NM1-011

CONTINUED

C-138

YEAR(S):

2006-1997

envirotech memo/fax

to: MARTYNE Röeling

company: EMNRD-OCD-EB-HQ-SoNM-CoUSA-INH.-WH-E

Fax #: 505-827-8177

re: VASTAR Resources C. 138

date: 12-14-99

pages: 23 (including cover sheet)

project: Acceptance of compressor lube oil Contaminated Soil

cc:

mments... MARTYNE:

VASTAR would like to move this material Friday 12-17-99 AND TRY to beat the next SNOW storm.

THANKS

Harlan

the desk of.... HARLAN M. BROWN

envirotech inc.
5796 us highway 64
farmington, n. m. 87401
505 632 0615
505 632 1865 fax

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
1 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

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

RECEIVED
DEC 17 1999
Environmental Bureau
Env. Oil Conservation Division

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: ☐ Non-Exempt: ☒	4. Generator VASTAR Resources
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Various Locations
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State Southern Ute Colorado → New Mexico
7. Location of Material (Street Address or ULSTR)	SEE Attached CWS.

9. 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:

Cleanup of soil contaminated with used compressor lube oil.

Estimated Volume 100 cy cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown Waste Management Facility/Authorized Agent TITLE: Landfarm Manager DATE: 12-13-99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 12-17-99

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Vastar Resources, Inc. 15375 Memorial Drive Houston, TX 77079	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name):	**Location of the Waste (Street address &/or ULSTR):**
Treating Site #7B (NE/4, NE/4, Sec. 3, T-32N, R-10W) and Well site 17-3; 32-9 (SE/4, SW/4, Sec. 17, T-32N, R-9W) Southern Ute Indian Reservation La Plata County, Colorado Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Soil contaminated with used compressor engine lubricating oil.	

I, Margaret M. Obluda (Print Name) representative for: Vastar Resources, 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

X **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
X Chain of Custody
X Other (description): TCLP

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): Margaret M. Obluda
(Margaret Obluda)

Title: Environmental Coordinator

Date: 12/6/99

SOUTHERN UTE INDIAN TRIBE

December 9, 1999

Margaret M. Obluda
Environmental Coordinator
Vastar Resources, Inc.
15375 Memorial Drive
Houston, TX 77079

Re: Tribal Notification of Transportation of Non-exempt Oil Field Waste
60 cubic yards of non-exempt, oil contaminated soil
Vastar Resources, Inc., Treating Site 17-B, NENE Sec. 3 T32N R10W,
Wellsite 17-3; 32-9, SESW Sec. 17 T32N R9W

Dear Ms. Obluda:

Thank you for notifying the Environmental Programs Division of the Southern Ute Indian Tribe of the transport of 60 cubic yards of contaminated soil of RCRA non-exempt oil from the above referenced sites to a land farm in New Mexico. It is our understanding that the contaminated soil will be transported to Envirotech's landfarm in New Mexico.

Certification may be required by the state in New Mexico Oil Conservation Commission (NMOCCD) from your company, the transporter or generator. Transportation of this waste may be subject to other state and federal laws.

Sincerely,

Cheryl L. Wiescamp

Cheryl L. Wiescamp
Division Head
Environmental Programs

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

November 29, 1999

Mr. Ross Kennemer
Animas Environmental Services
P.O. Box 5314
Farmington, NM 87499

Project No.: 908301

Dear Mr. Kennemer,

Enclosed is the analytical result for the sample collected from the location designated as "Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite". One soil sample was collected on 11/19/99, and received by the Envirotech laboratory on 11/22/99 for TCLP W/O Herbicides and Pesticides.

The samples were documented on Envirotech Chain of Custody No. 7574 and assigned Laboratory No. G493 (Excavated Soils) for tracking purposes.

The samples were analyzed 11/22/99 thru 11/24/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Christine M. Walters
Laboratory Coordinator / Environmental Scientist

enc.

CMW/cmw C:/files/labreports/animas.wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Animas Env. Serv.	Project #:	908301
Sample ID:	Excavated Soils	Date Reported:	11-22-99
Lab ID#:	G493	Date Sampled:	11-19-99
Sample Matrix:	Soil	Date Received:	11-22-99
Preservative:	Cool	Date Analyzed:	11-22-99
Condition:	Cool and Intact	Chain of Custody:	7574

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 8.25**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*
Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
Comments:	**Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

Client:	Animas Env. Serv.	Project #:	908301
Sample ID:	Excavated Soils	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	11-19-99
Chain of Custody:	7574	Date Received:	11-22-99
Sample Matrix:	TCLP Extract	Date Extracted:	11-22-99
Preservative:	Cool	Date Analyzed:	11-24-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**0.2**
1,1-Dichloroethene	**ND**	**0.0001**	**0.7**
2-Butanone (MEK)	**0.0002**	**0.0001**	**200**
Chloroform	**ND**	**0.0001**	**6.0**
Carbon Tetrachloride	**ND**	**0.0001**	**0.5**
Benzene	**0.0021**	**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	**98%**
	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: **Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Animas Env. Serv.	Project #:	908301
Sample ID:	Excavated Soils	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	11-19-99
Chain of Custody:	7574	Date Received:	11-22-99
Sample Matrix:	TCLP Extract	Date Extracted:	11-22-99
Preservative:	Cool	Date Analyzed:	11-24-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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**	**0.020**	**100**

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	**98%**
	2,4,6-Tribromophenol	**99%**

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: **Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Animas Env. Serv.	Project #:	908301
Sample ID:	Excavated Soils	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	11-19-99
Chain of Custody:	7574	Date Received:	11-22-99
Sample Matrix:	TCLP Extract	Date Extracted:	11-22-99
Preservative:	Cool	Date Analyzed:	11-23-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**95%**

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: **Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Animas Env. Serv.	Project #:	908301
Sample ID:	Excavated Soils	Date Reported:	11-23-99
Laboratory Number:	G493	Date Sampled:	11-19-99
Chain of Custody:	7574	Date Received:	11-22-99
Sample Matrix:	TCLP Extract	Date Analyzed:	11-23-99
Preservative:	Cool	Date Extracted:	11-22-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.001**	**5.0**
Barium	**1.74**	**0.001**	**21**
Cadmium	**ND**	**0.001**	**0.11**
Chromium	**ND**	**0.001**	**0.60**
Lead	**0.028**	**0.001**	**0.75**
Mercury	**ND**	**0.001**	**0.025**
Selenium	**ND**	**0.001**	**5.7**
Silver	**ND**	**0.001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Vastar Resources Treatment Plant 7B and Southern Ute 17-3; 32-9 Composite.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	11-24-99
Laboratory Number:	11-24-TCLP VOL	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-24-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 sample G493.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-24-99
Laboratory Number:	11-22-TCLP Vol	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-24-99
Condition:	N/A	Date Extracted:	11-22-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**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	**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: **QA/QC for sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	11-24-99
Condition:	N/A	Date Extracted:	11-22-99

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	**ND**	**ND**	**0.0001**	**0.0%**
1,1-Dichloroethene	**ND**	**ND**	**0.0001**	**0.0%**
2-Butanone (MEK)	**0.0002**	**0.0002**	**0.0001**	**0.0%**
Chloroform	**ND**	**ND**	**0.0001**	**0.0%**
Carbon Tetrachloride	**ND**	**ND**	**0.0001**	**0.0%**
Benzene	**0.0021**	**0.0021**	**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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	11-24-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	0.0002	0.050	0.0497	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0021	0.050	0.0519	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	11-24-99
Laboratory Number:	11-24-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-24-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-24-99
Laboratory Number:	11-22-TCA	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-22-99
Condition:	Cool & Intact	Date Analyzed:	11-24-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	11-24-99
		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**	**0.020**	**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 sample G493.**

Analyst

Review

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	11-24-99
Laboratory Number:	11-23-TCBN	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	11-23-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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 sample G493.**

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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-24-99
Laboratory Number:	11-22-TCBN	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-22-99
Condition:	Cool and Intact	Date Analyzed:	11-23-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**98%**

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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	11-22-99
Condition:	N/A	Date Analyzed:	11-23-99
		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 sample G493.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	11-23-TCM QA/QC	Date Reported:	11-24-99
Laboratory Number:	G493	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	11-23-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.001	1.74	1.71	1.7%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.001	0.028	0.029	3.6%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Unspiked Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	ND	0.498	99.6%	80% - 120%
Barium	1.00	1.74	2.73	99.6%	80% - 120%
Cadmium	0.250	ND	0.250	100.0%	80% - 120%
Chromium	0.250	ND	0.251	100.4%	80% - 120%
Lead	0.250	0.028	0.277	99.6%	80% - 120%
Mercury	0.125	ND	0.124	99.2%	80% - 120%
Selenium	0.500	ND	0.499	99.8%	80% - 120%
Silver	0.250	ND	0.250	100.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission, SW-846, USEPA, December 1996.

Comments: **QA/QC for sample G493.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

7574

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Animas Env. Serv.	Vastar Resources Treatment Plant TB @ Southern UTE 17-3; 32-9 Composite	
Sampler: Ross Kennemer	Client No. 908301	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP 20 HOA						Remarks
Excavated Soils	11-19-99	1200	G493	Soil	2	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Ross Kennemer	11/22/99 ~~0950~~	0950	Amy Ware	11.22.99	09:50
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

envirotech memo/fax

to: MARTYNE Kieling

company: EMNRD-OCD-EB-HQ-SoNM-CoUSA-INH-WH-E

fax #: 505-827-8177

re: VASTAR Resources C.138

date: 12-14-99

pages: 23 (including cover sheet)

project: Acceptance of compressor lube oil Contaminated Soil

cc:

mments... MARTYNE:

VASTAR would like to move this material Friday 12-17-99 AND TRY to beat the next SNOW storm.

THANKS

Harlan

the desk of.... HARLAN M. BROWN

envirotech inc.
5796 us highway 64
farmington, n. m. 87401
505 632 0615
505 632 1865 fax

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

RECEIVED
DEC 17 1999
Environmental Bureau
Oil Conservation Division

Env. JN: 92132-03

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: ☐ Non-Exempt: ☒	4. Generator Halliburton Energy Services
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Navajo Hill
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State Southern Ute Colorado → New Mexico
7. Location of Material (Street Address or ULSTR)	NE/4 Sec 29, T35N, R8W La Plata County, Co.

9. 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:

Clean up of stimulation fluids spilled @ Trailer Accident.

MSDS sheets
&
RCRA RCI Attached.

Estimated Volume ± 108 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown TITLE: Landfarm Manager DATE: 12-10-99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 12/14/99

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 12/17/99

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
HALLIBURTON ENERGY SERVICE 4109 E. MAIN ST. FARMINGTON N.M. 87401	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop,New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): VEHICLE ACCIDENT HERRERA HILL Attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR): NORTH EAST 1/4 SECTION 29 TOWNSHIP 33 NORTH RANGE 8 WEST SOUTHERN UTE INDIAN RESERVATION LAPLATA COUNTY CO.
4. Source and Description of Waste LOSURF 300 SAND WEDGE BC-140	

I, ROBERT SMITH representative for:
(Print Name)

HALLIBURTON ENERGY SERVICE 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

X **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):

X MSDS Information
___ RCRA Hazardous Waste Analysis
___ Chain of Custody
X Other (description): RCRA RCI

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): ROBERT SMITH

Title: HEALTH, SAFETY & ENVIRONMENTAL ADVISOR

Date: 12-10-99

RECEIVED NOV 2 9 1999

SOUTHERN UTE INDIAN TRIBE

November 22, 1999

Harlan Brown
Envirotech, Inc.
5796 U.S. Hwy 64
Farmington, NM 87401

Re: Tribal Notification of Transportation of Non-exempt Contaminated Soil
300 gallons non-exempt sandwedge 630
208 gallons BC-140
190 gallons Low Surf contaminated soil
Haliburton Energy Services, Inc. Herrera Hill, N2NE1/4 Sec. 29 T33N R8W

Dear Mr. Brown:

Thank you for notifying the Environmental Programs Division of the Southern Ute Indian Tribe of the transport of soil contaminated with RCRA non-exempt Sandwedge 630, BC-140, and Low Surf from the above referenced site to your land farm in New Mexico. It is our understanding that the contaminated soil will be transported to Envirotech's landfarm in New Mexico.

Certification may be required by the state in New Mexico Oil Conservation Commission (NMOCCD) from your company, the transporter or generator. Transportation of this waste may be subject to other state and federal laws.

Sincerely,

Cheryl L. Wiescamp

Cheryl Wiescamp
Division Head
Environmental Programs

P.O. Box 737 ✦ Ignacio, CO 81137 ✦ Phone: 970-563-0100

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Halliburton Energy Services	Project #:	213203
Sample ID:	Stockpile	Date Reported:	12-03-99
Lab ID#:	G523	Date Sampled:	12-01-99
Sample Matrix:	Soil	Date Received:	12-01-99
Preservative:	Cool	Date Analyzed:	12-03-99
Condition:	Cool and Intact	Chain of Custody:	7580

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 6.88**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **Herrera Hill.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

7580

Client / Project Name	Project Location
HALLIBURTON ENERGY SERVICES	Herrera Hill
Sampler:	**Client No.**
HARLAN M. BROWN	92132.03

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	RCRA or RCI	8015 Ethylene Glycol	8015 Aromatics	8021 Naphthalene			Remarks
STOCKPILE	12.1.99	12:10	G523	Soil	1	✓						
Drummed Soil	12.1.99	12:05	G524	Soil	1	No MK this.	✓	✓	✓			Worst Case

ANALYSIS / PARAMETERS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Harlan M Brown	12.1.99	14:45	Christine M Wade	12.1.99	14:45
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

632-1865

SANDWEDGE - HAL-TANK PAGE 1

MATERIAL SAFETY DATA SHEET DATE: 07-22-98
HALLIBURTON ENERGY SERVICES REVISED DATE 11-04-9
DUNCAN, OKLAHOMA 73536

EMERGENCY TELEPHONE: 580/251-4689 OR 580/251-3569
AFTER HOURS: 580/251-3760

* * * * * * * * * * * SECTION I - PRODUCT DESCRIPTION * * * * * * * * * * * *

CHEMICAL CODE: SANDWEDGE - HAL-TANK PART NUMBER: 51601167
PKG QTY: 300 GALLON HALTANK APPLICATION: CONDUCTIVITY ENHANCER
SERVICE USED: FRACTURING

* * * * * * * * * * * SECTION II - COMPONENT INFORMATION * * * * * * * * * * *

COMPONENT+ + + + + + + + + +	PERCENT	TLV	PEL
ISOPROPANOL	31-60 %	400 PPM	400 PPM
HEAVY AROMATIC NAPHTHA	1-10 %	300 PPM	400 PPM

* * * * * * * * * * * * * SECTION III - PHYSICAL DATA * * * * * * * * * * * * *

PROPERTY	MEASUREMENT
APPEARANCE	DARK BROWN LIQUID
ODOR	BLAND
SPECIFIC GRAVITY (H2O=1)	.903
BULK DENSITY	7.52 LB/GAL
PH	7.8 TO 9.8
SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H20	INSOLUBLE
BIODEGRADABILITY	NOT DETERMINED
PERCENT VOLATILES	35
EVAPORATION RATE(BUTYL ACETATE=1)	N/D
VAPOR DENSITY	N/D
VAPOR PRESSURE (MMHG)	N/D
BOILING POINT(760 MMHG)	/0 F / -17 C
POUR POINT	>/A-20 F / 2>C-28 C
FREEZE POINT	>/A-20 F / 2>C-28 C
SOLUBILITY IN SEAWATER	NOT EVALUATED
PARTITION COEF (OCTANOL IN WATER)	NOT EVALUATED

* * * * * * * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * * * * * * * *

NFPA(704) RATING:
HEALTH 2 FLAMMABILITY 3 REACTIVITY 0 SPECIAL NONE
FLASH POINT 66 F / 18 C FLASH MTHD PMCC
AUTOIGNITION TEMPERATURE ND ND
FLAMMABLE LIMITS (% BY VOLUME) LOWER 2 UPPER 12.7
++
EXTINGUISHING MEDIA:
USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.
SPECIAL FIRE FIGHTING PROCEDURES:
USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

MAY BE IGNITED BY HEAT, SPARKS, OR FLAMES. FIGHT FIRE FROM A SAFE DISTANCE AND FROM A PROTECTED LOCATION. HEAT MAY BUILD PRESSURE AND RUPTURE CLOSED CONTAINERS, SPREADING THE FIRE AND INCREASING THE RISK OF BURNS AND INJURIES.

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE AND CARBON MONOXIDE.

DO NOT ALLOW RUNOFF TO ENTER WATERWAYS.

* * * * * * * * * * * * SECTION V - HEALTH HAZARD DATA * * * * * * * * * * * *

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: NOT DETERMINED

---------- EFFECTS OF EXPOSURE ----------

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE SEVERE IRRITATION WITH POSSIBLE CORNEAL BURNS.

SKIN:

MAY BE ABSORBED THROUGH SKIN.

PROLONGED OR REPEATED CONTACT MAY CAUSE DERMATITIS.

INHALATION:

HIGH CONCENTRATIONS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. THIS MAY BE EVIDENCED BY GIDDINESS, HEADACHES, DIZZINESS, NAUSEA, VOMITING OR POSSIBLY UNCONSCIOUSNESS.

HIGH CONCENTRATIONS CAUSES NARCOSIS.

VAPORS, MIST OR SPRAY MAY CAUSE IRRITATION.

INGESTION:

LARGE DOSES CAUSES ABDOMINAL PAIN, NAUSEA, VOMITING AND DIARRHEA.

CHRONIC EFFECTS:

CHRONIC OVEREXPOSURE MAY CAUSE LIVER AND KIDNEY DISORDERS.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENED BY EXPOSURE TO THIS PRODUCT.

---------- EMERGENCY AND FIRST AID PROCEDURES ----------

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.

DISCARD CONTAMINATED LEATHER ARTICLES. SEEK PROMPT MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! GIVE UP TO TWO (2) QUARTS OF WATER TO DILUTE. KEE HEAD BELOW HIPS TO PREVENT ASPIRATION. SEEK PROMPT MEDICAL ATTENTION.

* * * * * * * * * * * * SECTION VI - REACTIVITY DATA * * * * * * * * * * * * *

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND/OR CARBON DIOXIDE.

HAZARD POLYMERIZATION: WON"T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

* * * * * * * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * * * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AREA AND STOP LEAK WHERE SAFE. REMOVE IGNITION SOURCES. CONTAIN AND ABSORB SPILL WITH SAND OR OTHER INERT MATERIAL. SCOOP OR SWEEP UP USING NON-SPARKING TOOLS. IN ENCLOSED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM HAZARDOUS WASTE DISPOSAL SITE AUTHORIZED UNDER EPA-RCRA SUBTITLE C OR STATE EQUIVALENT. SHIP TO SITE.

* * * * * * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR CARTRIDGE RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN AREAS WITHOUT GOOD CROSS VENTILATION.

PROTECTIVE GLOVES:

IMPERVIOUS RUBBER GLOVES.

EYE PROTECTION:

WEAR GOGGLES AND/OR FACE SHIELD. PROVIDE EYEWASH AND QUICK DRENCH SYSTEM.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * * * * * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * * * * * * * *

PRECAUTIONARY LABELING SANDWEDGE - HAL-TANK 516.011670

WARNING!

MAY CAUSE HEADACHE, DIZZINESS AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM. FLAMMABLE!

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.
OTHER HANDLING AND STORAGE CONDITIONS:
STORE AWAY FROM OXIDIZERS.
KEEP FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
AVOID BREATHING VAPORS.
CONTAINER DISPOSITION:
IF EMPTY CONTAINER RETAINS PRODUCT RESIDUES, ALL LABEL PRECAUTIONS MUST BE OBSERVED. STORE AWAY FROM IGNITION SOURCES WITH ALL DRUM CLOSURES IN PLACE. OFFER CONTAINER TO RECONDITIONER OR RECYCLER. ENSURE RECONDITIONER OR RECYCLER IS AWARE OF THE PROPERTIES OF THE CONTENTS.
SPECIAL PRECAUTIONS:
PRODUCT HAS A SHELF LIFE OF 24 MONTHS.

* * * * * * * * * * SECTION X - TRANSPORTATION INFORMATION * * * * * * * * * *

DOT SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - 3 - UN1993 - II
(CONTAINS ISOPROPANOL, HEAVY AROMATIC NAPHTHA)

IATA SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - 3 - UN1993 - II
(CONTAINS ISOPROPANOL, HEAVY AROMATIC NAPHTHA)

IMO SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. (CONTAINS ISOPROPANOL, HEAVY AROMATIC NAPHTHA) -
CLASS 3.2 - UN1993 - II (15.6'C)
MS 3-07

CAN SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - CLASS 3 - UN1993 - II
(CONTAINS ISOPROPANOL, HEAVY AROMATIC NAPHTHA)

ADR SHIPPING DESCRIPTION:
1993 FLAMMABLE LIQUID, N.O.S. - 3, ITEM 3(B) - ADR
(CONTAINS ISOPROPANOL, HEAVY AROMATIC NAPHTHA)

* * * * * * * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * * * * * * *

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION
FIRE: Y PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
12,500 LBS OR 1673 GALLONS

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

ISOPROPANOL	67-63-0	31-60 %

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA YES EEC N/D ACOIN N/D NPR NE DRSM NE

F. EXTRACTION METAL AND TRACE CONTENTS

ARSENIC:	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NO
BARIUM :	IN LIQUID > 100 MG/L,	SOLID > 10000 MG/KG	NO
CADIUM:	IN LIQUID > 1 MG/L,	SOLID > 100 MG/KG	NO
CHROMIUM(VI):	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NO
CHROMIUM(III):	IN LIQUID > 560 MG/L,	SOLID > 2500 MG/KG	NO
LEAD:	IN LIQUID > 5 MG/L,	SOLID > 1000 MG/KG	NO
MERCURY:	IN LIQUID > 0.2 MG/L,	SOLID > 2000 MG/KG	NO
SELENIUM:	IN LIQUID > 1 MG/L,	SOLID > 100 MG/KG	NO
SILVER:	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NO
ANTIMONY:	IN LIQUID > 15 MG/L,	SOLID > 500 MG/KG	NO
BERYLLIUM:	IN LIQUID > 0.75 MG/L,	SOLID > 75 MG/KG	NO
COBALT:	IN LIQUID > 80 MG/L,	SOLID > 8000 MG/KG	NO
COPPER:	IN LIQUID > 25 MG/L,	SOLID > 2500 MG/KG	NO
FLUORIDE:	IN LIQUID > 180 MG/L,	SOLID > 18000 MG/KG	NO
MOLYBDENUM:	IN LIQUID > 350 MG/L,	SOLID > 3500 MG/KG	NO
NICKEL:	IN LIQUID > 20 MG/L,	SOLID > 2000 MG/KG	NO
THALLIUM:	IN LIQUID > 7 MG/L,	SOLID > 700 MG/KG	NO
VANADIUM:	IN LIQUID > 24 MG/L,	SOLID > 2400 MG/KG	NO
ZINC:	IN LIQUID > 250 MG/L,	SOLID > 5000 MG/KG	NO
CYANIDE:	IN LIQUID > 250 MG/L,	SOLID > 250 MG/KG	NO
H2S:	IN LIQUID > 500 MG/L,	SOLID > 500 MG/KG	NO
ORGANO-TIN:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
ORGANO-PHOS:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
TIN:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
PERSISTENT ORGANO-HALOGENS:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED

G. OTHER COMPONENTS

CONTAINS BENZENE	NO
CONTAINS TOLUENE	NO
CONTAINS XYLENE	NO
REPORTABLE SPILL QUANTITY FOR BENZENE, TOLUENE, XYLENE	NOT APPLICABLE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY US EPA BECAUSE OF:

✓ IGNITABILITY

I. UNITED KINGDOM - DOE (CHEMICAL NOTIFICATION SCHEME)
TOXICITY CATEGORY NOT EVALUATED

* *

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FRO VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT I GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN

BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSL PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

-32-1565

HALLIBURTON

Farmington New Mexico
Rocky Mountain N.W.A.

Attention : HARLEN

Company : ENVIROTECH

From : ROBERT SMITH

Date : 11-22 Time : 4:00pm

Number of pages (including cover sheet) 7

Fax No. (505) 327-2534 Telephone No. (505) 324-3500

MATERIAL SAFETY DATA SHEET DATE: 07-22-98
HALLIBURTON ENERGY SERVICES REVISED DATE 06-24-9
DUNCAN, OKLAHOMA 73536

EMERGENCY TELEPHONE: 580/251-4689 OR 580/251-3569
AFTER HOURS: 580/251-3760

* * * * * * * * * * * SECTION I - PRODUCT DESCRIPTION * * * * * * * * * * * *

CHEMICAL CODE: BC-140 - HAL-TANK PART NUMBER: 51601089
PKG QTY: 330 GALLON TANK APPLICATION: CROSSLINKING AGENT
SERVICE USED: STIMULATION

* * * * * * * * * * * SECTION II - COMPONENT INFORMATION * * * * * * * * * * *

COMPONENT+ + + + + + + + + +	PERCENT	TLV	PEL
ETHYLENE GLYCOL	11-30 %	C 50 PPM	C 50 PPM
MONOETHANOLAMINE	1-10 %	3 PPM	3 PPM

* * * * * * * * * * * * * SECTION III - PHYSICAL DATA * * * * * * * * * * * * *

PROPERTY	MEASUREMENT	
APPEARANCE	DARK LIQUID	
ODOR	GLYCOL	
SPECIFIC GRAVITY (H2O=1)	1.221	
BULK DENSITY	10.17	LB/GAL
PH	7.28	
SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H20	N/D	
BIODEGRADABILITY	NOT DETERMINED	
PERCENT VOLATILES	N/D	
EVAPORATION RATE(BUTYL ACETATE=1)	N/D	
VAPOR DENSITY	N/D	
VAPOR PRESSURE (MMHG)	N/D	
BOILING POINT(760 MMHG)	N/D	
POUR POINT	N/D	
FREEZE POINT	N/D	
SOLUBILITY IN SEAWATER	NOT EVALUATED	
PARTITION COEF (OCTANOL IN WATER)	NOT EVALUATED	

* * * * * * * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * * * * * * * *

NFPA(704) RATING:
HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE
FLASH POINT N/D FLASH MTHD TCC
AUTOIGNITION TEMPERATURE ND ND
FLAMMABLE LIMITS (% BY VOLUME) LOWER N/D UPPER N/D
++
EXTINGUISHING MEDIA:
FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL FIRE FIGHTING PROCEDURES:
FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING

APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE TOXIC GASES.

* * * * * * * * * * * * SECTION V - HEALTH HAZARD DATA * * * * * * * * * * * *

CALIFORNIA PROPOSITION 65:
PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:
PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: NOT DETERMINED

---------- EFFECTS OF EXPOSURE ----------
ROUTES OF EXPOSURE:
EYE OR SKIN CONTACT, INHALATION.
EYE:
MAY CAUSE MODERATE TO SEVERE IRRITATION, AND IN EXTREME CASES SEVERE BUT TRANSIENT EYE INJURY.
SKIN:
CONTACT MAY CAUSE SKIN IRRITATION.
INHALATION:
MIST OR HEATED VAPORS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION RESULTING IN GIDDINESS, HEADACHES, DIZZINESS, NAUSEA, VOMITING OR POSSIBLY UNCONSCIOUSNESS.
INGESTION:
CONTAINS ETHYLENE GLYCOL, MAY CAUSE HEART, KIDNEY AND BRAIN DISORDERS.
CHRONIC EFFECTS:
REPEATED AND/OR PROLONGED EXPOSURE AT LOW LEVELS MAY RESULT IN KIDNEY DISORDERS, REPRODUCTIVE DISORDERS, AND ADVERSE EYE EFFECTS.
CONTAINS ETHYLENE GLYCOL WHICH MAY CAUSE KIDNEY, LIVER, HEART, BLOOD & BRAI DISORDERS. ETHYLENE GLYCOL HAS BEEN SHOWN TO CAUSE DEVELOPMENTAL AND REPRODUCTIVE EFFECTS IN LABORATORY ANIMALS. THESE FINDINGS ARE OF UNCERTAI TO HUMANS.
ETHYLENE GLYCOL HAS PRODUCED DOSE RELATED TERATOGENIC EFFECTS IN RATS AND MICE, WHEN GIVEN BY GAVAGE OR DRINKING WATER AT HIGH DOSES. TERATOGENIC EFFECTS WERE ALSO PRODUCED BY INHALATION IN VERY HIGH CONCENTRATIONS, BUT ONLY IN MICE. THE DATA SUGGESTS ETHYLENE GLYCOL MAY CAUSE BIRTH DEFECTS.
OTHER SYMPTOMS AFFECTED:
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE INCLUDE SKIN DISORDERS AND ALLERGIES, LIVER DISORDER, AND EYE DISEASE.
---------- EMERGENCY AND FIRST AID PROCEDURES ----------
EYE:
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK PROMPT MEDICAL ATTENTION.
SKIN:
IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE.

INHALATION:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.
INGESTION:
GIVE UP TO TWO (2) QUARTS OF WATER AND INDUCE VOMITING. NEVER GIVE ANYTHIN BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION.

* * * * * * * * * * * * SECTION VI - REACTIVITY DATA * * * * * * * * * * * * *

STABILITY: STABLE
CONDITIONS TO AVOID:
NOT APPLICABLE.
INCOMPATIBILITY (MATERIALS TO AVOID):
STRONG OXIDIZERS AND DEHYDRATING AGENTS.
HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON DIOXIDE AND/OR CARBON MONOXIDE AND UNIDENTIFIED HYDROCARBON VAPORS.
HAZARD POLYMERIZATION: WON"T OCCUR
CONDITIONS TO AVOID:
NOT APPLICABLE.

* * * * * * * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * * * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AND STOP LEAK WHERE SAFE. CONTAIN AND ABSORB SPILL WITH AN INERT MATERIAL. SCOOP UP AND REMOVE.
PREVENT RUNOFF FROM ENTERING SEWERS, LAKES, RIVERS, STREAMS OR PUBLIC WATER SUPPLIES.
WASTE DISPOSAL METHOD:
DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. CONTAC HALLIBURTON HEALTH, SAFETY, AND ENVIRONMENT DEPARTMENTS IN DUNCAN, OK FOR THE APPROPRIATE DISPOSAL METHOD.

* * * * * * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):
ORGANIC VAPOR CHEMICAL CARTRIDGE RESPIRATOR WITH A DUST-MIST FILTER.
VENTILATION:
USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN AREAS WITHOUT GOOD CROSS VENTILATION.
PROTECTIVE GLOVES:
IMPERVIOUS RUBBER GLOVES.
EYE PROTECTION:
WEAR GOGGLES AND/OR FACE SHIELD. PROVIDE EYEWASH AND QUICK DRENCH SYSTEM.
OTHER PROTECTIVE EQUIPMENT:
RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * * * * * * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * * * * * * * * *

PRECAUTIONARY LABELING BC-140 - HAL-TANK 516.010890

WARNING!
MAY CAUSE HEADACHE, DIZZINESS AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS.

MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM.
CONTAINS ETHYLENE GLYCOL WHICH MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:
STORE AWAY FROM OXIDIZERS.
STORE IN A COOL WELL VENTILATED LOCATION.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
AVOID DUST ACCUMULATIONS.
AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:
IF CONTAINER RETAINS PRODUCT RESIDUES, LABEL PRECAUTIONS MUST BE OBSERVED.
STORE CONTAINER WITH CLOSURES IN PLACE. OFFER EMPTY CONTAINER TO RECONDI-
TIONOR OR RECYCLER FOR RECONDITIONING OR DISPOSAL. ENSURE RECONDITIONER
OR RECYCLER IS AWARE OF THE PROPERTIES OF THE CONTENTS.

SPECIAL PRECAUTIONS:
PRODUCT HAS A SHELF LIFE OF 36 MONTHS.

* * * * * * * * * * SECTION X - TRANSPORTATION INFORMATION * * * * * * * * * *

DOT SHIPPING DESCRIPTION:
NOT RESTRICTED

IATA SHIPPING DESCRIPTION:
NOT RESTRICTED

IMO SHIPPING DESCRIPTION:
NOT RESTRICTED

CAN SHIPPING DESCRIPTION:
NOT RESTRICTED

ADR SHIPPING DESCRIPTION:
NOT RESTRICTED

* * * * * * * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * * * * * * *

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION
FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
NOT EVALUATED

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

ETHYLENE GLYCOL	107-21-1	11-30 %

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA YES EEC N/D ACOIN N/D NPR NE DRSM NE

F. EXTRACTION METAL AND TRACE CONTENTS

ARSENIC:	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NOT EVALUATED
BARIUM :	IN LIQUID > 100 MG/L,	SOLID > 10000 MG/KG	NOT EVALUATED
CADIUM:	IN LIQUID > 1 MG/L,	SOLID > 100 MG/KG	NOT EVALUATED
CHROMIUM(VI):	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NOT EVALUATED
CHROMIUM(III):	IN LIQUID > 560 MG/L,	SOLID > 2500 MG/KG	NOT EVALUATED
LEAD:	IN LIQUID > 5 MG/L,	SOLID > 1000 MG/KG	NOT EVALUATED
MERCURY:	IN LIQUID > 0.2 MG/L,	SOLID > 2000 MG/KG	NOT EVALUATED
SELENIUM:	IN LIQUID > 1 MG/L,	SOLID > 100 MG/KG	NOT EVALUATED
SILVER:	IN LIQUID > 5 MG/L,	SOLID > 500 MG/KG	NOT EVALUATED
ANTIMONY:	IN LIQUID > 15 MG/L,	SOLID > 500 MG/KG	NOT EVALUATED
BERYLLIUM:	IN LIQUID > 0.75 MG/L,	SOLID > 75 MG/KG	NOT EVALUATED
COBALT:	IN LIQUID > 80 MG/L,	SOLID > 8000 MG/KG	NOT EVALUATED
COPPER:	IN LIQUID > 25 MG/L,	SOLID > 2500 MG/KG	NOT EVALUATED
FLUORIDE:	IN LIQUID > 180 MG/L,	SOLID > 18000 MG/KG	NOT EVALUATED
MOLYBDENUM:	IN LIQUID > 350 MG/L,	SOLID > 3500 MG/KG	NOT EVALUATED
NICKEL:	IN LIQUID > 20 MG/L,	SOLID > 2000 MG/KG	NOT EVALUATED
THALLIUM:	IN LIQUID > 7 MG/L,	SOLID > 700 MG/KG	NOT EVALUATED
VANADIUM:	IN LIQUID > 24 MG/L,	SOLID > 2400 MG/KG	NOT EVALUATED
ZINC:	IN LIQUID > 250 MG/L,	SOLID > 5000 MG/KG	NOT EVALUATED
CYANIDE:	IN LIQUID > 250 MG/L,	SOLID > 250 MG/KG	NOT EVALUATED
H2S:	IN LIQUID > 500 MG/L,	SOLID > 500 MG/KG	NOT EVALUATED
ORGANO-TIN:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
ORGANO-PHOS:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
TIN:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED
PERSISTENT ORGANO-HALOGENS:	IN LIQUID OR	SOLID > 100 MG/L	NOT EVALUATED

G. OTHER COMPONENTS

CONTAINS BENZENE	NO
CONTAINS TOLUENE	NO
CONTAINS XYLENE	NO
REPORTABLE SPILL QUANTITY FOR BENZENE, TOLUENE, XYLENE	NOT APPLICABLE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A HAZARDOUS WASTE

I. UNITED KINGDOM - DOE (CHEMICAL NOTIFICATION SCHEME)

TOXICITY CATEGORY	NOT EVALUATED

* *

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FRO VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT I GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY

OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSL PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

MATERIAL SAFETY DATA SHEET DATE: 07-22-98
HALLIBURTON ENERGY SERVICES REVISED DATE 06-14-9
DUNCAN, OKLAHOMA 73536

EMERGENCY TELEPHONE: 580/251-4689 OR 580/251-3569
AFTER HOURS: 580/251-3760

* * * * * * * * * * * SECTION I - PRODUCT DESCRIPTION * * * * * * * * * * * *

CHEMICAL CODE: LOSURF-300 NONIONIC SURFACTANT - HAL-TANK PART NUMBER: 51600179
PKG QTY: 330 GALLON TANK APPLICATION: NONEMULSIFIER
SERVICE USED: STIMULATION

* * * * * * * * * * * SECTION II - COMPONENT INFORMATION * * * * * * * * * * *

COMPONENT+ + + + + + + + + +	PERCENT	TLV	PEL
ISOPROPANOL	31-60 %	400 PPM	400 PPM
AROMATIC SOLVENT	11-30 %	100 PPM	100 PPM
NAPHTHALENE	1-10 %	10 PPM	10 PPM

* * * * * * * * * * * SECTION III - PHYSICAL DATA * * * * * * * * * * * *

PROPERTY	MEASUREMENT
APPEARANCE	AMBER LIQUID
ODOR	SOLVENT
SPECIFIC GRAVITY (H2O=1)	.910
BULK DENSITY	7.59 LB/GAL
PH	NOT DETERMINED
SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H20	DISPERSES
BIODEGRADABILITY	N/D
PERCENT VOLATILES	46-50
EVAPORATION RATE(BUTYL ACETATE=1)	N/D
VAPOR DENSITY	N/D
VAPOR PRESSURE (MMHG)	N/D
BOILING POINT(760 MMHG)	N/D
POUR POINT	N/D
FREEZE POINT	N/D
SOLUBILITY IN SEAWATER	NOT EVALUATED
PARTITION COEF (OCTANOL IN WATER)	NOT EVALUATED

* * * * * * * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * * * * * * * *

NFPA(704) RATING:
HEALTH 1 FLAMMABILITY 4 REACTIVITY 0 SPECIAL NONE
FLASH POINT 63 F / 17 C FLASH MTHD PMCC
AUTOIGNITION TEMPERATURE ND ND
FLAMMABLE LIMITS (% BY VOLUME) LOWER N/D UPPER N/D
++
EXTINGUISHING MEDIA:
USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.
SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.
FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
MAY BE IGNITED BY HEAT, SPARKS, OR FLAMES. FIGHT FIRE FROM A SAFE DISTANCE AND FROM A PROTECTED LOCATION. HEAT MAY BUILD PRESSURE AND RUPTURE CLOSED CONTAINERS, SPREADING THE FIRE AND INCREASING THE RISK OF BURNS AND INJURIES.
INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND NITROGEN OXIDES.

* * * * * * * * * * * * SECTION V - HEALTH HAZARD DATA * * * * * * * * * * * *

CALIFORNIA PROPOSITION 65:
PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:
PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: 3.3-10 PPM(BROWN SHRIMP)

PRODUCT TLV: NOT ESTABLISHED

---------- EFFECTS OF EXPOSURE ----------

ROUTES OF EXPOSURE:
EYE OR SKIN CONTACT, INHALATION.

EYE:
MAY CAUSE EYE IRRITATION.

SKIN:
FREQUENT OR PROLONGED CONTACT WILL DRY AND DEFAT THE SKIN, POSSIBLY LEADING TO IRRITATION AND DERMATITIS. REPEATED CONTACT MAY SENSITIZE THE SKIN.

INHALATION:
HIGH CONCENTRATIONS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. THIS MAY BE EVIDENCED BY GIDDINESS, HEADACHES, DIZZINESS, NAUSEA, VOMITING OR POSSIBLY UNCONSCIOUSNESS.
VAPORS, MIST OR SPRAY MAY CAUSE IRRITATION.

INGESTION:
ASPIRATION INTO LUNGS BY INGESTION OR VOMITING, MAY CAUSE CHEMICAL PNEUMONITIS RESULTING IN EDEMA AND HEMORRAGE AND MAY BE FATAL. SYMPTOMS INCLUDE INCREASED RESPIRATORY RATE AND BLUISH DISCOLORATION OF SKIN.
COUGHING AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION.

CHRONIC EFFECTS:
CHRONIC OVEREXPOSURE MAY CAUSE LIVER AND KIDNEY DISORDERS.

OTHER SYMPTOMS AFFECTED:
BECAUSE OF ITS IRRITATING PROPERTIES, THIS MATERIAL MAY AGGRAVATE AN EXISTING DERMATITIS. BREATHING OF VAPOR AND/OR MISTS MAY AGGRAVATE ASTHMA AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

---------- EMERGENCY AND FIRST AID PROCEDURES ----------

EYE:
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK PROMPT MEDICAL ATTENTION.

SKIN:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! ASPIRATION INTO LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS.

* * * * * * * * * * * * SECTION VI - REACTIVITY DATA * * * * * * * * * * * * *

STABILITY: STABLE

CONDITIONS TO AVOID:

HEAT, SPARKS AND OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND/OR CARBON DIOXIDE.

HAZARD POLYMERIZATION: WON"T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

* * * * * * * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * * * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AREA AND STOP LEAK WHERE SAFE. REMOVE IGNITION SOURCES. CONTAIN AND ABSORB SPILL WITH SAND OR OTHER INERT MATERIAL. SCOOP OR SWEEP UP USING NON-SPARKING TOOLS. IN ENCLOSED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM HAZARDOUS WASTE DISPOSAL SITE AUTHORIZED UNDER EPA-RCRA SUBTITLE C OR STATE EQUIVALENT. SHIP TO SITE.

* * * * * * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR CARTRIDGE RESPIRATOR WITH A FULL FACEPIECE.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN AREAS WITHOUT GOOD CROSS VENTILATION.

LOCAL EXHAUST VENTILATION MUST BE DESIGNED FOR EXPLOSIVE ATMOSPHERES (NEC CLASS I EQUIPMENT).

PROTECTIVE GLOVES:

IMPERVIOUS RUBBER GLOVES.

EYE PROTECTION:

GOGGLES AND/OR FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * * * * * * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * * * * * * * * *

PRECAUTIONARY LABELING LOSURF-300 NONIONIC SURFACTANT - HAL-TANK516.001790

WARNING!
MAY CAUSE HEADACHE, DIZZINESS AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS.
MAY CAUSE EYE IRRITATION.
MAY CAUSE DEFATTING OF SKIN WHICH MAY LEAD TO IRRITATION OR DERMATITIS.
FLAMMABLE!
FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:
STORE AWAY FROM OXIDIZERS.
KEEP FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:
EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

* * * * * * * * * * SECTION X - TRANSPORTATION INFORMATION * * * * * * * * * *

DOT SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - 3 - UN1993 - II
(CONTAINS ISOPROPANOL)

IATA SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - 3 - UN1993 - II
(CONTAINS ISOPROPANOL)

IMO SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. (CONTAINS ISOPROPANOL) -
CLASS 3.2 - UN1993 - II (16'C)
MDG PAGE 3230

CAN SHIPPING DESCRIPTION:
FLAMMABLE LIQUID, N.O.S. - CLASS 3 - UN1993 - II
(CONTAINS ISOPROPANOL)

ADR SHIPPING DESCRIPTION:
1993 FLAMMABLE LIQUID, N.O.S. - 3, ITEM 3(B) - ADR
(CONTAINS ISOPROPANOL)

* * * * * * * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * * * * * * *

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION
FIRE: Y PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

ISOPROPANOL	67-63-0	31-60 %
NAPHTHALENE	91-20-3	1-10 %

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

F. EXTRACTION METAL AND TRACE CONTENTS

ARSENIC:	IN LIQUID > 5 MG/L,		SOLID > 500 MG/KG	NO
BARIUM :	IN LIQUID > 100 MG/L,		SOLID > 10000 MG/KG	NO
CADIUM:	IN LIQUID > 1 MG/L,		SOLID > 100 MG/KG	NO
CHROMIUM(VI):	IN LIQUID > 5 MG/L,		SOLID > 500 MG/KG	NO
CHROMIUM(III):	IN LIQUID > 560 MG/L,		SOLID > 2500 MG/KG	NO
LEAD:	IN LIQUID > 5 MG/L,		SOLID > 1000 MG/KG	NO
MERCURY:	IN LIQUID > 0.2 MG/L,		SOLID > 2000 MG/KG	NO
SELENIUM:	IN LIQUID > 1 MG/L,		SOLID > 100 MG/KG	NO
SILVER:	IN LIQUID > 5 MG/L,		SOLID > 500 MG/KG	NO
ANTIMONY:	IN LIQUID > 15 MG/L,		SOLID > 500 MG/KG	NO
BERYLLIUM:	IN LIQUID > 0.75 MG/L,		SOLID > 75 MG/KG	NO
COBALT:	IN LIQUID > 80 MG/L,		SOLID > 8000 MG/KG	NO
COPPER:	IN LIQUID > 25 MG/L,		SOLID > 2500 MG/KG	NO
FLUORIDE:	IN LIQUID > 180 MG/L,		SOLID > 18000 MG/KG	NO
MOLYBDENUM:	IN LIQUID > 350 MG/L,		SOLID > 3500 MG/KG	NO
NICKEL:	IN LIQUID > 20 MG/L,		SOLID > 2000 MG/KG	NO
THALLIUM:	IN LIQUID > 7 MG/L,		SOLID > 700 MG/KG	NO
VANADIUM:	IN LIQUID > 24 MG/L,		SOLID > 2400 MG/KG	NO
ZINC:	IN LIQUID > 250 MG/L,		SOLID > 5000 MG/KG	NO
CYANIDE:	IN LIQUID > 250 MG/L,		SOLID > 250 MG/KG	NO
H2S:	IN LIQUID > 500 MG/L,		SOLID > 500 MG/KG	NO
ORGANO-TIN:	IN LIQUID	OR	SOLID > 100 MG/L	NO
ORGANO-PHOS:	IN LIQUID	OR	SOLID > 100 MG/L	NO
TIN:	IN LIQUID	OR	SOLID > 100 MG/L	NO
PERSISTENT ORGANO-HALOGENS:	IN LIQUID	OR	SOLID > 100 MG/L	NO

G. OTHER COMPONENTS

CONTAINS BENZENE	NO
CONTAINS TOLUENE	NO
CONTAINS XYLENE	NO
REPORTABLE SPILL QUANTITY FOR BENZENE, TOLUENE, XYLENE	NOT APPLICABLE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY US EPA BECAUSE OF:

IGNITABILITY

I. UNITED KINGDOM - DOE (CHEMICAL NOTIFICATION SCHEME)

TOXICITY CATEGORY NOT EVALUATED

* *

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FRO VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT I GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSL PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

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
1 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

RECEIVED
NOV 07 1999
Environmental Bureau
Oil Conservation Division

Env. JN:

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: ☐ Non-Exempt: ☒	4. Generator Production Operators Inc.
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Unit #1255
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State Southern Ute Colorado → NM
7. Location of Material (Street Address or ULSTR)	SE¼ Sec 26 T33N, R11W

9. 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:

Clean up of soil contaminated w/ new lube oil (Mobile Pegasus 805)
MSDS - Attached

RECEIVED
DEC - 2 1999
OIL CON. DIV.
DIST. 3

Estimated Volume ±100 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown TITLE: Landfarm Manager DATE: 12.2.99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 12/3/99

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 12-7-99

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
GOVERNOR

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Production Operators Inc. 4000 Lomas Farmington, NM 87401	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): POI unit # 1255 Attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR): SE 1/4 Sec. 26 T. 33N R-11W
4. Source and Description of Waste Source - 500gal. Lube Oil Storage Tank Description - mobil Pegasus 805 unused clean Lube Oil	

I, Rod Heaston (Print Name) representative for:

Production Operator 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

X **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):

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

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): Rod Heaston

Title: Area 135 Supt.

Date: 11-18-99

SOUTHERN UTE INDIAN TRIBE

November 22, 1999

Rod Heaston
Production Operators, Inc.
4000 Lomas
Farmington, NM 87401

Re: Tribal Notification of Transportation of Non-exempt Oil Field Waste
500 gallons of non-exempt, unused lube oil contaminated soil
Production Operators Inc., Unit #1255 4-Queens, SE1/4 Sec. 26 T33N R11W

Dear Mr. Heaston:

Thank you for notifying the Environmental Programs Division of the Southern Ute Indian Tribe of the transport of soil contaminated with 500 gallons of RCRA non-exempt unused lube oil from the above referenced site to a land farm in New Mexico. It is our understanding that the contaminated soil will be transported to Envirotech's landfarm in New Mexico.

Certification may be required by the state in New Mexico Oil Conservation Commission (NMOCCD) from your company, the transporter or generator. Transportation of this waste may be subject to other state and federal laws.

Sincerely,

Cheryl L. Wiescamp
Division Head
Environmental Programs

Mobil The energy to make a difference™ Print View

602466-00

602466-00 MOBIL PEGASUS 805
MATERIAL SAFETY DATA BULLETIN

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOBIL [PREV HIT] [NEXT HIT] PEGASUS 805 SUPPLIER: MOBIL OIL CORP
NORTH AMERICA MARKETING AND REFINING
3225 GALLOWO RD.
FAIRFAX, VA 22037

24 - Hour Emergency (call collect):	609-737-4411	
Product and MSDS Information:	800-662-4525	609-224-4644
CHEMTREC:	800-424-9300	202-483-7616

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: PET. HYDROCARBONS AND ADDITIVES
INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:
This product is not formulated to contain ingredients which have exposure limits established by U.S. agencies. It is not hazardous to health as defined by the European Union Dangerous Substances/Preparations Directives. See Section 15 for a regulatory analysis of the ingredients.
See Section 15 for European Label Information.
See Section 8 for exposure limits (if applicable).

3. HAZARDS IDENTIFICATION

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.
EFFECTS OF OVEREXPOSURE: No significant effects expected.
EMERGENCY RESPONSE DATA: Light Amber Liquid. DOT ERG No. - NA

4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.
SKIN CONTACT: Wash contact areas with soap and water.
INHALATION: Not expected to be a problem.
INGESTION: Not expected to be a problem when ingested. If

uncomfortable seek medical assistance.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None. Flash Point C(F): 245(473) (ASTM D-92). Flammable limits - LEL: NE, UEL: NE.
NFPA HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide. Possibly hydrocarbon fragments. Sulfur oxides and compounds.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Report spills as required to appropriate authorities. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.
PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Adsorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.
ENVIRONMENTAL PRECAUTIONS: Prevent spills from entering storm sewers or drains and contact with soil.
PERSONAL PRECAUTIONS: See Section 8

7. HANDLING AND STORAGE

HANDLING: No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
STORAGE: Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.
RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.
EYE PROTECTION: Normal industrial eye protection practices should be employed.
SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.
EXPOSURE LIMITS: This product does not contain any components which have recognized exposure limits. However, a exposure limit of 5.00 mg/m3 is suggested for oil mist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical properties are given below. Consult Product Data Sheet for specific details.
APPEARANCE: Liquid
COLOR: Light Amber
ODOR: Marketable
ODOR THRESHOLD-ppm: NE
pH: NA
BOILING POINT C(F): NE
MELTING POINT C(F): NA
FLASH POINT C(F): 245(473) (ASTM D-92)
FLAMMABILITY: NE
AUTO FLAMMABILITY: NE
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA
VAPOR PRESSURE-mmHg 20 C: < 0.1
VAPOR DENSITY: > 2.0
EVAPORATION RATE: NE
RELATIVE DENSITY, 15/4 C: 0.89
SOLUBILITY IN WATER: Negligible
PARTITION COEFFICIENT: NE
VISCOSITY AT 40 C, cSt: 130.0
VISCOSITY AT 100 C, cSt: 13.5
POUR POINT C(F): -12(10)
FREEZING POINT C(F): NE
VOLATILE ORGANIC COMPOUND: NE
NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES
FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.
CONDITIONS TO AVOID: Extreme heat.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide. Possibly hydrocarbon fragments. Sulfur oxides and compounds.
HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL DATA

---ACUTE TOXICOLOGY---
ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.
DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.
INHALATION TOXICITY (RATS): Not applicable ---Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.
EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: greater than 6 but 15 or less). ---Based on testing of similar products and/or the components.
SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.
---SUBCHRONIC TOXICOLOGY (SUMMARY)---
Severely solvent refined and severely hydrotreated mineral base oils have been tested at Mobil Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body

fluids, showed no adverse effects.

---CHRONIC TOXICOLOGY (SUMMARY)---

The base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS: Not established.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.
RID/ADR: NOT REGULATED BY RID/ADR.
IMO: NOT REGULATED BY IMO.
IATA: NOT REGULATED BY IATA.

15. REGULATORY INFORMATION

Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS, AICS, and DSL.

EU Labeling:
Symbol: * EU labeling not required..
Risk Phrase(s): R.
NA
Safety Phrase(s): Not applicable.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:
This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.
This product contains no chemicals reportable under SARA (313) toxic release program.

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
XYLENES (0.06%)	1330-20-7	22
ZINC (ELEMENTAL ANALYSIS) (< 0.04%)	7440-66-6	22
PHOSPHORODITHOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP) (0.33%)	68649-42-3	22

--- REGULATORY LISTS SEARCHED ---

1=ACGIH ALL	6=IARC 1	11=TSCA 4	16=CA P65 CARC	21=LA RTK
2=ACGIH A1	7=IARC 2A	12=TSCA 5a2	17=CA P65 REPRO	22=MI 293
3=ACGIH A2	8=IARC 2B	13=TSCA 5e	18=CA RTK	23=MN RTK
4=NTP CARC	9=OSHA CARC	14=TSCA 6	19=FL RTK	24=NJ RTK
5=NTP SUS	10=OSHA Z	15=TSCA 12b	20=IL RTK	25=PA RTK
				26=RI RTK

Code key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

16. OTHER INFORMATION

USE: ENGINE LUBRICANT
NOTE: MOBIL PRODUCTS ARE NOT FORMULATED TO CONTAIN PCBS.

Please call the Customer Response Center on 800-662-4525 for formulation disclosure.

****

For Internal Use Only: MHC: 0* 0* NA 1* 1*, MPPEC: A, TRN: 602466-00, GHS: 400795, CMCS97: 97D936, REQ: US - MARKETING, SAFE USE: L
RHS Approval Date: 14SEP1999

****

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
1 Rio Brazos Road
...c, 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

Env. JN: 99043

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator Hanover Compression
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Unit 71453
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter TBA
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	1280 Trout King Rd. Farmington

9. 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:
Soil Contaminated w/ Engine lube oil
TCLP ATTACHED

RECEIVED
NOV 16 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 4 drums cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown (Waste Management Facility Authorized Agent) TITLE: Landfarm Manager DATE: 11-12-99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 11/16/99

APPROVED BY: Martyn J. Chavez TITLE: Environmental Geologist DATE: 11/16/99

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
HANOVER COMPRESSOR CO. 1280 TROY KING RD. FARMINGTON N.M. 87401	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): UNIT 71453 Attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR):
4. Source and Description of Waste NAT. GAS ENG. CATCO 30 WT. OIL	

I, GEORGE PHILLIPS representative for:
(Print Name)
HANOVER COMPRESSOR CO. 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):

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): George Phillips

Title: EMISSION SPECIALIST

Date: 11/10/99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

October 25, 1999

Mr. George Phillips
Hanover Compression, Inc. (505) 325-3220
1280 Troy King Road
Farmington, New Mexico 87401

Client No.: 99043
Job No.: 904302

Dear Mr. Phillips,

Enclosed are the analytical results for the sample collected from the location designated as "71453". One soil sample was collected by Hanover Compression personnel on 10/07/99, and delivered to the Envirotech laboratory on 10/07/99 for Hazardous Waste Characterization analysis (TCLP Volatiles, Semi-volatiles, Trace Metals, Ignitability, Reactivity and Corrosivity).

The sample was documented on Envirotech Chain of Custody No. 7420 and assigned Laboratory No. G168 (2 Barrel Comp.) for tracking purposes. The sample was extracted on 10/11/99 and analyzed 10/11/99 through 10/22/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615. It has been our pleasure doing business with you and we hope you will consider Envirotech for any of your future environmental contracting needs.

Respectfully submitted,
Envirotech, Inc.

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enclosure

SWS\sws\99043-02.lb1/wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Hanover Compression	Project #:	904302
Sample ID:	4 Barrel Composite	Date Reported:	10-14-99
Lab ID#:	G168	Date Sampled:	10-07-99
Sample Matrix:	Soil	Date Received:	10-07-99
Preservative:	Cool	Date Analyzed:	10-11-99
Condition:	Cool and Intact	Chain of Custody:	7420

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 8.19**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*
Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
Comments:	**71453.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Hanover Compression	Project #:	904302
Sample ID:	4 Barrel Composite	Date Reported:	10-14-99
Laboratory Number:	G168	Date Sampled:	10-07-99
Chain of Custody:	7420	Date Received:	10-07-99
Sample Matrix:	TCLP Extract	Date Extracted:	10-11-99
Preservative:	Cool	Date Analyzed:	10-12-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.0086	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0295	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	98%
	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: **71453.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Hanover Compression	Project #:	904302
Sample ID:	4 Barrel Composite	Date Reported:	10-15-99
Laboratory Number:	G168	Date Sampled:	10-07-99
Chain of Custody:	7420	Date Received:	10-07-99
Sample Matrix:	TCLP Extract	Date Extracted:	10-11-99
Preservative:	Cool	Date Analyzed:	10-14-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.078	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **71453.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Hanover Compression	Project #:	904302
Sample ID:	4 Barrel Composite	Date Reported:	10-15-99
Laboratory Number:	G168	Date Sampled:	10-07-99
Chain of Custody:	7420	Date Received:	10-07-99
Sample Matrix:	TCLP Extract	Date Extracted:	10-11-99
Preservative:	Cool	Date Analyzed:	10-14-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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: **71453.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Hanover Compression	Project #:	904302
Sample ID:	4 Barrel Composite	Date Reported:	11-05-99
Laboratory Number:	G168	Date Sampled:	10-07-99
Chain of Custody:	7420	Date Received:	10-07-99
Sample Matrix:	TCLP Extract	Date Analyzed:	11-04-99
Preservative:	Cool	Date Extracted:	10-11-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**0.134**	**0.001**	**5.0**
Barium	**0.498**	**0.001**	**21**
Cadmium	**0.088**	**0.001**	**0.11**
Chromium	**0.031**	**0.001**	**0.60**
Lead	**0.527**	**0.001**	**0.75**
Mercury	**0.0071**	**0.0005**	**0.025**
Selenium	**0.108**	**0.001**	**5.7**
Silver	**0.028**	**0.001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **71453.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	10-14-99
Laboratory Number:	10-12-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-12-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 sample G168.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	10-14-99
Laboratory Number:	10-12-TCV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-12-99
Condition:	N/A	Date Extracted:	10-11-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	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: **QA/QC for sample G168.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	10-14-99
Laboratory Number:	G168	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	10-12-99
Condition:	N/A	Date Extracted:	10-11-99

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.0086	0.0089	0.0001	3.7%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0295	0.0297	0.0001	0.7%
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 sample G168.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	10-15-99
Laboratory Number:	10-14-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-14-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 G168 and G181.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	10-15-99
Laboratory Number:	10-11-TCA	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	10-11-99
Condition:	Cool & Intact	Date Analyzed:	10-14-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 G168 and G181.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	10-15-99
Laboratory Number:	G168	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	10-14-99
		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	0.078	0.077	0.020	1.1%
Pentachlorophenol	ND	ND	0.020	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 G168 and G181.**

Analyst

Review

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	10-15-99
Laboratory Number:	10-11-TBN	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	10-11-99
Condition:	Cool and Intact	Date Analyzed:	10-14-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	96%

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 G168 and G181.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	10-15-99
Laboratory Number:	G168	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	10-11-99
Condition:	N/A	Date Analyzed:	10-14-99
		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 G168 and G181.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	11-04-TCM QA/QC	Date Reported:	11-05-99
Laboratory Number:	G132	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	11-04-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.076	0.076	0.0%	0% - 30%
Barium	ND	ND	0.001	1.07	1.06	0.4%	0% - 30%
Cadmium	ND	ND	0.001	0.013	0.013	0.0%	0% - 30%
Chromium	ND	ND	0.001	0.002	0.002	0.0%	0% - 30%
Lead	ND	ND	0.001	0.460	0.459	0.2%	0% - 30%
Mercury	ND	ND	0.0005	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	0.076	0.577	100.2%	80% - 120%
Barium	1.00	1.07	2.06	99.7%	80% - 120%
Cadmium	0.250	0.013	0.264	100.4%	80% - 120%
Chromium	0.250	0.002	0.251	99.6%	80% - 120%
Lead	0.250	0.460	0.709	99.9%	80% - 120%
Mercury	0.125	ND	0.125	100.0%	80% - 120%
Selenium	0.500	ND	0.499	99.8%	80% - 120%
Silver	0.250	ND	0.251	100.4%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples G132, G168, G181, G191 and G243.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

7420

Client / Project Name	Project Location
HANOVER COMPRESSION	71453
Sampler: GEORGE PHILLIPS	**Client No.** 904302

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP w/o HgP						Remarks
~~#661.~~ 2 [illegible] Comp.	10.7.99	8:51	G1168	Soil	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	10.7.99	9:10	[signature]	10.7.99	9:10
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

Env. JN: 92132

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator Halliburton Energy Services
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Main Yard
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	4109 E. Main St Farmington New Mexico

9. 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:
Continuation of wash bay Solids

RECEIVED
NOV 16 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 30 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown (Waste Management Facility Authorized Agent) TITLE: Landfarm Manager DATE: 11-15-99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 11/16/99

APPROVED BY: Montgomery Kruger TITLE: Environmental Geologist DATE: 11/16/99

NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Halliburton 4109 E Main Farmington N Mex	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): Same as above - Wash Bay Attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR):
4. Source and Description of Waste Continuation of Wash Bay Solids	

I, DOUG HODGES (Print Name) representative for: Halliburton 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
✓ RCRA Hazardous Waste Analysis
✓ Chain of Custody
__ Other (description):

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): Doug Hodges

Title: Maintenance Supervisor

Date: 11-12-99

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

REAFFIRMATION OF WASTE STATUS / NON-EXEMPT WASTE

I hereby certify that the attached Request For Approval and Certificate of Waste Status are for materials generated using the same procedures and equipment employed to generate the waste on which Toxicity Characteristic Leaching Procedures (TCLP) analysis was performed. I further certify that said material is from operations in the immediate Four Corners area.

Date of TCLP 01/13/99

Printed Name DOUGLAS HODGES

Title / Agency MAINTENANCE SUP / HALLIBURTON

Address 4109 E MAIN

FARMINGTON NM

Signature Douglas Hodges

Date 11-12-99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

January 28, 1999

Mr. Ed Shannon
Halliburton Energy Services, Inc.
4109 East Main Street
Farmington, New Mexico 87401

Project No.: 92132

Dear Mr. Shannon,

Enclosed are the analytical results for the sample collected from the location designated as "East Main, Farmington-Wash Bay Solids". One soil sample was collected by Envirotech personnel on 01/13/99, and delivered to the Envirotech laboratory on 01/13/99 for Hazardous Waste Characterization analysis (Volatiles, Semi-Volatiles, Trace Metals, Corrosivity, Ignitability, and Reactivity).

The sample was documented on Envirotech Chain of Custody No. 6498 and assigned Laboratory No. E499 for tracking purposes. The sample was extracted on 01/18/99 and analyzed 01/18/99 through 01/27/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS/sws

92132/tclp0199.lb1

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-15-99
Lab ID#:	E499	Date Sampled:	01-13-99
Sample Matrix:	Soil	Date Received:	01-13-99
Preservative:	Cool	Date Analyzed:	01-15-99
Condition:	Cool and Intact	Chain of Custody:	6498

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 7.98**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **East Main, Farmington.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-19-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	98%
	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: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-21-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.123	0.020	200
p,m-Cresol	0.054	0.040	200
2,4,6-Trichlorophenol	0.060	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	0.556	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **East Main, Farmington.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-22-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**0.054**	**0.020**	**5.0**
Hexachloroethane	**0.353**	**0.020**	**3.0**
Nitrobenzene	**0.202**	**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	**98%**

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: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-23-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Analyzed:	01-23-99
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.0001**	**5.0**
Barium	**1.53**	**0.001**	**21**
Cadmium	**0.0329**	**0.0001**	**0.11**
Chromium	**0.0301**	**0.0001**	**0.60**
Lead	**0.0309**	**0.0001**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.0001**	**5.7**
Silver	**ND**	**0.0001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-19-99
Laboratory Number:	01-19-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-19-99
Laboratory Number:	01-18-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	01-18-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	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: **QA/QC for samples E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	ND	0.050	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-21-99
Laboratory Number:	01-21-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-21-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-21-99
Laboratory Number:	01-18-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-21-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	0.123	0.122	0.020	1.0%
p,m-Cresol	0.054	0.053	0.040	2.0%
2,4,6-Trichlorophenol	0.060	0.059	0.020	1.0%
2,4,5-Trichlorophenol	ND	ND	0.020	0.0%
Pentachlorophenol	0.556	0.551	0.020	0.8%

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 E499 and E503.**

Analyst

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-22-99
Laboratory Number:	01-21-TBN - Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**96%**

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 E499 and E503.**

Analyst

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-22-99
Laboratory Number:	01-18-TBN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool and Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**95%**

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-22-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	01-18-99
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	**0.054**	**0.053**	**1.0%**	**0.020**
Hexachloroethane	**0.353**	**0.349**	**1.0%**	**0.020**
Nitrobenzene	**0.202**	**0.200**	**0.9%**	**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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-23-TCM QA/QC	Date Reported:	01-23-99
Laboratory Number:	E449	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	01-23-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Barium	**ND**	**ND**	**0.001**	**1.53**	**1.53**	**0.0%**	**0% - 30%**
Cadmium	**ND**	**ND**	**0.0001**	**0.0329**	**0.0324**	**1.5%**	**0% - 30%**
Chromium	**ND**	**ND**	**0.0001**	**0.0301**	**0.0300**	**0.3%**	**0% - 30%**
Lead	**ND**	**ND**	**0.0001**	**0.0309**	**0.0307**	**0.6%**	**0% - 30%**
Mercury	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Selenium	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Silver	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	**0.1000**	**ND**	**0.0997**	**99.7%**	**80% - 120%**
Barium	**1.000**	**1.53**	**2.53**	**100.0%**	**80% - 120%**
Cadmium	**0.0500**	**0.0329**	**0.0826**	**99.6%**	**80% - 120%**
Chromium	**0.0500**	**0.0301**	**0.0802**	**100.1%**	**80% - 120%**
Lead	**0.1000**	**0.0309**	**0.131**	**99.8%**	**80% - 120%**
Mercury	**0.0250**	**ND**	**0.0248**	**99.2%**	**80% - 120%**
Selenium	**0.1000**	**ND**	**0.0998**	**99.8%**	**80% - 120%**
Silver	**0.0500**	**ND**	**0.0499**	**99.8%**	**80% - 120%**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples E499 and E503.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

6498

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
HALLIBURTON	EAST MAIN FARMINGTON	
Sampler: Morris D. Young	Client No. 92132	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP W/O H&P						Remarks
Wash Bay Solids	1/13/99	12:10	E499	Soil	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Morris D. Young	1/13/99	12:30	Christ Waeter	1.13.99	12:30
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

RECEIVED
NOV 04 1999
Environmental Bureau
Oil Conservation Division

Env. JN: _____

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: ☐ Non-Exempt: ☒	4. Generator Smith Drilling & Completions
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Shop
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Serrano's
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	3650 Bloomfield Hwy Farmington NM.

9. 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:

Continuation of oil/water separator sludge disposal

RECEIVED
NOV - 1 1999
OIL CON. DIV.
DIST. 3

Estimated Volume ± 18 bbl cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown TITLE: Landfarm Manager DATE: 10-27-99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 11/2/99

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 11/4/99

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Smith International Drilling & Completions 3650 Bloomfield Hwy. Farmington, NM 87401	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): S.A.	Location of the Waste (Street address &/or ULSTR):
Attach list of originating sites as appropriate	
4. Source and Description of Waste Wash bay Soils @ oil/water Separator Continuation	

I, Eppie Sanchez (Print Name) representative for: Smith International Drilling & Completions 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

x **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):

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): Eppie Sanchez

Title: District Manager FAR-1191

Date: 10-27-99

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

REAFFIRMATION OF WASTE STATUS / NON-EXEMPT WASTE

I hereby certify that the attached Request For Approval and Certificate of Waste Status are for materials generated using the same procedures and equipment employed to generate the waste on which Toxicity Characteristic Leaching Procedures (TCLP) analysis was performed. I further certify that said material is from operations in the immediate Four Corners area.

Date of TCLP 10.27.98

Printed Name Eppie Sanchez

Title / Agency District Mgr.

Address 3650 Bloomfield Hwy

Farmington, NM

Signature Eppie T Sanchez

Date 10.27.99

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Analytical Results

Smith Drilling and Completions
3650 Bloomfield Highway
Farmington, NM

DHL Analytical **Date:** *19-Nov-98*

CLIENT:	SMITH INTERNATIONAL
Project:	SD & C Farmington, NM
Lab Order:	9810105

CASE NARRATIVE

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

The sludge sample was evaluated for hazardous waste characteristics using Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.
The stormwater sample was evaluated using Standard Methods and EPA Methods for Chemical Analysis of Water and Wastes.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where otherwise noted in the following.: The MS/MSD result for barium is slightly above the control limit. This was due to the fact that the TCLP extract being spiked had approximately twice the concentration of barium present than the spiking amount. The spike was only 6% above the control limit and the LSC and LCSD are both within control limits. Therefore no sample result was adversely affected.

WASTE EVALUATION

The sludge sample SL-1-SDC-NM (DHL ID# 9810105-01) had no results that exceeded TCLP or RCRA characterization limits and is therefore, non-hazardous for the parameters tested under the RCRA guidelines.

DHL ANALYTICAL

FLASHPOINT ANALYTICAL RESULTS

DHL PROJECT # : 9810105
CLIENT: Smith International, Inc.
CLIENT PROJECT # : N/A
LOCATION: SD & C Farmington, NM

Ignitability (Flashpoint) Analyses of Solid

ANALYTICAL METHOD:	**EPA 1010**	**SAMPLE DATE:**	10/27/98
MATRIX:	Solid	**SAMPLE REC'D:**	10/27/98
ANALYST:	DL	**SAMPLE CONDITION:**	GOOD
REPORT GENERATED BY:	LB	**ANALYSIS DATE:**	11/7/98
QA REVIEW:	JD	**HOLDING TIME (DAYS):**	11

SAMPLE ID:	SL-1-SDC-NM
Flashpoint	> 90 ° C

Data Review

2300 Double Creek Drive • Round Rock, TX 78664 • Phone (512) 388-8222 • Fax (512) 388-8229

DHL Analytical

Date: *19-Nov-98*

CLIENT:	SMITH INTERNATIONAL	**Client Sample ID:**	SL-1-SDC-NM
Project Name:	SD & C Farmington, NM	**Lab ID:**	9810105-01A
Project No:	SD & C Farmington, NM	**Collection Date:**	10/27/98 9:15:00 AM
Lab Order:	9810105	**Matrix:**	SLUDGE

Analyses	Result	RL	Qual	Units	TCLP Limits	DF	Date Analyzed
TCLP SEMI-VOLATILES		**SW1311/8270C**					Analyst: **FL**
1,4-Dichlorobenzene	ND	0.010		mg/L	7.5	1	11/17/98 7:56:00 PM
2,4,5-Trichlorophenol	ND	0.010		mg/L	400	1	11/17/98 7:56:00 PM
2,4,6-Trichlorophenol	ND	0.010		mg/L	2	1	11/17/98 7:56:00 PM
2,4-Dinitrotoluene	ND	0.010		mg/L	0.13	1	11/17/98 7:56:00 PM
2-Methylphenol	0.0132	0.010		mg/L	200	1	11/17/98 7:56:00 PM
3&4-Methylphenol	0.0148	0.010		mg/L	200	1	11/17/98 7:56:00 PM
Hexachlorobenzene	ND	0.010		mg/L	0.13	1	11/17/98 7:56:00 PM
Hexachlorobutadiene	ND	0.010		mg/L	0.5	1	11/17/98 7:56:00 PM
Hexachloroethane	ND	0.010		mg/L	3	1	11/17/98 7:56:00 PM
Nitrobenzene	ND	0.010		mg/L	2	1	11/17/98 7:56:00 PM
Pentachlorophenol	ND	0.010		mg/L	100	1	11/17/98 7:56:00 PM
Pyridine	ND	0.010		mg/L	5	1	11/17/98 7:56:00 PM
TCLP VOLATILES		**SW1311/8260B**					Analyst: **FL**
1,1-Dichloroethene	ND	0.0050		mg/L	0.7	1	11/4/98 5:35:00 PM
1,2-Dichloroethane	ND	0.0050		mg/L	0.5	1	11/4/98 5:35:00 PM
1,4-Dichlorobenzene	ND	0.0050		mg/L	7.5	1	11/4/98 5:35:00 PM
2-Butanone	ND	0.050		mg/L	200	1	11/4/98 5:35:00 PM
Benzene	0.00504	0.0050		mg/L	0.5	1	11/4/98 5:35:00 PM
Carbon tetrachloride	ND	0.0050		mg/L	0.5	1	11/4/98 5:35:00 PM
Chlorobenzene	ND	0.0050		mg/L	100	1	11/4/98 5:35:00 PM
Chloroform	ND	0.0050		mg/L	6	1	11/4/98 5:35:00 PM
Tetrachloroethene	ND	0.0050		mg/L	0.5	1	11/4/98 5:35:00 PM
Trichloroethene	ND	0.0050		mg/L	0.5	1	11/4/98 5:35:00 PM
Vinyl chloride	ND	0.0050		mg/L	0.2	1	11/4/98 5:35:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds TCLP Maximum Concentration Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

DHL Analytical

Date: *19-Nov-98*

CLIENT:	SMITH INTERNATIONAL	**Client Sample ID:**	SL-1-SDC-NM
Project Name:	SD & C Farmington, NM	**Lab ID:**	9810105-01B
Project No:	SD & C Farmington, NM	**Collection Date:**	10/27/98 9:15:00 AM
Lab Order:	9810105	**Matrix:**	SLUDGE

Analyses	Result	RL	Qual	Units	TCLP Limits	DF	Date Analyzed
TCLP MERCURY		**SW1311/7470A**					Analyst: **BZ**
Mercury	0.0641	0.020		mg/L	0.2	1	11/4/98 1:10:00 PM
TCLP METALS		**SW1311/6010B**					Analyst: **BZ**
Arsenic	ND	0.016		mg/L	5	1	11/4/98 4:03:00 PM
Barium	2.01	0.0060		mg/L	100	5	11/4/98 4:31:00 PM
Cadmium	ND	0.0029		mg/L	1	1	11/4/98 4:03:00 PM
Chromium	ND	0.012		mg/L	5	1	11/4/98 4:03:00 PM
Lead	0.0570	0.014		mg/L	5	1	11/4/98 4:03:00 PM
Selenium	ND	0.013		mg/L	1	1	11/4/98 4:03:00 PM
Silver	ND	0.0072		mg/L	5	1	11/4/98 4:03:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds TCLP Maximum Concentration Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

DHL Analytical

Date: *18-Nov-98*

CLIENT:	SMITH INTERNATIONAL	**Client Sample ID:**	SL-1-SDC-NM
Project Name:	SD & C Farmington, NM	**Lab ID:**	9810105-01B
Project No:	SD & C Farmington, NM	**Collection Date:**	10/27/98 9:15:00 AM
Lab Order:	9810105	**Matrix:**	SLUDGE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH SOIL		**SW9045B**				Analyst: **JV**
pH	7.58	0		pH Units	1	11/3/98 9:50:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

DHL Analytical

Date: *18-Nov-98*

CLIENT:	SMITH INTERNATIONAL	**Client Sample ID:**	SW-1-SDC-NM
Project Name:	SD & C Farmington, NM	**Lab ID:**	9810105-02B
Project No:	SD & C Farmington, NM	**Collection Date:**	10/27/98 8:45:00 AM
Lab Order:	9810105	**Matrix:**	AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS		**E160.2**				Analyst: **JA**
Suspended Solids (Residue, Non-Filterable)	240	5.0		mg/L	1	11/3/98 4:00:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Austin Analytical Laboratory
2401 Holly Street
P. O. Box 1088
Austin, TX 78767-8814
(512) 505-7840
FAX: 505-7843

November 9, 1998

Jacob Vasquez
DHL Analytical
2300 Double Creek Drive
Round Rock, Texas 78664
Phone:388-8222, Fax:388-8229

Enclosed is the laboratory report for the following sample batch:

Sample Batch ID:	98104493
Job Number:	DHLANAL
Date Submitted:	10/29/98 11:10
Submitted by:	Cindy Taylor
Received by:	E. Dudak-Pawlik
Sampler:	

The attached analysis results were determined in accordance with the referenced test methods. If you have any question concerning this laboratory report, please contact us at (512) 505-7842.

Sincerely,

Larry K. Mutschler
Acting Laboratory Supervisor
Austin Analytical Laboratory

enclosures

Laboratory Report

Report Date: Monday, November 09, 1998

Client ID	**SL-1-SDC-NM (9810105-01C)**		
Lab Sample ID	**98104493 - 24493**	**Collection Date**	**10/27/98 9:15:00 AM**
Date Submitted	**10/29/98 11:10:00 AM**	**Sampler**	
Submitted by	**Cindy Taylor**	**Sample Matrix**	**SLUDGE**
Received by	**E. Dudak-Pawlik**	**QC Sample ID**	**AA14537**

Parameter Name	Result(s)	Units	Reference	Analysis Date	Reporting Limit
Reactive cyanide	179	mg/Kg as HCN	SW846.7.3	11/6/98	25
Reactive sulfide	< 50	mg/Kg as H2S	SW846.7.3	11/6/98	50

Client ID	**SW-1-SDC-NM (9810105-02A)**		
Lab Sample ID	**98104493 - 24494**	**Collection Date**	**10/27/98 8:45:00 AM**
Date Submitted	**10/29/98 11:10:00 AM**	**Sampler**	
Submitted by	**Cindy Taylor**	**Sample Matrix**	**Water**
Received by	**E. Dudak-Pawlik**	**QC Sample ID**	**AA14538**

Parameter Name	Result(s)	Units	Reference	Analysis Date	Reporting Limit
Total Phosphate	5.84	mg/L as P	SM4500P	10/29/98	0.196

Client ID	**SW-1-SDC-NM (9810105-02C)**		
Lab Sample ID	**98104493 - 24495**	**Collection Date**	**10/27/98 8:45:00 AM**
Date Submitted	**10/29/98 11:10:00 AM**	**Sampler**	
Submitted by	**Cindy Taylor**	**Sample Matrix**	**Water**
Received by	**E. Dudak-Pawlik**	**QC Sample ID**	**AA14539**

Parameter Name	Result(s)	Units	Reference	Analysis Date	Reporting Limit
Oil and Grease	5.5	mg/L	E1664	11/4/98	2.9

QC Report for sample batch: 98104493

Reactive cyanide

QC Batch Number: CN-RX-1162
Analysis Date: 11/06/98
QC Sample ID: AA14537

Method blank	< 0.004	mg HCN
Laboratory control standard	6.64	mg HCN
Laboratory control standard measurement	5.25	mg HCN
Laboratory control standard recovery	79.1	% Recovery

Oil and Grease

QC Batch Number: O&G_SP-1146
Analysis Date: 11/04/98
QC Sample ID: AA14569

Method blank	< 2.9	mg/L
Laboratory control standard	40.0	mg/L
Laboratory control standard measurement	36.8	mg/L
Laboratory control standard recovery	92.0	% Recovery
Matrix spike added	40.0	mg/L
Matrix spiked sample result	39.2	mg/L
Matrix spike recovery	98.0	% Recovery

Reactive sulfide

QC Batch Number: S-RX-1161
Analysis Date: 11/06/98
QC Sample ID: AA14537

Method blank	< 0.0013	mg H2S
Laboratory control standard	22.7	mg H2S
Laboratory control standard measurement	21.4	mg H2S
Laboratory control standard recovery	94.3	% Recovery

Total Phosphate aqueous

QC Batch Number: TPO4-1121
Analysis Date: 10/29/98
QC Sample ID: AA14502

Method blank	< 0.02	mg/L as P
Laboratory control standard	0.163	mg/L as P
Laboratory control standard measurement	0.163	mg/L as P
Laboratory control standard recovery	100	% Recovery
Laboratory control standard duplicate	0.163	mg/L as P
Laboratory control standard duplicate measurement	0.157	mg/L as P
Laboratory control standard duplicate recovery	96.3	% Recovery
LCS/LCSD relative percent deviation	3.77	RPD

QC Report for sample batch: 98104493

Total Phosphate aqueous

QC Batch Number: TPO4-1123
Analysis Date: 10/29/98
QC Sample ID: AA14538

Matrix spike added	3.26	mg/L as P
Matrix spiked sample result	9.14	mg/L as P
Matrix spike recovery	101	% Recovery
Matrix duplicate	6.00	mg/L as P
Matrix duplicate relative percent deviation	2.70	RPD

Unspiked sample results:

Analysis parameter	Result	Units	QC Sample ID
Oil and Grease	< 2.9	mg/L	AA14569
Total Phosphate	5.84	mg/L as P	AA14538

CHAIN OF CUSTODY RECORD

Holly Street Laboratory
2401 Holly Street
Austin, TX 78702
(512) 505-7840 FAX (512) 505-7843

Client DHL Analytical
Sampler
Contact Jacob Vasquez

Date 10-29-98
Page 1 of 1

☐ Cost Tracking Incident W.O. Number Batch Number 9810493

	Sample I.D./Description	Matrix	Date/Time Collected	Analysis Request	TAT Request	Lab I.D.
1	SL-1-SDC-NM (9810105-01C)	sludge	10-27-98 9:15AM	Reactivity	1/wk	24493
2	SW-1-SDC-NM (9810105-02A)	Water	10-27-98 8:45AM	Total Phosphorus	1/wk	24494
3	SW-1-SDC-NM (9810105-02C)	Water	10-27-98 8:45AM	1664	1/wk	24495
4						
5						
6						
7						
8						
9						
10						
11						
12						

List possible sample hazards

1. Relinquished by C Taylor of DHL Date/Time 10/29/98 11:10AM
2. Received by [illegible] of AAL Date/Time 10/29/98 11:10 am
3. Relinquished by ____ of ____ Date/Time ____
4. Received by ____ of ____ Date/Time ____
5. Relinquished by ____ of ____ Date/Time ____
6. Received by ____ of ____ Date/Time ____

Tests Available:
PCB, TPH, Pb, Fe, Cu, Ca, O&G, TSS, COD, TOC, pH, Conductivity, PLM, PCM

Matrix Types:
Water, Oil, Soil, Paint, Wipe, Filter, Sludge, Bulk

TAT Request:
Priority 1 – 48 hr
Priority 2 – 72 hr
Priority 3 – 2 wk

PM

DHL Analytical

Date: *18-Nov-98*

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-2252** Batch ID: **2252** Test Code: **SW6010B** Units: **µg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 3:29:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	16							
Barium	ND	1.3							
Cadmium	ND	2.9							
Chromium	ND	12							
Lead	ND	14							
Selenium	ND	13							
Silver	ND	7.2							

Sample ID: **MB-2255** Batch ID: **2255** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS2_981104A** Analysis Date: **11/4/98 4:41:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	5							
1,2-Dichloroethane	ND	5							
1,4-Dichlorobenzene	ND	5							
2-Butanone	ND	50							
Benzene	ND	5							
Carbon tetrachloride	ND	5							
Chlorobenzene	ND	5							
Chloroform	ND	5							
Tetrachloroethene	ND	5							
Trichloroethene	ND	5							
Vinyl chloride	ND	5							

Sample ID: **MB-2256** Batch ID: **2256** Test Code: **SW1311/7470** Units: **mg/L**
Run ID: **CVAA_981104A** Analysis Date: **11/4/98 1:10:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.02							

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

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-2270** Batch ID: **2270** Test Code: **SW1311/8270** Units: **mg/L**
Run ID: **GCMS3_981117A** Analysis Date: **11/17/98 7:23:00 PM** Prep Date: **11/6/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	0.01							
2,4,5-Trichlorophenol	ND	0.01							
2,4,6-Trichlorophenol	ND	0.01							
2,4-Dinitrotoluene	ND	0.01							
2-Methylphenol	ND	0.01							
3&4-Methylphenol	ND	0.01							
Hexachlorobenzene	ND	0.01							
Hexachlorobutadiene	ND	0.01							
Hexachloroethane	ND	0.01							
Nitrobenzene	ND	0.01							
Pentachlorophenol	ND	0.01							
Pyridine	ND	0.01							

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

DHL Analytical

Date: *18-Nov-98*

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT

Sample Duplicate

Sample ID: **9810117-01E DUP** Batch ID: **TSS_W-11/03/98** Test Code: **E160.2** Units: **mg/L**
Run ID: **WC_981103B** Analysis Date: **11/3/98 4:00:00 PM** Prep Date:

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids (Residue, Non-Filter	42	5	0	0.0%	0	0	6.9%	20	

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

DHL Analytical

Date: *18-Nov-98*

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **9810105-01B MS** Batch ID: **2252** Test Code: **SW1311/6010** Units: **mg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 4:11:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	1.054	0.016	1	105.4%	80	120			
Cadmium	0.981	0.0029	1	98.1%	80	120			
Chromium	0.8832	0.012	1	88.3%	80	120			
Lead	0.9112	0.014	1	85.4%	80	120			
Selenium	1.119	0.013	1	111.9%	80	120			
Silver	1.119	0.0072	1	111.9%	80	120			

Sample ID: **9810105-01B MS** Batch ID: **2252** Test Code: **SW1311/6010** Units: **mg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 4:39:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.271	0.0065	1	126.1%	80	120			S

Sample ID: **9810105-01B MSD** Batch ID: **2252** Test Code: **SW1311/6010** Units: **mg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 4:19:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	1.052	0.016	1	105.2%	80	120	0.2%	15	
Cadmium	0.9785	0.0029	1	97.9%	80	120	0.3%	15	
Chromium	0.883	0.012	1	88.3%	80	120	0.0%	15	
Lead	0.928	0.014	1	87.1%	80	120	1.8%	15	
Selenium	1.122	0.013	1	112.2%	80	120	0.3%	15	
Silver	1.08	0.0072	1	108.0%	80	120	3.6%	15	

Sample ID: **9810105-01B MSD** Batch ID: **2252** Test Code: **SW1311/6010** Units: **mg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 4:51:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.268	0.0065	1	125.8%	80	120	0.1%	15	S

Sample ID: **9811001-01A MS** Batch ID: **2255** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS2_981104A** Analysis Date: **11/4/98 8:16:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	52.38	5	50	104.8%	75	125			
Benzene	50.28	5	50	100.6%	75	125			
Chlorobenzene	52.91	5	50	105.8%	75	125			
Toluene	48.03	5	50	96.1%	75	125			
Trichloroethene	52.02	5	50	104.0%	75	125			

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

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

Sample ID: **9811001-01A MSD** Batch ID: **2255** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS2_981104A** Analysis Date: **11/4/98 8:43:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	51.53	5	50	103.1%	75	125	1.6%	20	
Benzene	49.4	5	50	98.8%	75	125	1.8%	20	
Chlorobenzene	52.41	5	50	104.8%	75	125	0.9%	20	
Toluene	46.94	5	50	93.9%	75	125	2.3%	20	
Trichloroethene	51.32	5	50	102.6%	75	125	1.4%	20	

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

DHL Analytical

Date: *18-Nov-98*

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-2252** Batch ID: **2252** Test Code: **SW6010B** Units: **µg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 3:37:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	1104	16	1000	110.4%	80	120			
Barium	1079	1.3	1000	107.9%	80	120			
Cadmium	1077	2.9	1000	107.7%	80	120			
Chromium	1034	12	1000	103.4%	80	120			
Lead	1093	14	1000	109.3%	80	120			
Selenium	1163	13	1000	116.3%	80	120			
Silver	1139	7.2	1000	113.9%	80	120			

Sample ID: **LCSD-2252** Batch ID: **2252** Test Code: **SW6010B** Units: **µg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 3:45:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	1122	16	1000	112.2%	80	120	1.6%	15	
Barium	1093	1.3	1000	109.3%	80	120	1.3%	15	
Cadmium	1098	2.9	1000	109.8%	80	120	2.0%	15	
Chromium	1077	12	1000	107.7%	80	120	4.1%	15	
Lead	1094	14	1000	109.4%	80	120	0.1%	15	
Selenium	1171	13	1000	117.1%	80	120	0.6%	15	

Sample ID: **LCSD-2252** Batch ID: **2252** Test Code: **SW6010B** Units: **µg/L**
Run ID: **ICP_981104A** Analysis Date: **11/4/98 3:55:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	1118	7.2	1000	111.8%	80	120	1.8%	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

CLIENT: SMITH INTERNATIONAL
Work Order: 9810105
Project: SD & C Farmington, NM

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-2255** Batch ID: **2255** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS2_981104A** Analysis Date: **11/4/98 4:14:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	52.05	5	50	104.1%	75	125			
1,2-Dichloroethane	53.01	5	50	106.0%	75	125			
1,4-Dichlorobenzene	52.44	5	50	104.9%	75	125			
2-Butanone	182	50	200	91.0%	50	150			
Benzene	52.37	5	50	104.7%	75	125			
Carbon tetrachloride	54	5	50	108.0%	75	125			
Chlorobenzene	53.91	5	50	107.8%	75	125			
Chloroform	51.56	5	50	103.1%	75	125			
Tetrachloroethene	53.61	5	50	107.2%	75	125			
Trichloroethene	54.56	5	50	109.1%	75	125			
Vinyl chloride	58.02	5	50	116.0%	75	125			

Sample ID: **LCS-2256** Batch ID: **2256** Test Code: **SW1311/7470** Units: **mg/L**
Run ID: **CVAA_981104A** Analysis Date: **11/4/98 1:10:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	4.666	0.02	5	93.3%	77	120			

Sample ID: **LCSD-2256** Batch ID: **2256** Test Code: **SW1311/7470** Units: **mg/L**
Run ID: **CVAA_981104A** Analysis Date: **11/4/98 1:10:00 PM** Prep Date: **11/4/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	4.373	0.02	5	87.5%	77	120	6.5%	15	

Sample ID: **LCS-2270** Batch ID: **2270** Test Code: **SW1311/8270** Units: **mg/L**
Run ID: **GCMS3_981117A** Analysis Date: **11/17/98 6:50:00 PM** Prep Date: **11/6/98**

Analyte	Result	PQL	SPK value	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	0.03	0.01	0.04	75.0%	40	140			
2,4,5-Trichlorophenol	0.0308	0.01	0.04	77.0%	40	140			
2,4,6-Trichlorophenol	0.0338	0.01	0.04	84.5%	40	140			
2,4-Dinitrotoluene	0.018	0.01	0.04	45.0%	40	140			
2-Methylphenol	0.0288	0.01	0.04	72.0%	40	140			
3&4-Methylphenol	0.0664	0.01	0.08	83.0%	40	140			
Hexachlorobenzene	0.0348	0.01	0.04	87.0%	40	140			
Hexachlorobutadiene	0.0332	0.01	0.04	83.0%	40	140			
Hexachloroethane	0.0244	0.01	0.04	61.0%	40	140			
Nitrobenzene	0.0336	0.01	0.04	84.0%	40	140			
Pentachlorophenol	0.0412	0.01	0.04	103.0%	40	140			
Pyridine	0.0474	0.01	0.04	118.5%	40	140			

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

Spreadsheet

Smith Drilling and Completions
3650 Bloomfield Highway
Farmington, NM

Cost Estimate
Sump Sludge Removal and Disposal
Smith Drilling and Completions
3650 Bloomfield Highway
Farmington, NM

	Units	Rate	Unit of Measure	Total
OCD Application				
Professional Personnel			hour	
Supplies			lump sum	
Sump Clean Out				
Professional Personnel			hour	
Vacuum Truck and Operator				
Vacuum Truck and Operator - Mobilization			lump sum	
Transportation				
Stabilization				
Disposal				
Summary Letter				
Professional Personnel			hour	
Administrative			hour	
Supplies/Copies/Postage			lump sum	

Indicate the appropriate unit of measure.
"Lump sum" valid only where indicated on the Sii provided spreadsheet.

DHL ANALYTICAL
2300 Double Creek Drive • Round Rock, TX 78664
Phone (512) 388-8222 • FAX (512) 388-8229

№ 02693

CHAIN-OF-CUSTODY

CLIENT: SMITH INTERNATIONAL INC.
ADDRESS: P.O. BOX 60068 HOUSTON TX 77205-0068
PHONE: (281) 233-5715 FAX (281) 233-5620
DATA REPORTED TO: BERNICE PETERSEN

DATE: ~~10/26/98~~ BP 10/27/98 10/27/98 PAGE 1 OF 1
DHL WORK ORDER #: 9810105
SITE LOCATION: SD+C FARMINGTON, NM
CLIENT PROJECT #: _____ COLLECTOR: B. PETERSEN

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐	GAS - MOD 8015 ☐	DIESEL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐ PCBS ☐	PAH 8270 ☐ 8310 ☐	TCLP - METALS (RCRA)	TCLP - PEST ☐ HERB ☐	METALS - PRIORITY POLLUTANT ☐ TAL ☐ RCRA ☐	LEAD - TOTAL ☐ D.W. 239.2 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ (SS) pH 150.1 ☐ 9045 ☐	GEOTECHNICAL ☐ with hydraulic conductivity ☐	HERBICIDES 8151	TOTAL CHLORIDE ☐ 9056 ANIONS ☐	Phosphows	Oil + Grease	FIELD NOTES
~~SL-1-SDC-NM~~		~~10/26/98~~			GLASS	1				✓									✓	✓											BP 10/27/98
~~SL-1 SDC-NM~~		~~10/27/98 0845~~		~~WATER~~	PLASTIC	1				✓									✓												BP 10/27/98
SL-1-SDC-NM	01	10/27/98	0915	SOLID	GLASS	1				✓									✓	✓											AIRBILL 805542752103
SW-1-SDC-NM	02	↓	0845	WATER	PLASTIC	1			✓	✓																		✓			
SW-1-SDC-NM	02		0845	WATER	PLASTIC	1				✓												✓									
SW-1-SDC-NM	02		0845	WATER	GLASS	1	✓			✓																			✓		
SL-1-SDC-NM	01	↓	0915	SOLID	PLASTIC	1				✓									✓			✓								↓	

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
Bernice Peterson	10/27/98 11:25	FedEx	10-27-98 11:25
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
FedEx 10-27-98	9:50AM.	J. Vasquez	10-27-98 9:50AM.
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

☒ DHL DISPOSAL @ $5.00 each ☐ Return ☐ Pickup

TAT
RUSH ☐
24-HOUR ☐
48-HOUR ☐
NORMAL ☒
OTHER ☐ ____
PO # _____

LABORATORY USE ONLY:
RECEIVING TEMP: 0.8°C
CHAIN OF CUSTODY SEALS ☐
☒ CARRIER BILL # 805-542752103
☐ PICKED UP BY DHL ANALYTICAL STAFF
☐ HAND DELIVERED

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

RECEIVED
OCT 18 1999
Environmental Bureau
Oil Conservation Division

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: ☐ Non-Exempt: ☒	4. Generator Stewart & Stevenson
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Main Yard
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Serrano's
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	1515 W. Murray Dr. Farmington

9. 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:
Waste by Solids
TCLP Attached.

Compressor Overhauling DSJ

RECEIVED
OCT - 6 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 20 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown (Waste Management Facility Authorized Agent) TITLE: Landfarm Manager DATE: 10-6-99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 10/8/99

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 10/18/99

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Stewart & Stevenson Power Inc. 1515 West Murray Drive Farmington, NM 87401	Envirotech Inc. Soil Remediation Remediation Facility Landfarm #2, Hilltop, New Mexico 5796 US Hwy 64, Farmington, NM 87401
3. Originating Site (name): Stewart & Stevenson Power Inc. 1515 West Murray Drive Farmington, NM 87401 **Attach list of originating sites as appropriate**	**Location of the Waste (Street address &/or ULSTR):**
4. Source and Description of Waste Wash Bay Sludge Pit	

I, Dale Stevens (Print Name) representative for: Stewart & Stevenson Power 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

XX **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
XX RCRA Hazardous Waste Analysis
XX Chain of Custody
___ Other (description):

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): Dale Stevens

Title: Branch Manager

Date: 10/6/99

ANALYTICAL RESULTS
FOR

Stewart & Stevenson Power
1515 W. Murray Drive
Farmington, New Mexico 87401
Attn: Dale Stevens

Name of Collector : Wayne Work

ASSIGNED TRANS-ENVIRO #	CUSTOMER ID	SAMPLE MATRIX	SITE, DATE & TIME OF COLLECTION
990125-04-A	---	Sludge	Farmington, New Mexico P.O. #452135

Laboratory Information : Sample was refrigerated upon receipt and analyzed as received.

Released by:
TRANS-ENVIRO ANALYTICAL SERVICES, INC.

Mark Kalmeyer
Lab Manager

H. Sitabkhan
Husein Sitabkhan
President/Lab Director

19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0806 • FAX: (216) 663-0656

Laboratory Accreditation's and Certifications

OHIO EPA DIVISION of DRINKING and GROUNDWATER - 4041
PA Dept. of ENVIRONMENTAL RESOURCES - 68-434
NEW YORK STATE Dept. of HEALTH - 11167
STATE of TENNESSEE Div. of UNDERGROUND STORAGE TANKS
ALABAMA Dept. of ENVIRONMENTAL MANAGEMENT - 41020
KENTUCKY Dept. of ENVIRONMENTAL PROTECTION - 90085
STATE of MICHIGAN Dept. of PUBLIC HEALTH
WEST VIRGINIA Dept. of ENVIRONMENTAL PROTECTION- 238
AMERICAN INDUSTRIAL HYGIENE ASSOCIATION - 18677
OHIO Dept. of HEALTH LEAD PROGRAM - 10023

Assumed Client Responsibility and Disclaimer

Trans-Enviro Analytical Services, Inc. (TEAS) shall provide the services contained in accordance with good laboratory practice (GLP), and accepted analytical procedures and shall be free from material defect in workmanship. The analytical data is limited to findings based upon the sample received for analysis and/or information provided by the client. TEAS's sole obligation hereunder shall be to reperform services which are materially deficient because of TEAS's failure to perform said services in accordance with the Agreement and the standards of the laboratory analytical protocol. Any such deficiencies should be reported in writing to TEAS within thirty days of the discovery thereof, but in no event later than one year from the performance of the services by TEAS.

Except as aforementioned, TEAS makes no express or implied warranty of merchantability of fitness for a particular purpose on the services and/or related materials furnished by TEAS. In no event shall TEAS be liable for any indirect, special or consequential damages, nor shall TEAS be liable in any event, including its obligation to reperform, for any losses, damages or claims in excess of the amount paid to TEAS for the services performed.

Date : 02/02/99

Date Received : 01/25/99
Date Extracted: 01/27-29/99
Date Analyzed : 02/01/99

Analysis For : Stewart & Stevenson Power

TRANS-ENVIRO # : 990125-04-A

Customer I.D. : ---

TCLP CONTAMINANTS

PARAMETER/(EPA HW No.[1])		DL mg/L	RL mg/L	RESULTS mg/L
Benzene	(D018)	0.05	0.5	**0.072**
Carbon tetrachloride	(D019)	0.05	0.5	BDL
Chlorobenzene	(D021)	0.05	100.0	BDL
Chloroform	(D022)	0.05	6.0	BDL
o-Cresol	(D023)	0.1	200.0	BDL
m&p-Cresol (D024)	(D025)	0.2	200.0	BDL
Cresol, total	(D026)	0.3	200.0	BDL
1,4-Dichlorobenzene	(D027)	0.05	7.5	BDL
1,2-Dichloroethane	(D028)	0.05	0.5	BDL
1,1-Dichloroethylene	(D029)	0.05	0.7	BDL
2,4-Dinitrotoluene	(D030)	0.1	0.13	BDL
Hexachlorobenzene	(D032)	0.1	0.13	BDL
Hexachlorobutadiene	(D033)	0.1	0.5	BDL
Hexachloroethane	(D034)	0.1	3.0	BDL
Methyl ethyl ketone	(D035)	0.5	200.0	BDL
Nitrobenzene	(D036)	0.1	2.0	BDL
Pentachlorophenol	(D037)	0.5	100.0	BDL
Pyridine	(D038)	0.1	5.0	BDL
Tetrachloroethylene	(D039)	0.05	0.7	BDL
Trichloroethylene	(D040)	0.05	0.5	BDL
2,4,5-Trichlorophenol	(D041)	0.1	400.0	BDL
2,4,6-Trichlorophenol	(D042)	0.1	2.0	BDL
Vinyl chloride	(D043)	0.05	0.2	BDL

DL = Detection Limit
RL = Regulatory Limit

BDL = Below Detection Limit
1 = Hazardous Waste Number

Method : EPA SW 846(8260,8270,1311)

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

SURROGATE

TRANS-ENVIRO # : 990125-04-A

Customer I.D. : ---

SURROGATE	% RECOVERY	% ACCEPTABLE LIMITS
Volatile Organic Compounds		
Dibromofluoromethane	115	86 - 118
Toluene-d8	107	88 - 110
Bromofluorobenzene	103	86 - 115
Semi-Volatile Organic Compounds		
Nitrobenzene-d5	69	35 - 114
2-Fluorobiphenyl	62	43 - 116
Terphenyl-d14	69	33 - 141
2-Fluorophenol	99	25 - 100
Phenol-d6	71	11 - 94
2,4,6-Tribromophenol	66	16 - 123

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

Date : 02/02/99

Date Received : 01/25/99
Date Extracted: 01/27/99
Date Analyzed : 01/29/99

Analysis For : Stewart & Stevenson Power

TRANS-ENVIRO # : 990125-04-A

Customer I.D. : ---

CHARACTERISTIC of TCLP METALS

ELEMENT/(EPA HW No.[1])		DL mg/L	RL mg/L	RESULTS mg/L
Arsenic	(D004)	0.336	5.0	BDL
Barium	(D005)	0.015	100.0	**1.63**
Cadmium	(D006)	0.027	1.0	BDL
Chromium	(D007)	0.026	5.0	BDL
Lead	(D008)	0.136	5.0	BDL
Mercury	(D009)	0.0004	0.2	BDL
Selenium	(D010)	0.397	1.0	BDL
Silver	(D011)	0.009	5.0	BDL

RL = Regulatory Limit

DL = Detection Limit

BDL = Below Detection Limit

1 = Hazardous Waste Number

Methods : Extraction - EPA SW 846(1311)
Mercury - EPA SW 846(7470)
Other metals - EPA SW 846(6010)

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

METHOD BLANK

TCLP CONTAMINANTS

PARAMETER/(EPA HW No.[1])		DL mg/L	RL mg/L	RESULTS mg/L
Benzene	(D018)	0.05	0.5	BDL
Carbon tetrachloride	(D019)	0.05	0.5	BDL
Chlorobenzene	(D021)	0.05	100.0	BDL
Chloroform	(D022)	0.05	6.0	BDL
o-Cresol	(D023)	0.1	200.0	BDL
m&p-Cresol (D024)	(D025)	0.2	200.0	BDL
Cresol, total	(D026)	0.3	200.0	BDL
1,4-Dichlorobenzene	(D027)	0.05	7.5	BDL
1,2-Dichloroethane	(D028)	0.05	0.5	BDL
1,1-Dichloroethylene	(D029)	0.05	0.7	BDL
2,4-Dinitrotoluene	(D030)	0.1	0.13	BDL
Hexachlorobenzene	(D032)	0.1	0.13	BDL
Hexachlorobutadiene	(D033)	0.1	0.5	BDL
Hexachloroethane	(D034)	0.1	3.0	BDL
Methyl ethyl ketone	(D035)	0.5	200.0	BDL
Nitrobenzene	(D036)	0.1	2.0	BDL
Pentachlorophenol	(D037)	0.5	100.0	BDL
Pyridine	(D038)	0.1	5.0	BDL
Tetrachloroethylene	(D039)	0.05	0.7	BDL
Trichloroethylene	(D040)	0.05	0.5	BDL
2,4,5-Trichlorophenol	(D041)	0.1	400.0	BDL
2,4,6-Trichlorophenol	(D042)	0.1	2.0	BDL
Vinyl chloride	(D043)	0.05	0.2	BDL

DL = Detection Limit
RL = Regulatory Limit
BDL = Below Detection Limit
1 = Hazardous Waste Number

Method : EPA SW 846(8260,8270)

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

METHOD BLANK

SURROGATE RECOVERIES

SURROGATE	% RECOVERY	% ACCEPTABLE LIMITS
Volatile Organic Compounds		
Dibromofluoromethane	105	86 - 118
Toluene-d8	106	88 - 110
Bromofluorobenzene	90	86 - 115
Semi-Volatile Organic Compounds		
Nitrobenzene-d5	54	35 - 114
2-Fluorobiphenyl	41	43 - 116
Terphenyl-d14	57	33 - 141
2-Fluorophenol	58	25 - 100
Phenol-d6	40	11 - 94
2,4,6-Tribromophenol	32	16 - 123

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

METHOD BLANK

CHARACTERISTIC of TCLP METALS

ELEMENT/(EPA HW No.[1])		DL mg/L	RL mg/L	RESULTS mg/L
Arsenic	(D004)	0.336	5.0	BDL
Barium	(D005)	0.015	100.0	BDL
Cadmium	(D006)	0.027	1.0	BDL
Chromium	(D007)	0.026	5.0	BDL
Lead	(D008)	0.136	5.0	BDL
Mercury	(D009)	0.0002	0.2	BDL
Selenium	(D010)	0.397	1.0	BDL
Silver	(D011)	0.009	5.0	BDL

RL = Regulatory Limit

DL = Detection Limit

BDL = Below Detection Limit

1 = Hazardous Waste Number

Methods : Mercury - EPA SW 846(7470)
Other metals - EPA SW 846(6010)

TRANS-ENVIRO ANALYTICAL SERVICES, INC.
19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128
TEL: (216) 663-0808 • FAX: (216) 663-0656

T90125-04-A

CHAIN-OF-CUSTODY
TRANS-ENVIRO ANALYTICAL SERVICES, INC.

19701 SOUTH MILES ROAD, WARRENSVILLE HEIGHTS, OHIO 44128-4257
TEL: (216) 663-0808 FAX: (216) 663-0656

CUSTOMER INFORMATION

COMPANY NAME: Stewart & Stevenson Power
BILLING ADDRESS: 1515 W. Murray Drive
CONTACT NAME: Wayne Dale Stevens
CITY: Farmington, NM
STATE/ZIP: New Mexico 8740
PHONE (505) 325-5071
FAX (505) 326-4218
Purchase Order No. 452135

COLLECTOR(S) NAME(S) print: Wayne Work
COLLECTOR(S) SIGNATURE(S): Wayne Work

TURN-AROUND (circle): 24-hr 48-hr 72-hr One Week Regular (Regular TCLP)

PRIORITY SERVICE APPROVED BY:

SITE LOCATION: Farmington, New Mexico

DATE LOGGED: 1/25/99 | VERBAL RESULTS DUE: | SALESPERSON:

SAMPLES WILL BE DISPOSED OF IN ACCORDANCE WITH TRANS-ENVIRO ANALYTICAL SERVICES, INC.'S TERMS & CONDITIONS.

T-E-A-S #	CUSTOMER SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	No. of CONTAINERS	PARAMETER: TCLP VOC	TCLP SVOC	TCLP metals							REMARKS
T90125-04-A	—			sludge	1	X	X	X							

Relinquished by (sign)	Date/Time	Received by (sign)	Date/Time
Relinquished by (sign)	Date/Time	Received by (sign)	Date/Time
Relinquished by (sign)	Date/Time	Received for Laboratory by (sign): R. Henderson	Date/Time: 1/25/99 9:30 am

Report to be sent (if different than customer information):
NAME:
ADDRESS:
CITY:
STATE/ZIP: FAX ( )

Method of Shipment (circle): US MAIL UPS FED. EX. T-E-A-S PICKUP PERSONAL DELIVERY OTHER

Laboratory Storage (circle): #1 #2 VOC

Additional Remarks:

WHITE - LAB YELLOW - REPORT PINK - CUSTOMER

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

RECEIVED
OCT 18 1999
Env. JN: Environmental Bureau
Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒ Verbal Approval Received: Yes ☐ No ☒	4. Generator Williams Field Service 5. Originating Site Horse Canyon Reboiler
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter WFS
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	Sec 26, T30N, R9W.

9. 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:

Continuation of Reboiler Sludge
TCLP & Norms Analysis attached.

RECEIVED
OCT - 1999
OIL CON. DIV.
DIST. 3

OIL CON. DIV.
DIST. 3
OCT - 6 1999
RECEIVED

Estimated Volume 1 bbl. cy Known Volume (to be entered by the operator at the end of the haul) ________ cy

SIGNATURE: [signature] TITLE: Landfarm Manager DATE: 10.6.99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: [signature] TITLE: Geologist DATE: 10/8/99

APPROVED BY: [signature] TITLE: Environmental Geologist DATE: 10/18/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Williams Field Services 295 Chipeta Way Salt Lake City, Utah 84108	Envirotech ; Land Farm #2 5796 U.S. Hwy 64 Farmington, NM. 87401
3. Originating Site (name): Horse Canyon Reclaimer Sec 26 T30N R9W Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):**
4. Source and Description of Waste Reboiler Sludge	

I, Bill Beeuwes (Print Name) representative for:

Williams Field Service 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
- ✓ RCRA Hazardous Waste Analysis
- ✓ Chain of Custody
- ___ Other (description):

Name (Original Signature): Bill Beeuwes

Title: Dely Spec

Date: 9/29/99

PESCO

NORM SURVEY DATA SHEET

Facility / location: Williams field Service Horse Canyon CDP Date: 9-29-99

Meter Model: DOSIMETER 3007A Serial No: 9808-238

Detector Model: DOSIMETER 3012 Serial No: 201-887-7100

Calibration Date: 4-5-99

Battery Check: (X)

Background Radiation Level: 0.03 mR/hr

Description of material surveyed: Waste Solids from Reboiler (sludge)

Item / Material Surveyed:

Waste Material: 55 approx. gals

Equipment: mR/hr: 0-03

Manufacturer: _____

Serial No: _____

Description: _____

Job No: _____

Comments:

Survey Conducted by: Gary W Howe
(Print Name)

Gary W Howe
(Signature)

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

March 5, 1999

Mr. Bill Beevers
Williams Field Service, Inc.
Manzanares District
P.O. Box 215
Bloomfield, NM 87413

(505) 320-4642
Fax (505) 632-4781

Project No.: 97050
Job No. : 705004

Dear Mr. Beevers,

Enclosed are the analytical results for one liquid sample collected from the location designated as "Horse Canyon". One liquid sample identified as "Waste Water" was collected by WFS designated personnel on 02/22/99, and delivered to the Envirotech laboratory on 02/22/99 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 6615 and assigned Laboratory No. E696 for tracking purposes. The sample was analyzed 02/22/99 through 03/05/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615. It has been our pleasure doing business with you and we hope you will consider Envirotech, Inc. for any of your future environmental contracting needs.

Respectfully submitted,
Envirotech, Inc.

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enclosure

SWS\sws\97050-04.lb2/wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-03-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Analyzed:	03-03-99
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**0.0473**	**0.0001**	**5.0**
Barium	**0.219**	**0.001**	**21**
Cadmium	**0.0083**	**0.0001**	**0.11**
Chromium	**0.0963**	**0.0001**	**0.60**
Lead	**0.0211**	**0.0001**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**0.0171**	**0.0001**	**5.7**
Silver	**ND**	**0.0001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Horse Canyon.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	02-26-99
Lab ID#:	E696	Date Sampled:	02-22-99
Sample Matrix:	Water	Date Received:	02-22-99
Preservative:	Cool	Date Analyzed:	02-23-99
Condition:	Cool and Intact	Chain of Custody:	6615

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 6.87**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **Horse Canyon.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	02-26-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.637	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.303	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	0.0035	0.0003	0.5
Tetrachloroethene	0.0012	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	98%
	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: **Horse Canyon.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Williams field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	03-01-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	4.53	0.020	200
p,m-Cresol	6.08	0.040	200
2,4,6-Trichlorophenol	1.05	0.020	2.0
2,4,5-Trichlorophenol	17.1	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **Horse Canyon.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Williams field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	03-01-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**0.236**	**0.020**	**5.0**
Hexachloroethane	**0.350**	**0.020**	**3.0**
Nitrobenzene	**0.207**	**0.020**	**2.0**
Hexachlorobutadiene	**0.430**	**0.020**	**0.5**
2,4-Dinitrotoluene	**0.076**	**0.020**	**0.13**
HexachloroBenzene	**0.100**	**0.020**	**0.13**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	**100%**

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: **Horse Canyon.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	03-01-99
Laboratory Number:	02-26-TCV Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-26-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	03-01-99
Laboratory Number:	02-22-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-26-99
Condition:	N/A	Date Extracted:	02-22-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	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: **QA/QC for samples E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-01-99
Laboratory Number:	E695	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	02-26-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
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 E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	03-01-99
Laboratory Number:	E695	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	02-26-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	ND	0.050	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	03-01-99
Laboratory Number:	03-01-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-01-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	03-01-99
Laboratory Number:	02-22-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	02-22-99
Condition:	Cool & Intact	Date Analyzed:	03-01-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 E695 - E696.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-01-99
Laboratory Number:	E695	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	03-01-99
		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	0.708	0.701	0.020	1.0%
2,4,5-Trichlorophenol	0.222	0.219	0.020	1.1%
Pentachlorophenol	0.091	0.090	0.020	0.8%

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 E695 - E696.**

Analyst

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	03-01-99
Laboratory Number:	03-01-TBN-Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	03-01-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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 E695 - E696.**

Analyst

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	03-01-99
Laboratory Number:	02-22-BN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	02-22-99
Condition:	Cool and Intact	Date Analyzed:	03-01-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**98%**

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 E695 - E696.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-01-99
Laboratory Number:	E695	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	02-22-99
Condition:	N/A	Date Analyzed:	03-01-99
		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	**0.056**	**0.055**	**1.0%**	**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 E695 - E696.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	03-03-TCM QA/QC	Date Reported:	03-03-99
Laboratory Number:	E695	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	03-03-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.0001	0.0437	0.0435	0.5%	0% - 30%
Barium	ND	ND	0.001	0.891	0.896	0.6%	0% - 30%
Cadmium	ND	ND	0.0001	0.0173	0.0174	0.6%	0% - 30%
Chromium	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.0001	0.0149	0.0150	0.7%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.0001	0.0315	0.0312	1.0%	0% - 30%
Silver	ND	ND	0.0001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.1000	0.0437	0.144	100.1%	80% - 120%
Barium	1.000	0.891	1.89	99.8%	80% - 120%
Cadmium	0.0500	0.0173	0.0672	99.9%	80% - 120%
Chromium	0.0500	ND	0.0498	99.6%	80% - 120%
Lead	0.1000	0.0149	0.115	99.9%	80% - 120%
Mercury	0.0250	ND	0.0249	99.6%	80% - 120%
Selenium	0.1000	0.0315	0.131	99.6%	80% - 120%
Silver	0.0500	ND	0.0498	99.6%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples E695, E696 and E755.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

6615

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Williams Field Service	Horse Canyon	#4

Sampler:	Client No.
Bill Beevers	97050-04

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP w/o					Remarks
WASTE WATER	2/22/99	1330	F696	LIQUID	8	✓					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Bill Beevers	2/22/99	1440	[signature]	2.22.99	1440
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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
1 Rio Brazos Road
...c, 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

Env. JN: 97057-

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator EPFS
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Kutz Comp. Station
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	Kutz Plant SW/3 Sec 15, T29N, R12W San Juan County, NM.

9. 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:

Clean up of lube oil spill from compressor engines

RECEIVED
OCT - 1 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 20 cy cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: _____ TITLE: Landfarm Manager DATE: 9-10-99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: _____ TITLE: Geologist DATE: 10/1/99

APPROVED BY: _____ TITLE: Environmental Geologist DATE: 10/1/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
El Paso Field Services Co. 614 Reilly Avenue Farmington, NM 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name): Kutz Plant Attach list of originating sites as appropriate	Location of Waste(Street address &/or ULSTR): SW/3 Section 15, T29N, R12W, San Juan Co., NM
4. Source and Description of Waste Lube oil spill from compressor engines	

I, David Bays representative for:
(Print Name)

El Paso Field Services Co. 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

__X__ **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-hazardous waste defined above.

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

_____ MSDS Information
__X__ RCRA Hazardous Waste Analysis
_____ Chain of Custody
____ Other (description)

Name (Original Signature): David Bays

Title: Principal Environmental Scientist

Date: September 14, 1999

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

September 21, 1999

Mr. John Lambdin
El Paso Field Services
P.O. Box 4990
Farmington, New Mexico 87499

Project No.: 97057
Job No.: 705716

Dear Mr. Lambdin,

Enclosed are the analytical results for the samples collected from the location designated as "Kutz Compressor Station". One soil sample was collected by Envirotech personnel on 09/16/99, and received by the Envirotech laboratory on 09/16/99 for Hazardous Waste Characterization analysis (Volatiles, Semi-volatiles, Metals, Ignitability, Reactivity and Corrosivity).

The sample was documented on Envirotech Chain of Custody No. 7400 and assigned Laboratory No. G086 for tracking purposes.

The sample was extracted on 09/17/99 and analyzed 09/16/99 through 09/21/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615. It is always a pleasure doing business with you.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS\sws 9705716lb1.wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	EPFS	Project #:	705716
Sample ID:	Oil Stains @ C1 & C2	Date Reported:	09-17-99
Lab ID#:	G086	Date Sampled:	09-16-99
Sample Matrix:	Soil	Date Received:	09-16-99
Preservative:	Cool	Date Analyzed:	09-17-99
Condition:	Cool and Intact	Chain of Custody:	7400

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 7.78**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*
Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
Comments:	**Kutz Compressor Station.**

Analyst

Review Stacy W Sendler

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	EPFS	Project #:	705716
Sample ID:	Oil Stains @ C1 & C2	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	09-16-99
Chain of Custody:	7400	Date Received:	09-16-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-17-99
Preservative:	Cool	Date Analyzed:	09-20-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.0059	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0131	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	98%
	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: **Kutz Compressor Station.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	El Paso Field Services	Project #:	7057-16
Sample ID:	Oil Stains @ C1 & C2	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	09-16-99
Chain of Custody:	7400	Date Received:	09-16-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-17-99
Preservative:	Cool	Date Analyzed:	09-20-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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**	**0.020**	**100**

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	**98%**
	2,4,6-Tribromophenol	**99%**

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: **Kutz Compressor Station.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	EPFS	Project #:	705716
Sample ID:	Oil Stains @ C1 & C2	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	09-16-99
Chain of Custody:	7400	Date Received:	09-16-99
Sample Matrix:	TCLP Extract	Date Extracted:	09-17-99
Preservative:	Cool	Date Analyzed:	09-20-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**96%**

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: **Kutz Compressor Station.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	EPFS	Project #:	705716
Sample ID:	Oil Stains @ C1 & C2	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	09-16-99
Chain of Custody:	7400	Date Received:	09-16-99
Sample Matrix:	TCLP Extract	Date Analyzed:	09-20-99
Preservative:	Cool	Date Extracted:	09-17-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.001**	**5.0**
Barium	**3.65**	**0.01**	**21**
Cadmium	**0.023**	**0.001**	**0.11**
Chromium	**ND**	**0.01**	**0.60**
Lead	**ND**	**0.05**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.001**	**5.7**
Silver	**ND**	**0.01**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kutz Compressor Station.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-20-99
Laboratory Number:	09-20-TCLP Vol Blank	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-20-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-20-99
Laboratory Number:	09-17-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-20-99
Condition:	N/A	Date Extracted:	09-17-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**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	**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: **QA/QC for sample G086.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-20-99
Condition:	N/A	Date Extracted:	09-17-99

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.0059	0.0059	0.0001	0.0%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0131	0.0134	0.0001	2.8%
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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-20-99
Condition:	N/A	Date Extracted:	09-17-99

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	0.0059	0.050	0.0554	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0131	0.050	0.0629	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-20-99
Laboratory Number:	09-20-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-20-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-20-99
Laboratory Number:	09-17-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-17-99
Condition:	Cool & Intact	Date Analyzed:	09-20-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	09-20-99
		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**	**0.020**	**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 sample G086.**

Analyst

Review

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-20-99
Laboratory Number:	09-20-BN-Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	09-20-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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 sample G086.**

Analyst

Review

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-20-99
Laboratory Number:	09-17-BN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-17-99
Condition:	Cool and Intact	Date Analyzed:	09-20-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	09-17-99
Condition:	N/A	Date Analyzed:	09-20-99
		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 sample G086.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	09-20-TCM QA/QC	Date Reported:	09-20-99
Laboratory Number:	G086	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	09-20-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.01	3.65	3.65	0.0%	0% - 30%
Cadmium	ND	ND	0.001	0.023	0.022	4.3%	0% - 30%
Chromium	ND	ND	0.01	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.05	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.01	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.100	ND	0.098	98.0%	80% - 120%
Barium	1.00	3.65	4.64	99.8%	80% - 120%
Cadmium	0.500	0.023	0.522	99.8%	80% - 120%
Chromium	0.50	ND	0.50	100.0%	80% - 120%
Lead	0.50	ND	0.50	100.0%	80% - 120%
Mercury	0.0250	ND	0.0248	99.2%	80% - 120%
Selenium	0.100	ND	0.099	99.0%	80% - 120%
Silver	0.50	ND	0.49	98.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples G086 and G097 - G098.**

Analyst

Review

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CHAIN OF CUSTODY RECORD

7400

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
EPFS.	Kutz Compressor Station	
Sampler: Harlan M. Brown	Client No. 97057-16	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP w/o H&P						Remarks
Oil Stains @ C1 & C2	9.16.99	13:45	G086	Soil	2	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Harlan M. Brown	9.16.99	14:35	Dawn L. Peterson	9.16.99	14:55
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

Env. JN: 93108-01

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒ Verbal Approval Received: Yes ☒ No ☐ Dawn Faust 8.17.99 10:00 AM to STACKED LF.	4. Generator PNM - Gas Trans S
	5. Originating Site Transmission Line
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter PNM
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	500' N of M.A.98, Hwy 64 Westside

9. Circle One: Sec 22 T 23N, R6W

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 oil contaminated soil generated @ a line relocate

BOL. 12073 LF245 - Equipment Staging area. 20 cy.

RECEIVED
OCT - 1 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 20 cy Known Volume (to be entered by the operator at the end of the haul) 20 cy

SIGNATURE: Harlan M Brown Waste Management Facility Authorized Agent TITLE: Landfarm Manager DATE: 8.20.99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Faust TITLE: Geologist DATE: 10/1/99

APPROVED BY: Martyn J. Kruse TITLE: Environmental Geologist DATE: 10/1/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Public Service Co of New Mexico 603 W. Elm Farmington, New Mexico 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name): Transmission line leak Counselors, NM Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):** Sec 22 T 23N R 6W 500' N. of M.P. 98 west side of Hwy 44
4. Source and Description of Waste Compressor oil contamined soil	

I, Tony Condelario (Print Name) representative for:

_____ 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

X **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

X RCRA Hazardous Waste Analysis RCI & TCLP metals.

X Chain of Custody

___ Other (description):

Name (Original Signature): _____

Title: CREWMAN II

Date: 8-17-99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	PNM	Project #:	310801
Sample ID:	S - 1	Date Reported:	08-18-99
Lab ID#:	F928	Date Sampled:	08-17-99
Sample Matrix:	Soil	Date Received:	08-17-99
Preservative:	Cool	Date Analyzed:	08-18-99
Condition:	Cool and Intact	Chain of Custody:	7283

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 8.44**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **Trans Line Counselor's, NM. Landfarm #2 Staging Area.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	PNM	Project #:	3108-01
Sample ID:	S - 1	Date Reported:	08-19-99
Laboratory Number:	F928	Date Sampled:	08-17-99
Chain of Custody:	7283	Date Received:	08-17-99
Sample Matrix:	TCLP Extract	Date Analyzed:	08-19-99
Preservative:	Cool	Date Extracted:	08-17-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.001**	**5.0**
Barium	**0.80**	**0.01**	**21**
Cadmium	**ND**	**0.001**	**0.11**
Chromium	**ND**	**0.01**	**0.60**
Lead	**ND**	**0.05**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.001**	**5.7**
Silver	**ND**	**0.01**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Trans Line, Counselor's, NM. Landfarm #2 Staging Area.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-19-TCM QA/QC	Date Reported:	08-19-99
Laboratory Number:	F925	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	08-19-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.01	0.20	0.20	0.0%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.01	0.01	0.01	0.0%	0% - 30%
Lead	ND	ND	0.05	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.01	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.100	ND	0.098	98.0%	80% - 120%
Barium	1.00	0.20	1.20	100.0%	80% - 120%
Cadmium	0.500	ND	0.490	98.0%	80% - 120%
Chromium	0.50	0.01	0.51	100.0%	80% - 120%
Lead	2.00	ND	2.00	100.0%	80% - 120%
Mercury	0.0250	ND	0.0248	99.2%	80% - 120%
Selenium	0.100	ND	0.097	97.0%	80% - 120%
Silver	0.50	ND	0.49	98.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples F925, F928, F931, F934 and F922.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	PNM	Project #:	310801
Sample ID:	S - 1	Date Reported:	08-18-99
Laboratory Number:	F928	Date Sampled:	08-17-99
Chain of Custody No:	7283	Date Received:	08-17-99
Sample Matrix:	Soil	Date Extracted:	08-17-99
Preservative:	Cool	Date Analyzed:	08-18-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**578**	**0.2**
Diesel Range (C10 - C28)	**847**	**0.1**
Total Petroleum Hydrocarbons	**1,420**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Trans Line, Counselor's, NM. Landfarm #2 Staging Area.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-18-TPH QA/QC	Date Reported:	08-18-99
Laboratory Number:	F928	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-18-99
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	06-17-99	1.2099E-001	1.2089E-001	**0.08%**	**0 - 15%**
Diesel Range C10 - C28	06-17-99	4.3747E-002	4.3677E-002	**0.16%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**578**	**576**	**0.4%**	**0 - 30%**
Diesel Range C10 - C28	**847**	**844**	**0.3%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**578**	**250**	**826**	**100%**	**75 - 125%**
Diesel Range C10 - C28	**847**	**250**	**1,090**	**99%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

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

Comments: **QA/QC for samples F928 - F930.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	PNM	Project #:	310801
Sample ID:	S - 1	Date Reported:	08-18-99
Laboratory Number:	F928	Date Sampled:	08-17-99
Chain of Custody:	7283	Date Received:	08-17-99
Sample Matrix:	Soil	Date Analyzed:	08-18-99
Preservative:	Cool	Date Extracted:	08-17-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**2,050**	**8.8**
Toluene	**425**	**8.4**
Ethylbenzene	**5,380**	**7.6**
p,m-Xylene	**48,640**	**10.8**
o-Xylene	**16,160**	**5.2**
Total BTEX	**72,660**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

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

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

Comments: **Trans Line, Counselor's, NM. Landfarm #2 Staging Area.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	08-18-BTEX QA/QC	Date Reported:	08-18-99
Laboratory Number:	F928	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-18-99
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	3.6219E-001	3.6306E-001	0.2%	ND	0.2
Toluene	2.7867E-002	2.7917E-002	0.2%	ND	0.2
Ethylbenzene	4.1931E-002	4.2019E-002	0.2%	ND	0.2
p,m-Xylene	3.6569E-002	3.6661E-002	0.3%	ND	0.2
o-Xylene	3.1955E-002	3.2010E-002	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	2,050	2,010	2.0%	0 - 30%	8.8
Toluene	425	414	2.6%	0 - 30%	8.4
Ethylbenzene	5,380	5,250	2.4%	0 - 30%	7.6
p,m-Xylene	48,640	47,480	2.4%	0 - 30%	10.8
o-Xylene	16,160	15,860	1.9%	0 - 30%	5.2

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	2,050	50.0	2,100	100%	39 - 150
Toluene	425	50.0	474	100%	46 - 148
Ethylbenzene	5,380	50.0	5,420	100%	32 - 160
p,m-Xylene	48,640	100.0	48,640	100%	46 - 148
o-Xylene	16,160	50.0	16,180	100%	46 - 148

ND - Parameter not detected at the stated detection limit.

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

Comments: QA/QC for sample F928.

Analyst

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CHAIN OF CUSTODY RECORD

7283

Client / Project Name: Trans Line PNM / Counselor's, NM

Project Location: Landfarm #2 Staging Area

Sampler: James A. Cowles

Client No.: 93108-01

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	RCRA	TCLP -Metals	8015 TPH	8021 BTEX			Remarks
S-1	8-17-99	12:30pm	F928	Soil	1	✓	✓	✓	✓			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	8-17-99	1:30pm	[signature]	8-17-99	13:30
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.
5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

Env. JN: 98061-05

EXTRACT

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator Halliburton
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Main Yard
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	4109 E. Main St Farmington, NM 87401

9. 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:

Disposal of used oil contaminated soil discovered @ buried unknown drum, Southeast corner of Facility.

TCLP Attached

Estimated Volume 3-4 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M Brown TITLE: Landfarm Manager DATE: 8.24.99

Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 8/24/99

APPROVED BY: Martyne J. Kieling TITLE: Environmental Geologist DATE: 8/25/99

CERTIFICATE OF WASTE STATUS

ENTACT 9806-05

1. Generator Name and Address:	2. Destination Name:
Halliburton Energy Services 4109 W. Main St. Farmington, NM 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name): SAA Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):**
4. Source and Description of Waste Petroleum Hydrocarbon Contaminated soil generated during clean up of "unknown" drum at SE Corner of Facility.	

I, MARTY COX representative for:
(Print Name)

Halliburton 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

X 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
X RCRA Hazardous Waste Analysis
X Chain of Custody
___ Other (description):

Name (Original Signature): Marty Cox

Title: Geologist

Date: 8-24-99

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

August 16, 1999

Mr. Marty Cox
Entact - Halliburton Farmington
1616 Corporate Court #150
Irving, Texas 75038

Project No.: 98061-05

Dear Mr. Cox,

Enclosed are the analytical results for the samples collected from the location designated as "Halliburton Main Yard". Two soil samples were collected by Envirotech personnel on 08/04/99, and received by the Envirotech laboratory on 08/04/99 for Hazardous Waste Characterization analysis (TCLP Volatile Organics, Semi-volatile Organics, Trace Metals, Corrosivity, Reactivity, and Ignitability) and Total Petroleum Hydrocarbons (TPH) per USEPA Method 8015.

The samples were documented on Envirotech Chain of Custody No. 7260 and assigned Laboratory Nos. F815 (SE Corner Stockpile) and F816 (SE Corner Pit) for tracking purposes.

The samples were analyzed 08/05/99 through 08/10/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS\sws

98061-05.lb1/wpd

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Entact	Project #:	806105
Sample ID:	SE Corner Stockpile	Date Reported:	08-06-99
Lab ID#:	F815	Date Sampled:	08-04-99
Sample Matrix:	Soil	Date Received:	08-04-99
Preservative:	Cool	Date Analyzed:	08-06-99
Condition:	Cool and Intact	Chain of Custody:	7260

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 6.79**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*
Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
Comments:	**Halliburton Main Yard. Unknown Drum Soil.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Entact	Project #:	806105
Sample ID:	SE Corner Stockpile	Date Reported:	08-10-99
Laboratory Number:	F815	Date Sampled:	08-04-99
Chain of Custody:	7260	Date Received:	08-04-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-06-99
Preservative:	Cool	Date Analyzed:	08-10-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**0.2**
1,1-Dichloroethene	**ND**	**0.0001**	**0.7**
2-Butanone (MEK)	**0.0014**	**0.0001**	**200**
Chloroform	**ND**	**0.0001**	**6.0**
Carbon Tetrachloride	**ND**	**0.0001**	**0.5**
Benzene	**0.0035**	**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	**98%**
	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: **SE Corner Stockpile. Unknown Drum Soil.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Entact	Project #:	806105
Sample ID:	SE Corner Stockpile	Date Reported:	08-10-99
Laboratory Number:	F815	Date Sampled:	08-04-99
Chain of Custody:	7260	Date Received:	08-04-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-06-99
Preservative:	Cool	Date Analyzed:	08-10-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.054	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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **Halliburton Main Yard. Unknown Drum Soil.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Entact	Project #:	806105
Sample ID:	SE Corner Stockpile	Date Reported:	08-10-99
Laboratory Number:	F815	Date Sampled:	08-04-99
Chain of Custody:	7260	Date Received:	08-04-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-06-99
Preservative:	Cool	Date Analyzed:	08-10-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**100%**

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: **Halliburton Main Yard. Unknown Drum Soil.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Entact	Project #:	806105
Sample ID:	SE Corner Stockpile	Date Reported:	08-10-99
Laboratory Number:	F815	Date Sampled:	08-04-99
Chain of Custody:	7260	Date Received:	08-04-99
Sample Matrix:	TCLP Extract	Date Analyzed:	08-10-99
Preservative:	Cool	Date Extracted:	08-06-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.001**	**5.0**
Barium	**1.36**	**0.01**	**21**
Cadmium	**ND**	**0.001**	**0.11**
Chromium	**0.01**	**0.01**	**0.60**
Lead	**0.20**	**0.05**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.001**	**5.7**
Silver	**ND**	**0.01**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Halliburton Main Yard. Unknown Drum Soil.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10-99
Laboratory Number:	08-10-TCLP Vol	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-10-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-10-99
Laboratory Number:	08-06-TCLP Vol	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	08-06-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**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	**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: **QA/QC for samples F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	0.0060	0.0060	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	0.0002	0.0002	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0042	0.0042	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 F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	0.0060	0.050	0.0554	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	0.0002	0.050	0.0499	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0042	0.050	0.0540	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10-99
Laboratory Number:	08-10-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-10-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-10-99
Laboratory Number:	08-06-TCA	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	08-06-99
Condition:	Cool & Intact	Date Analyzed:	08-10-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 F814 - F815.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	08-10-99
		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	0.020	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 F814 - F815.**

Analyst

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10-99
Laboratory Number:	08-10-TBN	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-10-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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 F814 - F815.**

Analyst

Review

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-10-99
Laboratory Number:	08-06-TBN-MB	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool and Intact	Date Analyzed:	08-10-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**100%**

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 F814 - F815.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-10-99
		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 F814 - F815.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-10-TCM QA/QC	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.01	0.22	0.22	0.0%	0% - 30%
Cadmium	ND	ND	0.001	0.024	0.024	0.0%	0% - 30%
Chromium	ND	ND	0.01	0.23	0.23	0.0%	0% - 30%
Lead	ND	ND	0.05	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.01	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.100	ND	0.098	98.0%	80% - 120%
Barium	1.00	0.22	1.20	98.4%	80% - 120%
Cadmium	0.500	0.024	0.523	99.8%	80% - 120%
Chromium	0.25	0.23	0.47	97.9%	80% - 120%
Lead	1.00	ND	0.99	99.0%	80% - 120%
Mercury	0.0250	ND	0.0249	99.6%	80% - 120%
Selenium	0.100	ND	0.097	97.0%	80% - 120%
Silver	1.00	ND	0.99	99.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples F789, F814 and F815.**

Analyst

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CHAIN OF CUSTODY RECORD

7260

Client / Project Name: ENTACT

Project Location: HALLIBURTON MAIN YARD

Sampler: HARLAN M BROWN

Client No.: 98061-05 thru 08

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP w/o HBA	8015 TPH					Remarks
SE CORNER Stockpile	8.4.99	14:10	F815	Soil	2	✓						UNKNOWN Drum Soil.
SE CORNER pit	8.4.99	14:20	F816	Soil	1		✓					closure sample

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Harlan M Brown	8.4.99	18:00	[signature]	8.4.99	18:00
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

Env. JN: 92101

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator BJ. Services
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Main Yard
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	3250 Southside River Road Farmington, New Mexico 87401

9. 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:

Continuation of Wash Bay Solids

TCLP attached

Estimated Volume 30 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M. Brown Waste Management FacilityAuthorized Agent TITLE: Landfarm Manager DATE: 8.24.99

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 8/24/99

APPROVED BY: Martyne J. Kieling TITLE: Env. Geologist DATE: 8/25/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
BJ Services 3350 Southside River Road Farmington, New Mex 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name): SAA Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):**
4. Source and Description of Waste Wash bay solids	

I, Les Baugh (Print Name) representative for:

BJ 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

X **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
X RCRA Hazardous Waste Analysis
X Chain of Custody
___ Other (description):

Name (Original Signature): Les Baugh

Title: Facilities Supervisor

Date: 8/23/99

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

REAFFIRMATION OF WASTE STATUS / NON-EXEMPT WASTE

I hereby certify that the attached Request For Approval and Certificate of Waste Status are for materials generated using the same procedures and equipment employed to generate the waste on which Toxicity Characteristic Leaching Procedures (TCLP) analysis was performed. I further certify that said material is from operations in the immediate Four Corners area.

Date of TCLP 12-23-98

Printed Name Les Baugh

Title / Agency Fac. Supv.

Address 3250 Southside River Road
Farmington, New Mex. 87401

Signature Les Baugh

Date 8/23/99

THANKS, STACY

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

January 28, 1999

Mr. Les Baugh
B. J. Services, Inc.
3220 Bloomfield Highway
Farmington, New Mexico 87401

Project No.: 92101

Dear Mr. Baugh,

Enclosed are the analytical results for the sample collected from the location designated as "Farmington, NM - Wash Bay Solids". One soil sample was collected by Envirotech personnel and delivered to the Envirotech laboratory on 01/13/99 for Hazardous Waste Characterization analysis (TCLP Volatiles, Semi-volatiles, Trace Metals, Corrosivity, Reactivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 6501 and assigned Laboratory No. E503 for tracking purposes.

The sample was extracted on 01/18/99 and analyzed 01/18/99 through 01/27/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS/sws

92101lb4.wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	B J Services	Project #:	92101
Sample ID:	Wash Bay Solids	Date Reported:	01-15-99
Lab ID#:	E503	Date Sampled:	01-13-99
Sample Matrix:	Soil	Date Received:	01-13-99
Preservative:	Cool	Date Analyzed:	01-15-99
Condition:	Cool and Intact	Chain of Custody:	6501

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 8.87**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*
Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
Comments:	**Wash Bay, Farmington, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	B J Services	Project #:	92101
Sample ID:	Wash Bay Solids	Date Reported:	01-19-99
Laboratory Number:	E503	Date Sampled:	01-13-99
Chain of Custody:	6501	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-19-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.0078	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	98%
	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: **Wash Bay, Farmington, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	B J Services	Project #:	92101
Sample ID:	Wash Bay Solids	Date Reported:	01-21-99
Laboratory Number:	E503	Date Sampled:	01-13-99
Chain of Custody:	6501	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.120	0.020	200
p,m-Cresol	0.075	0.040	200
2,4,6-Trichlorophenol	0.530	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	0.556	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **Wash Bay, Farmington, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	B J Services	Project #:	92101
Sample ID:	Wash Bay Solids	Date Reported:	01-22-99
Laboratory Number:	E503	Date Sampled:	01-13-99
Chain of Custody:	6501	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**ND**	**0.020**	**5.0**
Hexachloroethane	**0.172**	**0.020**	**3.0**
Nitrobenzene	**0.604**	**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	**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: **Wash Bay, Farmington, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	B. J. Services	Project #:	92101
Sample ID:	Wash Bay Solids	Date Reported:	01-23-99
Laboratory Number:	E503	Date Sampled:	01-13-99
Chain of Custody:	6501	Date Received:	01-13-99
Sample Matrix:	Soil	Date Analyzed:	01-23-99
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.0001**	**5.0**
Barium	**1.17**	**0.001**	**21**
Cadmium	**0.0611**	**0.0001**	**0.11**
Chromium	**0.0168**	**0.0001**	**0.60**
Lead	**0.0586**	**0.0001**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.0001**	**5.7**
Silver	**ND**	**0.0001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Wash Bay, Farmington, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-19-99
Laboratory Number:	01-19-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	100%
	Bromofluorobenzene	100%

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-19-99
Laboratory Number:	01-18-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	01-18-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	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: **QA/QC for samples E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	**ND**	**ND**	**0.0001**	**0.0%**
1,1-Dichloroethene	**ND**	**ND**	**0.0001**	**0.0%**
2-Butanone (MEK)	**ND**	**ND**	**0.0001**	**0.0%**
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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	ND	0.050	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-21-99
Laboratory Number:	01-21-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-21-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-21-99
Laboratory Number:	01-18-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-21-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	0.123	0.122	0.020	1.0%
p,m-Cresol	0.054	0.053	0.040	2.0%
2,4,6-Trichlorophenol	0.060	0.059	0.020	1.0%
2,4,5-Trichlorophenol	ND	ND	0.020	0.0%
Pentachlorophenol	0.556	0.551	0.020	0.8%

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 E499 and E503.**

Analyst

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-22-99
Laboratory Number:	01-21-TBN - Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**96%**

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 E499 and E503.**

Analyst

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-22-99
Laboratory Number:	01-18-TBN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool and Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**95%**

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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-22-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	01-18-99
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	**0.054**	**0.053**	**1.0%**	**0.020**
Hexachloroethane	**0.353**	**0.349**	**1.0%**	**0.020**
Nitrobenzene	**0.202**	**0.200**	**0.9%**	**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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-23-TCM QA/QC	Date Reported:	01-23-99
Laboratory Number:	E449	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	01-23-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Barium	**ND**	**ND**	**0.001**	**1.53**	**1.53**	**0.0%**	**0% - 30%**
Cadmium	**ND**	**ND**	**0.0001**	**0.0329**	**0.0324**	**1.5%**	**0% - 30%**
Chromium	**ND**	**ND**	**0.0001**	**0.0301**	**0.0300**	**0.3%**	**0% - 30%**
Lead	**ND**	**ND**	**0.0001**	**0.0309**	**0.0307**	**0.6%**	**0% - 30%**
Mercury	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Selenium	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Silver	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	**0.1000**	**ND**	**0.0997**	**99.7%**	**80% - 120%**
Barium	**1.000**	**1.53**	**2.53**	**100.0%**	**80% - 120%**
Cadmium	**0.0500**	**0.0329**	**0.0826**	**99.6%**	**80% - 120%**
Chromium	**0.0500**	**0.0301**	**0.0802**	**100.1%**	**80% - 120%**
Lead	**0.1000**	**0.0309**	**0.131**	**99.8%**	**80% - 120%**
Mercury	**0.0250**	**ND**	**0.0248**	**99.2%**	**80% - 120%**
Selenium	**0.1000**	**ND**	**0.0998**	**99.8%**	**80% - 120%**
Silver	**0.0500**	**ND**	**0.0499**	**99.8%**	**80% - 120%**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples E499 and E503.**

Analyst

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CHAIN OF CUSTODY RECORD

6501

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
BJ SERVICES WASH BAY	FARMINGTON, NM	

Sampler:	Client No.
Morris D. Young	92101

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP w/o H&P						Remarks
WASH BAY SOLIDS	1/13/99	15:55	E503	Soil	1	✓						

elinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Morris D. Young	1/13/99	16:25	[signature]	1.13.99	16:25
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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
1 Rio Brazos Road
...c, 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

Env. JN: 92132

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator Halliburton Energy Services
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site Main Yard
2. Management Facility Destination Envirotech Soil Remedia. Facility Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Highway 64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR)	4109 E. Main. Farmington New Mexico

9. 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:

Continuation of wash bay solids disposal

TCLP & Reaffirmation Statement attached

Estimated Volume 80 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Harlan M. Brown TITLE: Landfarm Manager DATE: 5-28-99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Harlan M. Brown TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny Foust TITLE: Geologist DATE: 8/24/99

APPROVED BY: Martyn J. Kelly TITLE: Environmental Geologist DATE: 8/30/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Halliburton Energy Services 4109 E Main Farmington N Mex 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name): Wash Bay S Above Holding Area Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):** 4109 E Main Farmington N Mex.
4. Source and Description of Waste Wash Bay solids (continuation)	

I, DOUG HODGES representative for:
(Print Name)
Halliburton 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 only the following documentation is attached (check appropriate items):

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

Name (Original Signature): Doug Hodges

Title: Maintenance Supervisor

Date: 8/23/99

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

REAFFIRMATION OF WASTE STATUS / NON-EXEMPT WASTE

I hereby certify that the attached Request For Approval and Certificate of Waste Status are for materials generated using the same procedures and equipment employed to generate the waste on which Toxicity Characteristic Leaching Procedures (TCLP) analysis was performed. I further certify that said material is from operations in the immediate Four Corners area.

Date of TCLP 1-13-99

Printed Name DOUG HODGES

Title / Agency Maintenance Supervisor

Address 4109 E Main

Farmington NMex

Signature Doug Hodges

Date 5/23/99

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ENVIROTECH LABS
PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

January 28, 1999

Mr. Ed Shannon
Halliburton Energy Services, Inc.
4109 East Main Street
Farmington, New Mexico 87401

Project No.: 92132

Dear Mr. Shannon,

Enclosed are the analytical results for the sample collected from the location designated as "East Main, Farmington-Wash Bay Solids". One soil sample was collected by Envirotech personnel on 01/13/99, and delivered to the Envirotech laboratory on 01/13/99 for Hazardous Waste Characterization analysis (Volatiles, Semi-Volatiles, Trace Metals, Corrosivity, Ignitability, and Reactivity).

The sample was documented on Envirotech Chain of Custody No. 6498 and assigned Laboratory No. E499 for tracking purposes. The sample was extracted on 01/18/99 and analyzed 01/18/99 through 01/27/99 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS/sws

92132/tclp0199.lb1

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-15-99
Lab ID#:	E499	Date Sampled:	01-13-99
Sample Matrix:	Soil	Date Received:	01-13-99
Preservative:	Cool	Date Analyzed:	01-15-99
Condition:	Cool and Intact	Chain of Custody:	6498

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 7.98**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. *(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)*
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. *(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)*
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. *(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)*

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-19-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	98%
	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: **East Main, Farmington.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-21-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.123	0.020	200
p,m-Cresol	0.054	0.040	200
2,4,6-Trichlorophenol	0.060	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	0.556	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-22-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Extracted:	01-18-99
Preservative:	Cool	Date Analyzed:	01-21-99
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**0.054**	**0.020**	**5.0**
Hexachloroethane	**0.353**	**0.020**	**3.0**
Nitrobenzene	**0.202**	**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	**98%**

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: **East Main, Farmington.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Halliburton	Project #:	92132
Sample ID:	Wash Bay Solids	Date Reported:	01-23-99
Laboratory Number:	E499	Date Sampled:	01-13-99
Chain of Custody:	6498	Date Received:	01-13-99
Sample Matrix:	Soil	Date Analyzed:	01-23-99
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**ND**	**0.0001**	**5.0**
Barium	**1.53**	**0.001**	**21**
Cadmium	**0.0329**	**0.0001**	**0.11**
Chromium	**0.0301**	**0.0001**	**0.60**
Lead	**0.0309**	**0.0001**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**ND**	**0.0001**	**5.7**
Silver	**ND**	**0.0001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **East Main, Farmington.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-19-99
Laboratory Number:	01-19-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**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	**100%**
	Bromofluorobenzene	**100%**

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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-19-99
Laboratory Number:	01-18-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	01-18-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	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	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: **QA/QC for samples E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	**ND**	**ND**	**0.0001**	**0.0%**
1,1-Dichloroethene	**ND**	**ND**	**0.0001**	**0.0%**
2-Butanone (MEK)	**ND**	**ND**	**0.0001**	**0.0%**
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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	01-19-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	01-19-99
Condition:	N/A	Date Extracted:	N/A

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	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	ND	0.050	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-21-99
Laboratory Number:	01-21-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-21-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	98 %
	2,4,6-tribromophenol	99 %

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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-21-99
Laboratory Number:	01-18-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	98%
	2,4,6-Tribromophenol	99%

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 E499 and E503.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-21-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	0.123	0.122	0.020	1.0%
p,m-Cresol	0.054	0.053	0.040	2.0%
2,4,6-Trichlorophenol	0.060	0.059	0.020	1.0%
2,4,5-Trichlorophenol	ND	ND	0.020	0.0%
Pentachlorophenol	0.556	0.551	0.020	0.8%

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 E499 and E503.**

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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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	01-22-99
Laboratory Number:	01-21-TBN - Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**96%**

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 E499 and E503.**

Analyst

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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	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	01-22-99
Laboratory Number:	01-18-TBN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	01-18-99
Condition:	Cool and Intact	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (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	**95%**

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 E499 and E503.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	01-22-99
Laboratory Number:	E499	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	01-18-99
Condition:	N/A	Date Analyzed:	01-21-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	**0.054**	**0.053**	**1.0%**	**0.020**
Hexachloroethane	**0.353**	**0.349**	**1.0%**	**0.020**
Nitrobenzene	**0.202**	**0.200**	**0.9%**	**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 E499 and E503.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-23-TCM QA/QC	Date Reported:	01-23-99
Laboratory Number:	E449	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	01-23-99
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Barium	**ND**	**ND**	**0.001**	**1.53**	**1.53**	**0.0%**	**0% - 30%**
Cadmium	**ND**	**ND**	**0.0001**	**0.0329**	**0.0324**	**1.5%**	**0% - 30%**
Chromium	**ND**	**ND**	**0.0001**	**0.0301**	**0.0300**	**0.3%**	**0% - 30%**
Lead	**ND**	**ND**	**0.0001**	**0.0309**	**0.0307**	**0.6%**	**0% - 30%**
Mercury	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Selenium	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**
Silver	**ND**	**ND**	**0.0001**	**ND**	**ND**	**0.0%**	**0% - 30%**

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	**0.1000**	**ND**	**0.0997**	**99.7%**	**80% - 120%**
Barium	**1.000**	**1.53**	**2.53**	**100.0%**	**80% - 120%**
Cadmium	**0.0500**	**0.0329**	**0.0826**	**99.6%**	**80% - 120%**
Chromium	**0.0500**	**0.0301**	**0.0802**	**100.1%**	**80% - 120%**
Lead	**0.1000**	**0.0309**	**0.131**	**99.8%**	**80% - 120%**
Mercury	**0.0250**	**ND**	**0.0248**	**99.2%**	**80% - 120%**
Selenium	**0.1000**	**ND**	**0.0998**	**99.8%**	**80% - 120%**
Silver	**0.0500**	**ND**	**0.0499**	**99.8%**	**80% - 120%**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples E499 and E503.**

Analyst

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CHAIN OF CUSTODY RECORD

6498

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
HALLIBURTON	EAST Main FARMINGTON	
Sampler: Mori D. Young	Client No. 92132	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP W/O H&P						Remarks
Wash Box Solids	1/13/99	12:10	E499	Soil	1	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Mori D. Young	1/13/99	12:30	Christ Wenten	1-13-99	12:30
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

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

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Environmental Bureau
Oil Conservation Division

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: ☐ Non-Exempt: ☒	4. Generator Coastal Chemical
Verbal Approval Received: Yes ☐ No ☐	5. Originating Site CR 4599 San Juan County
2. Management Facility Destination Envirotech Landfarm #2	6. Transporter Envirotech
3. Address of Facility Operator 5796 US Hwy #64 Farmington, NM 87401	8. State New Mexico
7. Location of Material (Street Address or ULSTR) Mile marker #2 CR4599 San Juan County	

9. 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:

New motor oil mixture of Chevron HDAX LA30
Conoco Geo 15W40
Conoco El Mar. 3000-30

RECEIVED
JUL 30 1999
OIL CON. DIV.
DIST. 3

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

SIGNATURE: Ezora L Boogn TITLE: Adm. Asst. DATE: 7/29/99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: Ezora L. Boogn TELEPHONE NO. 505-632-0615

(This space for State Use)

APPROVED BY: Denny G. Foust TITLE: Geologist DATE: 7/30/99

APPROVED BY: Martyn J. Kieft TITLE: Environmental Geologist DATE: 8-3-99

7/29/99- 10:10 AM
verbal approval
Denny Foust- OCD

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Coastal Chemical #10 County Road 5911 Farmington, NM 87401	Envirotech Soil Remediation Facility Landfarm #2 Hilltop, New Mexico
3. Originating Site (name):	**Location of the Waste (Street address &/or ULSTR):**
2 miles North on CR 4599 off Highway 64 @ Blanco NM 2 mile marker	
Attach list of originating sites as appropriate	

4. Source and Description of Waste

159 gals. New Motor Oil - Chevron HDAX LA 30
1320 gal Conoco GeO 15W40
6600 gal Conoco EMAR 3000-30
} on truck at time of spill

I, Bon Boatwright (Print Name) representative for:
Coastal Chemical 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

X **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
- ___ RCRA Hazardous Waste Analysis
- ___ Chain of Custody
- ___ Other (description):

Name (Original Signature): Bon Boatwright

Title: Material Handling Manager

Date: 7/29/99

MATERIAL SAFETY DATA SHEET

MOTC0082 | Revised 6-DEC-1997 | Printed 9-DEC-1997

HYDROCLEAR EL MAR Low Ash Supreme Engine Oil

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification
"EL MAR" is a registered trademark of Conoco.

"HYDROCLEAR" is a trademark of Conoco.

Grade SAE 30, 40, 15W-40

Product Use
Natural Gas Engine Oil

Tradenames and Synonyms
47513, 47514, 47515 - Conoco Base Codes

Company Identification
MANUFACTURER/DISTRIBUTOR
Conoco, Inc.
P.O. Box 2197
Houston, TX 77252

PHONE NUMBERS

Product Information	1-281-293-5550
Transport Emergency	CHEMTREC 1-800-424-9300
Medical Emergency	1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Highly refined base oils		>75
Proprietary additives		<25

If oil mist is generated, exposure limits apply.

(Continued)

HAZARDS IDENTIFICATION

Potential Health Effects

Primary Route of Entry: Skin

The product, as with many petroleum products, may cause minor skin, eye, and lung irritation, but good hygienic practices can minimize these effects.

Normal use of this product does not result in generation of an oil mist. However if an oil mist is generated, overexposure can cause minor and reversible irritation to the eyes, skin, and especially the lungs. Proper personal protective equipment and sufficient ventilation can provide adequate protection.

"USED" Motor Oil -
There are no epidemiology studies showing "used" motor oil to be carcinogenic. Health hazards to "used" motor oil can be minimized by avoiding prolonged skin contact.

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.

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

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

If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.

(Continued)

FIRST AID MEASURES (Continued)

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.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point	470 F (243 C) Method: COC (Grade 30) 510 F (266 C) Method: COC (Grade 40) 420 F (216 C) Method: COC (Grade 15W-40)

Flash point(s) given above are typical values.

Autoignition	Undetermined
Flammable limits in Air, % by Volume	
LEL	Undetermined
UEL	Undetermined
NFPA Classification	Class IIIB Combustible Liquid.

Extinguishing Media
Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions
Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

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.

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, and flame.

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

Spill Clean Up
Recover free liquid for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

(Continued)

HANDLING AND STORAGE

Handling (Personnel)
Avoid breathing mist. Avoid contact with eyes. Avoid prolonged contact with skin. Wash thoroughly after handling. Wash contaminated clothing prior to reuse.

Handling (Physical Aspects)
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. Store in a cool, dry place. Store in a well ventilated place. Store away from oxidizers, heat, sparks and flames.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
VENTILATION
Normal shop ventilation.

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 PROTECTION
Safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT
Coveralls with long sleeves if splashing is probable.

OTHER PRECAUTIONS
Avoid any prolonged or repeated skin contact with "used" motor oil. Wash thoroughly with soap and water after contact.

 # Exposure Guidelines
Applicable Exposure Limits
If oil mist is generated, exposure limits apply.

PEL	(OSHA)	5 mg/m3, 8 Hr. TWA
TLV	(ACGIH)	5 mg/m3, 8 Hr. TWA, STEL 10 mg/m3 Notice of Intended Changes (1997)

(Continued)

EXPOSURE CONTROLS/PERSONAL PROTECTION(Continued)

	5 mg/m3, 8 Hr. TWA, (As sampled by method that does not collect vapors)
AEL * (DuPont)	5 mg/m3, 8 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	Not Available
Vapor Pressure	Nil
Vapor Density	>1 (Air=1.0)
% Volatiles	Nil
Evaporation Rate	Nil
Solubility in Water	Insoluble
pH	Undetermined
Odor	Petroleum Hydrocarbon (mild).
Form	Liquid.
Color	Brown (light).
Specific Gravity	0.87-0.88 @ 60 F (16 C)
Density	7.26-7.33 lb/gal @ 60 F (16 C)

STABILITY AND REACTIVITY

Chemical Stability
Stable.

Conditions to Avoid
Heat, sparks, and flames.

Incompatibility with Other Materials
Incompatible or can react with oxidizers.

Decomposition
Normal combustion forms carbon dioxide; incomplete combustion may produce carbon monoxide.

Polymerization
Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data
Mouse skin painting studies have shown that highly solvent-refined petroleum distillates similar to ingredients in this product have not caused skin tumors.

"USED" Motor Oil -
Laboratory studies with mice have shown that "Used" motor oil applied repeatedly to the skin caused skin cancer. In these studies, the "Used" motor oil was not removed between applications.

(Continued)

TOXICOLOGICAL INFORMATION (Continued)

Following information based on components or similar material.

ACUTE TOXICITY:
Oral Toxicity: LD50 >5000 mg/kg (rats)
Dermal Toxicity: LD50 >2000 mg/kg (rabbits)
Eye Irritation: Not expected to be an eye irritant.
Inhalation: Mists or vapors may cause irritation.

ECOLOGICAL INFORMATION

Ecotoxicological Information
No specific aquatic data available for this product.

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.

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.

TRANSPORTATION INFORMATION

Shipping Information
DOT
Not regulated.

ICAO/IMO
Not restricted.

REGULATORY INFORMATION

U.S. Federal Regulations
OSHA HAZARD DETERMINATION
Under normal conditions of use, this material is not known to be 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.

(Continued)

REGULATORY INFORMATION (Continued)

SARA, TITLE III, 302/304
Extremely Hazardous Substance: None

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

SARA, TITLE III, 313
Toxic Chemical: None

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

RCRA
This material has been evaluated for RCRA characteristics and does not meet hazardous waste criteria if discarded in its purchased form. Because of product use, transformation, mixing, processing, etc., which may render the resulting material hazardous, it is the product user's responsibility to determine at the time of disposal whether the material meets RCRA hazardous waste criteria.

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"
The material contains ingredient(s) known to the State of California to cause cancer, birth defects, or other reproductive harm. Read and follow all label directions.

Ingredient	Benzene (CAS # 71-43-2) <0.01%
Ingredient	Acetaldehyde (CAS # 75-07-0) <0.01%
Ingredient	Cadmium <0.01%
Ingredient	Arsenic <0.01%
Ingredient	1,3-Butadiene (CAS # 106-99-0) <0.01%
Ingredient	Lead <0.01%

PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT
Ingredients subject to Act - None

(Continued)

REGULATORY INFORMATION (Continued)

Canadian Regulations

This is not a WHMIS Controlled Product.

Transport/Medical Emergency Phone Number: 1-613-348-3616

This material contains an ingredient which is being notified and tracked by its manufacturer. Export into Canada may only occur when the active exporting party participates in the tracking procedure.

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating	
Health	0
Flammability	1
Reactivity	0
NPCA-HMIS Rating	
Health	1
Flammability	1
Reactivity	0

Personal Protection rating to be supplied by user depending on use conditions.

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

CONOCO

MSDS MATERIAL SAFETY DATA SHEET

Post-it® Fax Note 7671 | Date | # of pages ▶ 13

To Mike Reams	From Jodi
Co./Dept. Coastal	Co. Coastal
Phone # Abbeville	Phone # 377-9280
Fax #	Fax #

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

HYDROCLEAR EL MAR GEO

MOTC0086 Revised 6-DEC-1997

Material Identification

"EL MAR" is a registered trademark of Conoco.

"HYDROCLEAR" is a trademark of Conoco.

Grade : SAE 15W-40, 30/40

Product Use

Natural Gas Engine Oil

Tradenames and Synonyms

47511, 47512 - Conoco Base Codes

Company Identification

MANUFACTURER/DISTRIBUTOR

Conoco, Inc.
P.O. Box 2197
Houston, TX 77252

PHONE NUMBERS

Product Information : 1-281-293-5550
Transport Emergency : CHEMTREC 1-800-424-9300
Medical Emergency : 1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

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

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

If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.

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.

RE FIGHTING MEASURES

Flammable Properties

Flash Point : 445 F (229 C) Method: COC (grade 15W-40)
525 F (274 C) Method: COC (grade 30/40)

Flash point(s) given above are typical values.

Autoignition : Undetermined
Flammable limits in Air, % by Volume
LEL : Undetermined
UEL : Undetermined

NFPA Classification : Class IIIB Combustible Liquid.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Water or foam may cause frothing. Use water to keep

fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

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.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Remove source of heat, sparks, and flame.

Initial Containment

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

Spill Clean Up

Recover free liquid for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Wash contaminated clothing prior to reuse.

Handling (Physical Aspects)

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. Store in a cool, dry place. Store in a well ventilated place. Store away from oxidizers, heat, sparks and flames.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION
Normal shop ventilation.

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 PROTECTION
Safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT
Coveralls with long sleeves if splashing is probable.

OTHER PRECAUTIONS
Avoid any prolonged or repeated skin contact with "used" motor oil. Wash thoroughly with soap and water after contact.

Exposure Guidelines

Applicable Exposure Limits
If oil mist is generated, exposure limits apply.

PEL	(OSHA)	: 5 mg/m3, 8 Hr. TWA
TLV	(ACGIH)	: 5 mg/m3, 8 Hr. TWA, STEL 10 mg/m3
		Notice of Intended Changes (1997)
		5 mg/m3, 8 Hr. TWA, (As sampled by

AEL *(DuPont) : 5 mg/m3, 8 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	: Not Available
Vapor Pressure	: Nil
Vapor Density	: >1 (Air=1.0)
% Volatiles	: Nil
Evaporation Rate	: Nil
Solubility in Water	: Insoluble
Odor	: Petroleum Hydrocarbon (mild).
Form	: Liquid.
Color	: Brown (light).
Specific Gravity	: 0.86 @ 60 F (16 C)
Density	: 7.21-7.28 lb/gal @ 60 F (16 C)

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Conditions to Avoid

Heat, sparks, and flames.

Incompatibility with Other Materials

Incompatible or can react with oxidizers.

Decomposition

Normal combustion forms carbon dioxide; incomplete combustion may produce carbon monoxide.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Mouse skin painting studies have shown that highly solvent-refined petroleum distillates similar to ingredients in this product have not caused skin tumors.

"USED" Motor Oil -
Laboratory studies with mice have shown that "Used" motor oil applied repeatedly to the skin caused skin cancer. In these studies, the "Used" motor oil was not removed between applications.

ECOLOGICAL INFORMATION

Ecotoxicological Information

No specific aquatic data available for this product.

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.

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.

TRANSPORTATION INFORMATION

Shipping Information

DOT
Not regulated.

CAO/IMO
Not restricted.

REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD DETERMINATION
Under normal conditions of use, this material is not known to be 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
Extremely Hazardous Substance: None

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

SARA, TITLE III, 313
Toxic Chemical: None

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

RCRA
This material has been evaluated for RCRA characteristics and does not meet hazardous waste criteria if discarded in its purchased form. Because of product use, transformation, mixing, processing, etc., which may render the resulting material hazardous, it is the product user's responsibility to determine at the time of disposal whether the material meets RCRA hazardous waste criteria.

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"
Ingredients subject to Act - None

PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT
Ingredients subject to Act - None

Canadian Regulations

This is not a WHMIS Controlled Product.

Transport/Medical Emergency Phone Number: 1-613-348-3616

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 0
Flammability : 1
Reactivity : 0

NPCA-HMIS Rating
Health : 1
Flammability : 1
Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

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

: PO Box 2197

: Houston, TX 77252

Telephone : 1-281-293-5550

# Indicates updated section.

End of MSDS

735

Chevron

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEVRON Gas Engine Oil HDAX Low Ash SAE 30

PRODUCT NUMBER(S): CPS232327 CPS238118

COMPANY IDENTIFICATION

Chevron USA Products Company
Environmental, Safety, and Health
Room 2900
575 Market St.
San Francisco, CA 94105-2856

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (202)483-7616

PRODUCT INFORMATION: MSDS Requests: (800) 228-3500
Environmental, Safety, & Health Info: (415) 894-1899
Product Information: (800) 582-3835

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CHEVRON Gas Engine Oil HDAX Low Ash SAE 30

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
HYDROTREATED DIST., HVY PARA Chemical Name: DISTILLATES, HYDROTREATED HEAVY PARAFFINIC CAS64742547	90.0%	5 mg/m3 (mist) 10 mg/m3 (mist) 5 mg/m3 (mist)	ACGIH TWA ACGIH STEL OSHA PEL
ADDITIVES INCLUDING THE FOLLOWING	10.0%		
ZINC ALKARYL DITHIOPHOSPHATE Chemical Name: ZINC ALKARYL DITHIOPHOSPHATE CAS54261675	< 1.5%		

Revision Number: 5 Revision Date: 01/11/95 MSDS Number: 004210
NDA - No Data Available NA - Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 4054, Richmond, CA 94804

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5 mg/m3.

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	PEL - Permissible Exposure Limit
C - Ceiling Limit	CAS - Chemical Abstract Service Number
A1-5 - Appendix A Categories	() - Change Has Been Proposed

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS
EYE:
This substance is not expected to cause prolonged or significant eye irritation.
SKIN:
This substance is not expected to cause prolonged or significant skin irritation. The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if it gets on the skin.
INGESTION:
The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if swallowed.
INHALATION:
The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if inhaled. Prolonged or repeated breathing of petroleum oil mist can cause respiratory irritation.
SIGNS AND SYMPTOMS OF EXPOSURE:
INHALATION: Respiratory tract irritation may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

4. FIRST AID MEASURES

EYE:
No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.
SKIN:
No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical

advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

INHALATION:

If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: (COC) 410F (210C) Min.

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA

EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam, Water Fog

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur, nitrogen and phosphorous.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (202)483-7616

ACCIDENTAL RELEASE MEASURES:

Stop the source of the leak or release. Clean up releases as soon as possible. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

7. HANDLING AND STORAGE

HANDLING AND STORAGE:

DO NOT weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or drum may rupture with explosive force. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

No special eye protection is usually necessary.

SKIN PROTECTION:

No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing.

RESPIRATORY PROTECTION:

No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards, the use of an approved respirator is required.

ENGINEERING CONTROLS:

Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Dark amber liquid.

pH:	NDA
VAPOR PRESSURE:	NA
VAPOR DENSITY (AIR=1):	NA
BOILING POINT:	NA
FREEZING POINT:	NDA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY:	0.88 @ 15.6/15.6C
EVAPORATION RATE:	NA
VISCOSITY:	11.0 cSt @ 100C (Min.)
PERCENT VOLATILE (VOL):	NA

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

NDA

CHEMICAL STABILITY:

Stable.

CONDITIONS TO AVOID:

No data available.

INCOMPATIBILITY WITH OTHER MATERIALS:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
No product toxicology data available. The hazard evaluation was based on data on the components.
SKIN EFFECTS:
No product toxicology data available. The hazard evaluation was based on data on the components.
ACUTE ORAL EFFECTS:
No product toxicology data available. The hazard evaluation was based on data on the components.
ACUTE INHALATION EFFECTS:
No product toxicology data available. The hazard evaluation was based on data on the components.
ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

This product contains zinc alkaryl dithiophosphate which is similar in toxicity to zinc alkyl dithiophosphate (ZDDP). Several (ZDDPs) have been reported to have weak mutagenic activity in cultured mammalian cells but only at concentrations that were toxic to the test cells. We do not believe that there is any mutagenic risk to workers exposed to ZDDPs.

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water. See Chevron Material Safety Data Sheet No. 1793 for additional information on used motor oil.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
No data available.
ENVIRONMENTAL FATE:
This material is not expected to present any environmental problems other than those associated with oil spills.

13. DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS:
Oil collection services and collection centers are available for used

motor oil recycling or disposal. Some service stations, automotive service centers, and retailers provide motor oil collection facilities.

Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT
DOT HAZARD CLASS: NOT APPLICABLE
DOT IDENTIFICATION NUMBER: NOT APPLICABLE
DOT PACKING GROUP: NOT APPLICABLE

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	

The following components of this material are found on the regulatory lists indicated.

ZINC ALKARYL DITHIOPHOSPHATE
is found on lists: 01,11,
DISTILLATES, HYDROTREATED HEAVY PARAFFINIC
is found on lists: 14,15,17,

16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;
(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
Changes have been made throughout this Material Safety Data Sheet.
Please read the entire document.

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.