

NM1 - 9

C - 138 LAND FARM

Date: 1999

993-6161

8241-1980

(505) 748-1283

First
NM 88210
Series III - (505) 334-6178
Rio Brazos Road
NM 87410
Series 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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Form C-138

Originated 8/8/95

OIL CON. DIV.

DIST. 3

JAN 2000

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OIL CON. DIV.

DIST. 3

Submit Original
Plus Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒Verbal Approval Received: Yes ☐ No ☒

4. Generator WFS

5. Originating Site MILAGRO PLANT

2. Management Facility Destination KEY ENERGY DISPOSAL

6. Transporter Key

3. Address of Facility Operator #345 CR3500 AZTEC NM

8. State NM

7. Location of Material (Street Address or ULSTR) 192 CR 4900 Bloomfield 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:

WASTE WATER FROM PONDS AT THE NATURAL GAS BREACHMENT

Plant

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DEC 17 1999OIL CON. DIV.
DIST. 3

* NEW ANALYSIS SAMPLED 11-13-99

Approved 12/28/99
by Roger Anderson

Estimated Volume 5000 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Tacovich
Waste Management Facility Authorized AgentTITLE: MGRDATE: 12-17-99TYPE OR PRINT NAME: MICHAEL TACOVICHTELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Dennis G. Faint TITLE: GeologistDATE: 12/20/99APPROVED BY: Martyn G. Gandy **DENIED** TITLE: Environmental GeologistDATE: 1/10/2000

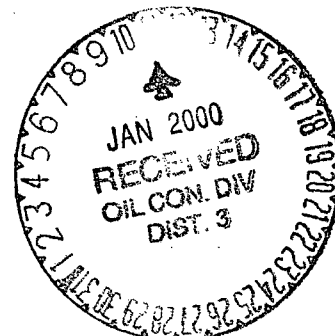
Roger Anderson

WILLIAMS FIELD SERVICES
ONE OF THE WILLIAMS COMPANIES, INC.

P.O. Box 58900 Salt Lake City, Utah 84158-0900

November 26, 1996

Mr. Patricio Sanchez
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505



RE: Disposal of Wastewater From Milagro Plant GW-60

Dear Mr. Sanchez:

Enclosed, please find the representative analysis of wastewater generated at the Milagro Plant in Bloomfield, New Mexico. Based on process knowledge and the attached analysis, Williams Field Services maintains that the wastewater is non-hazardous. The chromium concentrations detected in the wastewater are a result of contact with the amine solution and stainless steel piping and vessels. The plant does not use and has never used chromium-containing chemicals in the process. The waste is generated from an industrial process which uses trivalent chromium exclusively and the process does not generate hexavalent chromium. Therefore, the waste is considered non-hazardous according to 40CFR Part 261.4 (b) (6) (I) (B).

Williams Field Services requests approval to dispose of this wastewater at Sunco's Class I Disposal Well. If you have any questions or need additional information, please do not hesitate to contact me at (801) 584-6543.

Sincerely,

Leigh E. Gooding

Leigh E. Gooding
Sr. Environmental Specialist

cc: Mr. Denny Foust
Hal Stone, Sunco

verbal approval from Roger 12/28/99



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Hazardous & Radioactive Materials Bureau
2044 Galisteo
P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-1557
Fax (505) 827-1544



MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

November 27, 1996

Mr. Patricio Sanchez
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: Disposal of wastewater from the Milagro Plant GW-60

Dear Mr. Sanchez:

This is to follow up on our telephone conversation re: your request for a determination of whether or not wastewaters from the above referenced facility are hazardous waste. NMED has determined that even though the wastewater does contain hazardous constituents as documented in the waste analysis report from Inter-Mountain Laboratories, Inc. dated 08-01-96, this waste is considered non-hazardous under 40 CFR §261.4(b)(6)(i).

Please feel free to contact me should need additional information.

Sincerely,

A handwritten signature in cursive script that reads "James E. Seubert".

James E. Seubert, Acting Program Manager
Hazardous and Radioactive Materials Bureau

xc: Leigh E. Gooding, Williams Field Services

District I - (505) 393-6161
P.O. Box 1980
Tobbs, NM 88241-1980
District II - (505) 748-1283
111 S. First
Artesia, NM 88210
District III - (505) 334-6178
1 Rio Brazos Road
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
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District Office

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DEC 20 1999

OIL CON. DIV.

DIST. 3

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>Burlington</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Compressor STA.</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR3500 AZTEC NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>SEE ATTACHED LIST</u>	
9. <u>Circle One:</u> 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:

DRAIN WATER FROM NON-EXEMPT OIL TANK

RENEWAL - NEW ANALYSIS

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Environmental Bureau
Oil Conservation Division

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DEC 22 1999

OIL CON. DIV.
DIST. 3

Estimated Volume > 1500 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MR DATE: 12-20-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Gregory Z. Zent TITLE: Geologist DATE: 12/20/99

APPROVED BY: [Signature] TITLE: _____ DATE: 12/21/99

District I - (505) 393-6161
P.O. Box 1980
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Rio Brazos Road
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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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DEC 20 1999
OIL CON. DIV.
DIST. 3

Form C-138
Originated 8/8/95
Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>Burlington</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Compressor STA.</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 023500 AZTEC N.M.</u>	8. State <u>N.M.</u>
7. Location of Material (Street Address or ULSTR) <u>SEE ATTACHED LIST</u>	
9. <u>Circle One</u> : 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:

DRAIN WATER FROM NON-EXEMPT OIL TANK

RENEWAL - NEW ANALYSIS

Estimated Volume > 1500 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: mgr DATE: 12-20-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Dennis G. Zent TITLE: Geologist DATE: 12/20/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Burlington Resources 3535 East 30 th Street Farmington NM 87401	2. Destination Name: Key Energy Services
3. Originating Site (name): All Compressor Stations Unit:	Location of the Waste (Street address /or ULSTR): See Attached. Section: Township: Range:
4. Source and Description of Waste: Drained water from oil tank.	

I, Ed Hasely

representative for:

Burlington Resources

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 the appropriate classification)

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

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

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

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

Name (Original Signature): Ed Hasely

Title: Env. Representative

Date: Thursday, December 16, 1999

BURLINGTON RESOURCES

SAN JUAN DIVISION

December 16, 1999

Key Energy Services, Inc.
Attention: Mike Talovich, Manager
P.O. Box 900
5651 U.S. Highway 64
Farmington, NM 87499

Re: Characterization of Drained Water from Used Oil Tank

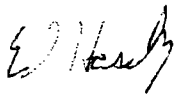
Dear Mr. Talovich:

As requested, attached is a new Certificate of Waste Status form and a wastewater analysis for water generated from draining the used oil tank at the compressor stations. The main purpose for analyzing these waste streams was to comply with 40 CFR 262.11 waste determination requirements contained in the Resource Conservation and Recovery Act (RCRA). Upon evaluating the analysis for this waste stream it appears the water does not exhibit the characteristics of a hazardous waste.

Due to the fact that this waste stream has been analyzed in two consecutive years and each time showing the waste is non-hazardous, Burlington Resources requests that the non-hazardous determination be accepted for a period of three years. If processes or products change that may impact this waste stream, a new analysis will be completed.

Should you have any questions concerning the content or need additional information, please feel free to contact me at 326-9841. Thank you for your time and consideration.

Sincerely,



Ed Hasely
Environmental Representative

Enc. Certificate of Waste Status
Sample Project CC-59463

CC: Bruce Gantner
Greg Kardos
Ken Johnson
Correspondence
Compressor Files

Burlington Resources Oil & Gas Company
Compressor Stations

		QTR	SEC	TWP	RNG
1.	Frances Mesa	SW	27	30N	7W
2.	Cedar Hill	SW	29	32N	10W
3.	Gobernador	NW	31	30N	7W
4.	Manzanares	SE	4	29N	8W
5.	Pump Canyon	NE	24	30N	9W
6.	Hart Canyon	SE	20	31N	10W
7.	Buena Vista	NE	13	30N	9W
8.	Sandstone	SE	32	31N	8W
9.	Quinn	SW	16	31N	8W
10.	Arch Rock	SW	14	31N	10W
11.	Pump Mesa	SW	14	31N	8W
12.	Middle Mesa	SW	10	31N	7W
13.	Simms Mesa	NE	22	30N	7W
14.	Rudy	SE	35	29N	11W
15.	Zachry	SW	34	29N	10W
16.	Albright	NW	22	29N	10W
17.	Rattlesnake	SW	10	31N	7W
18.	Cox	SW	20	32N	10W
19.	Lateral 311	NE	17	29N	10W
20.	Lateral 355	SE	25	30N	11W
21.	Ute	SW	14	32N	11W
22.	State	NW	16	28N	9W



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

Ed Hasely
Burlington Resources
P.O. Box 4289
Farmington, NM 87499-4289

Dec. 13, 1999

Mr. Hasely:

Please find enclosed the reports for the samples submitted to our laboratory for analysis on November 23, 1999. I apologize for the delay in receiving your results.

If you should have any questions regarding the results of these analyses, please do not hesitate to call me at your convenience.

Sincerely,

A handwritten signature in cursive script, reading 'Sharon Williams', is written over the typed name.

Sharon Williams
Organics Lab Supervisor

Enclosures

xc: file



BURLINGTON RESOURCES

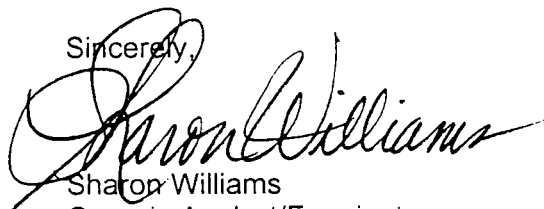
Case Narrative

On November 23, 1999, samples were submitted to Inter-Mountain Laboratories for analysis. The samples were analyzed for the parameters listed on the accompanying chain of custody document.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analyses of the samples reported herein are found in Test Methods For Evaluation of Solid Waste, SW-846, USEPA, and Methods For Chemical Analysis of Water and Wastes, EPA-600/4-79-020, USEPA, 1994.

Quality control reports appear at the end of the analytical package and may be identified by title. If there are any questions regarding the information presented in this package, please feel free to call me at your convenience.

Sincerely,



Sharon Williams
Organic Analyst/Farmington



Client: Burlington Resources
Project: Compressor Stations
Sample ID: Water From Used Oil Tank
Lab ID: 0399W05762
Matrix: Liquid
Condition: Cool/Intact

Date Reported: 12/13/99

Date Sampled: 11/23/99

Date Received: 11/23/99

Date Analyzed: 12/03/99

Parameter	Analytical Result	PQL	MCL	Units
TCLP Metals - EPA Method 1311				
Arsenic	<0.1	0.1	5.0	mg/L
Barium	<0.5	0.5	100	mg/L
Cadmium	<0.01	0.01	1.0	mg/L
Chromium	0.05	0.02	5.0	mg/L
Lead	<0.1	0.1	5.0	mg/L
Mercury	<0.001	0.001	0.2	mg/L
Selenium	0.23	0.1	1.0	mg/L
Silver	<0.05	0.05	5.0	mg/L

Reference: SW-846 - "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", United States Environmental Protection Agency, Final Update 1, July 1992.

Reviewed By: 

William Lipps



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

Flash Point

Client: **Burlington Resources**
Project: Compressor Stations
Sample ID: Water From Used Oil Tank
Laboratory ID: 0399W05762
Sample Matrix: Liquid
Condition: Intact

Date Reported: 12/13/99
Date Sampled: 11/23/99
Date Received: 11/23/99
Date Analyzed: 12/07/99

Analyte	Result	Units
Flash Point	>140	°F

References:

Analysis performed according to SW-846 "Test Methods for Evaluating Solid Waste: Physical / Chemical Methods" United States Environmental Protection Agency 3rd Edition, Final Update II, September, 1994.

Annual Book of ASTM Standards, Method D56.

Reported by: 

Reviewed by: 



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
EPA METHOD 8260B
VOLATILE ORGANIC COMPOUNDS BY GC/MS

Client: **Burlington Resources**
Project ID: Compressor Stations
Sample ID: Water from used oil tanks
Laboratory ID: 0399W05762
Sample Matrix: Water

Date Reported: 12/08/99
Date Sampled: 11/23/99
Date Received: 11/24/99
Date Extracted: NA
Date Analyzed: 12/01/99

Parameter	Analytical Result	Detection Limit	Regulatory Level	Units
Benzene	ND	0.05	0.5	mg/L
Carbon Tetrachloride	ND	0.05	0.5	mg/L
Chlorobenzene	ND	0.05	100	mg/L
Chloroform	ND	0.05	6.0	mg/L
1,2-Dichloroethane	ND	0.05	0.5	mg/L
1,1-Dichloroethylene	ND	0.05	0.7	mg/L
Methyl Ethyl Ketone (2-Butanone)	ND	1.25	200	mg/L
Tetrachloroethylene	ND	0.05	0.7	mg/L
Trichloroethylene	ND	0.05	0.5	mg/L
Vinyl Chloride	ND	0.05	0.2	mg/L

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery	%	Limits
Dibromofluoromethane	97	86 - 118
Dichloroethane-d4	91	80 - 120
Toluene-d8	90	88 - 110
4-Bromofluorobenzene	92	86 - 116

Reference: Test Methods for Evaluating Water, Wastewater and Solid Waste, SW-846, U.S.E.P.A., Volume IB, Revision 2, December 1996.

Analyst

Reviewed



Inter-Mountain Laboratories, Inc.

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

2506 West Main Street, Farmington, NM 87401

QUALITY CONTROL / QUALITY ASSURANCE



Quality Control / Quality Assurance

Spike Analysis / Blank Analysis

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client: **Burlington Resources**
Project: **Compressor Stations**
Sample Matrix: **Liquid**

Date Reported: 12/13/99
Date Analyzed: 12/03/99
Date Received: 11/23/99

Spike Analysis

Parameter	Spike Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	Percent Recovery
Arsenic	0.97	<0.1	1.00	97%
Barium	0.98	<0.5	1.00	98%
Cadmium	0.79	<0.01	1.00	79%*
Chromium	0.88	<0.01	1.00	88%
Lead	0.68	<0.1	1.00	68%*
Mercury	0.005	<0.001	0.005	102%
Selenium	1.20	<0.1	1.00	120%*
Silver	0.74	<0.05	1.00	74%*

Method Blank Analysis

Parameter	Result	Detection Limit	Units
Arsenic	ND	0.1	mg/L
Barium	ND	0.5	mg/L
Cadmium	ND	0.01	mg/L
Chromium	ND	0.02	mg/L
Lead	ND	0.1	mg/L
Mercury	ND	0.001	mg/L
Selenium	ND	0.1	mg/L
Silver	ND	0.05	mg/L

References:

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

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

Comments:

*Spike recovery failed to meet established QC limits due to matrix interferences.

Reported by

Reviewed by



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

Inter-Mountain Laboratories, I

2506 West Main Street, Farmington, NM

Quality Control / Quality Assurance

Known Analysis

TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:
Project:
Sample Matrix:

Burlington Resources
Compressor Stations
Liquid

Date Reported: 12/13/99
Date Analyzed: 12/03/99
Date Received: 11/23/99

Known Analysis

Parameter	Found Result	Known Result	Percent Recovery	Units
Arsenic	1.01	1.00	101%	mg/L
Barium	0.51	0.50	102%	mg/L
Cadmium	1.03	1.00	92%	mg/L
Chromium	1.06	1.00	106%	mg/L
Lead	1.04	1.00	104%	mg/L
Mercury	0.004	0.004	100%	mg/L
Selenium	0.53	0.50	106%	mg/L
Silver	1.05	1.00	105%	mg/L

References:

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

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

Comments:

Reported by

Reviewed by



EPA METHOD 8260B
VOLATILE ORGANIC COMPOUNDS BY GC/MS
Method Blank Analysis

Sample ID: Method Blank
Laboratory ID: V3MB99-335
Sample Matrix: Water

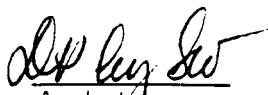
Date Reported: 12/08/99
Date Extracted: NA
Date Analyzed: 12/01/99

Parameter	Analytical Result	Detection Limit	Regulatory Level	Units
Benzene	ND	0.01	0.5	mg/L
Carbon Tetrachloride	ND	0.01	0.5	mg/L
Chlorobenzene	ND	0.01	100	mg/L
Chloroform	ND	0.01	6.0	mg/L
1,2-Dichloroethane	ND	0.01	0.5	mg/L
1,1-Dichloroethylene	ND	0.01	0.7	mg/L
Methyl Ethyl Ketone (2-Butanone)	ND	0.25	200	mg/L
Tetrachloroethylene	ND	0.01	0.7	mg/L
Trichloroethylene	ND	0.01	0.5	mg/L
Vinyl Chloride	ND	0.01	0.2	mg/L

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery	%	Limits
Dibromofluoromethane	94	86 - 118
Dichloroethane-d4	93	80 - 120
Toluene-d8	89	88 - 110
4-Bromofluorobenzene	92	86 - 116

Reference: Test Methods for Evaluating Water, Wastewater and Solid Waste, SW-846, U.S.E.P.A., Volume IB, Revision 2, December 1996.


Analyst


Reviewed



TOXICITY CHARACTERISTIC LEACHING PROCEDURE
EPA METHOD 8260B
VOLATILE ORGANIC COMPOUNDS BY GC/MS
Matrix Spike Analysis

Sample ID: Matrix Spike
Laboratory ID: 0199W19088MS
Sample Matrix: Water

Date Reported: 12/08/99
Date Extracted: NA
Date Analyzed: 12/02/99

Parameter	Analytical Result mg/L	Spike Added mg/L	Spike Results mg/L	Spike Recovery %
Benzene	ND	0.050	0.054	108
Carbon Tetrachloride	ND	0.050	0.059	119
Chlorobenzene	ND	0.050	0.054	109
Chloroform	ND	0.050	0.061	121
1,2-Dichloroethane	ND	0.050	0.054	108
1,1-Dichloroethylene	ND	0.050	0.050	100
Methyl Ethyl Ketone (2-Butanone)	ND	0.100	0.084	84
Tetrachloroethylene	ND	0.050	0.059	118
Trichloroethylene	ND	0.050	0.057	113
Vinyl Chloride	ND	0.050	0.054	108

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery	%	Limits
Dibromofluoromethane	98	86 - 118
Dichloroethane-d4	96	80 - 120
Toluene-d8	92	88 - 110
4-Bromofluorobenzene	95	86 - 116

Reference: Test Methods for Evaluating Water, Wastewater and Solid Waste. SW-846 U.S.E.P.A., Volume IB, Revision 2, December 1996.


Analyst


Reviewed



TOXICITY CHARACTERISTIC LEACHING PROCEDURE
EPA METHOD 8260B
VOLATILE ORGANIC COMPOUNDS BY GC/MS
Blank Spike/Duplicate Analysis

Sample ID: Blank Spike Duplicate
Laboratory ID: BSD99-336
Sample Matrix: Water

Date Reported: 12/08/99
Date Extracted: NA
Date Analyzed: 12/02/99

Parameter	Analytical Result mg/L	Spike Added mg/L	Spike Results mg/L	Spike Recovery %	Duplicate Results mg/L	Duplicate Recovery %	Relative Difference %RSD
Benzene	ND	0.050	0.050	99	0.053	106	7
Carbon Tetrachloride	ND	0.050	0.054	109	0.057	113	4
Chlorobenzene	ND	0.050	0.050	99	0.053	106	7
Chloroform	ND	0.050	0.056	112	0.060	121	7
1,2-Dichloroethane	ND	0.050	0.049	98	0.057	113	15
1,1-Dichloroethylene	ND	0.050	0.046	91	0.047	94	3
Methyl Ethyl Ketone (2-Butanone)	ND	0.100	0.102	102	0.115	115	12
Tetrachloroethylene	ND	0.050	0.055	110	0.058	115	4
Trichloroethylene	ND	0.050	0.052	103	0.055	111	7
Vinyl Chloride	ND	0.050	0.052	105	0.052	104	0

ND - Compound not detected at stated Detection Limit.

Surrogate Recoveries	Spike %	Duplicate %	Limits
Dibromofluoromethane	96	102	86 - 118
Dichloroethane-d4	90	101	80 - 120
Toluene-d8	92	92	88 - 110
4-Bromofluorobenzene	95	94	86 - 116

Reference: Test Methods for Evaluating Water, Wastewater and Solid Waste, SW-846, U.S.E.P.A., Volume IB, Revision 2, December 1996.

Analyst

Reviewed



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Known Analysis

FLASH POINT

Client: **Burlington Resources**
Project: **Compressor Stations**
Sample Matrix: **Liquid**

Date Reported: 12/13/99
Date Analyzed: 12/07/99
Date Received: 11/23/99

Parameter	Found Result	Known Result
p-Xylene	76°F	77°F

Reference: Analysis performed according to SW-846 "Test Methods for Evaluating Solid Waste: Physical / Chemical Methods" United States Environmental Protection Agency 3rd Edition, Final Update II, September, 1994.

Annual Book of ASTM Standards, Method D93-80.

Comments:

Reported by

Reviewed by

CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location			ANALYSES / PARAMETERS													
Burlington Resources / Oil Tank Water			Compressor Stations																
Sampler: (Signature)			Chain of Custody Tape No.			No. of Containers	TCLP Metals	TCLP Benzene	Flash	Remarks									
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	TCLP Metals	TCLP Benzene	Flash	Remarks										
Water from Used Oil Tank	11/23		WD5762	Liquid	3	✓			IML to make Composite in Lab										
"	"			"	6		✓												
"	"			"	3			✓											
<div style="display: flex; justify-content: space-between;"> <div> <p>Pump Canyon Arch Rock Hart Canyon</p> </div> <div> <p>Handwritten notes and signatures in the table body.</p> </div> </div>																			
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time										
[Signature]			11/23/99	12 Noon	[Signature]														
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time										
[Signature]			11/23/99	14:15	[Signature]														
Relinquished by: (Signature)			Date	Time	Received by laboratory: (Signature)			Date	Time										
[Signature]					[Signature]			11/23/99	14:15										

☐ 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (307) 672-8945

☐ 1701 Phillips Circle
Gillette, Wyoming 82718
Telephone (307) 682-8945

☐ 2506 West Main Street
Farmington, NM 87401
Telephone (505) 326-4737

☐ 1160 Research Drive
Bozeman, Montana 59718
Telephone (406) 586-8450

☐ 11183 State Hwy. 30
College Station, TX 77845
Telephone (409) 776-8945

Inter-Mountain Laboratories, Inc.

59463

Hardy I - (505) 393-6161
O. Box 1980
Albuquerque, NM 88241-1980
Hardy II - (505) 748-1283
11 S. First
Albuquerque, NM 88210
Hardy III - (505) 334-6178
7 Rio Brazos Road
Albuquerque, NM 87410
Hardy IV - (505) 827-7131

RECEIVED
New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
DEC 22 1999
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131
OIL CON. DIV.
DIST. 3

Form C-138
Originated 8/89

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>WFS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>EL CEDRO COMDEX</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500</u> <u>AZtec, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>Hwy 64 MM 100.5</u>	
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 WATER MIXED WITH D.I WATER, LUBE OIL AND GLYCOL
SEE MSDS

Recent WASH WATER ANALYSIS INCLUDED

RECEIVED

DEC 20 1999

Environmental Bureau
Oil Conservation Division

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

Estimated Volume 2500 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: M. Talovich
Waste Management Facility Authorized Agent

TITLE: MGR

DATE: 12-16-99

TYPE OR PRINT NAME: MICHAEL TALOVICH

TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Faint TITLE: Geologist DATE: 12/16/99

APPROVED BY: Paul R. Chiles TITLE: Environmental Chief DATE: 12/16/99

Office I - (505) 393-6161
O. Box 1980
obbs, NM 88241-1980
Office II - (505) 748-1283
11 S. First
resia, NM 88210
Office III - (505) 334-6178
Rio Brazos Road
NM 87410
Office IV - (505) 827-7131

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>WFS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>EL CEDRO COMPLEX</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500</u> <u>AZTEC, N.M.</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>Hwy 64 MM 100.5</u>	
9. <u>Circle One</u> : 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 WATER MIXED WITH D.I WATER, LUBE OIL AND GLYCOL
SEE MSDS

Recent WASH WATER Analysis included

RECEIVED
DEC 16 1999

OIL CON. DIV.
DIST. 3

Estimated Volume 2500 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: [Signature] TITLE: MGR DATE: 12-16-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 12/16/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: WILLIAMS EL CEDRO COMPLEX HWY 64 MILE MARKER 100.5	2. Destination Name: KEY DISPOSAL
3. Originating Site (name): EL CEDRO COMPLEX	
Location of the Waste (Street address &/or ULSTR): Attach list of originating sites as appropriate	
4. Source and Description of Waste CITGO FACEMAKER 840 LUBE OIL ETHYLENE GLYCOL/D.I. H ₂ O 50/50 MIX	

I, WILL SMITH representative for:
WILLIAMS FIELD SERVICE (Print Name)
do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature):

WILL SMITH

Title:

PSM COORDINATOR (505) 632-4879

Date:

12-15-99

1 HMIS HEALTH
1 HMIS FLAMMABILITY
0 HMIS REACTIVITY
B HMIS PERSONAL PROTECTION

SECTION I - IDENTIFICATION

DISTRIBUTED BY..... COASTAL CHEMICAL CO., INC
(318)893-3862
EMERGENCY PHONE NUMBER... CHEMTREC (800)424-9300
EFFECTIVE DATE..... 5/15/1993
MANUFACTURER'S NAME..... COASTAL CHEMICAL CO., INC.
TRADE NAME..... COASTALGUARD 50 ANTIFREEZE/COOLANT
CHEMICAL FAMILY..... INHIBITED ETHYLENE GLYCOL SOLUTION
CAS NUMBER..... Blended Product
CHEMICAL FORMULA..... Blended Product

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	%	TLV (Units)	PROD. CAS #
ETHYLENE GLYCOL	50 %	ACGIH CEILING 50ppm	107-21-1

SECTION III - PHYSICAL DATA

FREEZING POINT (F)..... APPROX. -34 DEG F
VAPOR PRESSURE (mm Hg)... 0.12 MMHG @ 25 C
VAPOR DENSITY (Air=1).... 2.14
SOLUBILITY IN H2O..... COMPLETELY MISCIBLE
APPEARANCE/ODOR..... YELLOW/GREEN LIQUID; PRACTICALLY ODORLESS
SPECIFIC GRAVITY (H2O=1). 1.06 typical
PH..... 10.5 - 11.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... WATER BLEND, NO FLASH AT BOILING POINT OF 212 DEG F.
AFTER WATER EVAPORATES FLASH APPROX. 247 DEG F.
LOWER FLAME LIMIT..... N/D
HIGHER FLAME LIMIT..... N/D
EXTINGUISH MEDIA..... Water fog or spray, Foam, Dry Powder, Carbon Dioxide
(CO2).
UNUSUAL FIRE HAZARD..... NONE KNOWN Approach fire from upwind side. Avoid
breathing smoke, fumes, mist or vapors on the
downwind side.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE.... 50 PPM BASED ON ETHYLENE GLYCOL

ROUTES OF ENTRY INHALATION? SKIN? INGESTION?

MATERIAL SAFETY DATA SHEET
C(ALGUARD 50 ANTIFREEZE/COOLANT

IRRITANT, POSSIBLY NARCOTIC	Not expected to cause significant health hazard	Ingestion of very large amounts could cause serious injury, or even death.
--------------------------------	---	---

HEALTH HAZARDS..... ACUTE: Vapors may be irritating to eyes, or mucous membranes. Avoid inhalation or eye contact. CHRONIC: Kidney and liver damage possible. May cause reproductive disorders.

CARCINOGENICITY NO	NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED Yes, table Z-1-A, Ceiling 50 ppm, 125 mg/m3, Final Rule Limits
-----------------------	------------	------------------------	---

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact. Symptoms of overexposure: headache, fatigue, nausea, irritation of respiratory tract, dizziness, staggering gait, confusion, unconsciousness.

FIRST AID PROCEDURES..... In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

=====

SECTION VI - REACTIVITY DATA

=====

CHEMICAL STABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container.

INCOMPATIBLE MATERIALS... OXIDIZING MATERIALS & OXIDIZERS

DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide

HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID..... None

=====

SECTION VII - SPILL OR LEAK PROCEDURE

=====

FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws.

=====

SECTION VIII - SPECIAL PROTECTION

=====

RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor/acid gas cartridge respirator is recommended.

VENTILATION..... Required in closed areas

MECHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

EYE PROTECTION..... Use chemical goggles or full face shield.

OTHER PROTECTIVE EQUIPMENT..... Chemical type apron recommended

=====

SECTION IX - SPECIAL HANDLING

=====

HANDLING AND STORAGE..... Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... NON HAZARDOUS

DOT SHIPPING NAME..... NOT REGULATED

REPORTABLE QUANTITY (RQ). None

UN NUMBER..... None

NA #..... None

PACKAGING SIZE..... N/A

=====

SECTION X - REGULATORY

=====

EPA ACUTE..... YES

EPA CHRONIC..... YES

EPA IGNITABILITY..... NO

EPA REACTIVITY..... NO

EPA SUDDEN RELEASE OF PRESSURE..... NO

CERCLA RQ VALUE..... 1 pound for ethylene glycol

SARA TPQ..... None

SARA RQ..... None

SECTION 313..... YES, ETHYLENE GLYCOL 107-21-1 50% (1/1/87)

EPA HAZARD WASTE #..... None

CLEANAIR..... Yes, Section 111 Volatile Organic Compounds & Section 112 Statutory Air Pollutants (1990 Amendments)

CLEAN WATER..... No

FOOT NOTES N/A - not applicable N/D - no data available
(- means less than) - means greater than
App. - approximate Est. - estimated

=====

MATERIAL SAFETY DATA SHEET
C1 TALGUARD 50 ANTIFREEZE/COOLANT

PREPARED BY:..... David Trahan, C.F.T. - 318-898-0001

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMER IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



CITGO Petroleum Corporation
P. O. Box 3758
Tulsa, Oklahoma 74102

Material Safety Data Sheet

Generic Name: CITGO Gas Engine Oils, SUS 450-2000

Date: May 30, 1997

Generic Code: GE-S1a

THIS GENERIC MSDS REPRESENTS THE FOLLOWING CITGO PRODUCTS:

<u>Trade Name</u>	<u>Commodity Code No.:</u>
CITGO Pacemaker GEO 340	32-003
CITGO Pacemaker GEO 315	32-004
CITGO Pacemaker GEO 815	32-026
CITGO Pacemaker GEO 830	32-027
CITGO Pacemaker GEO 840	32-028
CITGO Pacemaker GEO 935	32-030
CITGO Pacemaker GEO 1035	32-032
CITGO Pacemaker GEO 715	32-033
CITGO Pacemaker GEO 740	32-034
CITGO Pacemaker GEO 1230	32-035
CITGO Pacemaker GEO 1240	32-036
CITGO Pacemaker GEO 1215	32-037
CITGO Pacemaker GEO 1630	32-045
CITGO Pacemaker GEO 1640	32-046
CITGO Pacemaker GEO 1615	32-047
CITGO Pacemaker GEO Special	32-054
CITGO Pacemaker GEO 1840	32-084
CITGO Pacemaker GEO 1015	32-210
CITGO Pacemaker GEO 1020	32-212

Synonyms:	Lubricating Oil	Technical Contact:	(918) 495-5933
CAS No.:	Mixture (Refer to Section 1)	Medical Emergency:	(918) 495-4700
CITGO Index No.:	1954	CHEMTREC Emergency:	(800) 424-9300

MATERIAL HAZARD EVALUATION

(Per OSHA Hazard Communication Standard [29 CFR 1910.1200])

Health Precautions: Protect exposed skin from repeated or prolonged exposure.

Safety Precautions: Do not store material in open or unmarked containers.

HMIS Rating¹ Health: 0 Flammability: 1 Reactivity: 0

¹Hazard Rating: least-0, slight-1, moderate-2, high-3, extreme-4.

CITGO assigned these values based upon an evaluation conducted pursuant to NPCA guidelines. Use of an asterisk (*) indicates that the material may present chronic health effects.

NA-Not Applicable

ND-No Data

NE-Not Established

1.0 GENERIC COMPOSITION / COMPONENTS

Components	CAS No.	%	Hazard Data	
Refined Petroleum Oil(s)	Refer to Section 11	> 70	Oral LD ₅₀ (rat): Dermal and Eye:	> 5 g/kg Mild irritant.
Anti-oxidant, Dispersant (May include zinc dialkyldithiophosphate)	Mixture	< 20	Dermal: Eye:	Mild irritant. Irritant
VI Improver	Mixture	< 15	Dermal and Eye:	Mild irritant.
Pour Point Depressant	Mixture	< 1	Dermal and Eye:	Mild irritant.
Antifoam	Mixture	< 0.1	Dermal and Eye:	Mild irritant.

2.0 PHYSICAL DATA

PHYSICAL HAZARD CLASSIFICATION (Per 29 CFR 1910.1200)

Combustible	No	Flammable	No	Pyrophoric	No
Compressed Gas	No	Organic Peroxide	No	Reactivity	No
Explosive	No	Oxidizer	No	Stable	Yes

Boiling Point, 760 mm Hg, °C (°F): ~361 - 466 (~ 682 - 870)
 Specific Gravity (60/60 °F) (H₂O = 1): ~ 0.87 - 0.89
 Vapor Density (Air = 1): > 1
 % Volatiles by Volume: Negligible
 Melting Point, °C (°F): NA
 Vapor Pressure, mm Hg (25°C): < 1 x 10⁻⁵ to ~ 4 x 10⁵
 Solubility in Water: Negligible
 Evaporation Rate (n-butyl acetate = 1): < 1
 pH of Undiluted Product: NA
 Appearance and Odor: Light to dark amber liquid, slight petroleum odor.

3.0 FIRE AND EXPLOSION DATA

Flash Point, OC, °C (°F): 213 - 286 (415 - 547)
 Flash Point, CC, °C (°F): 170 - 232 (338 - 450)
 Fire Point, OC °C (°F): 238 - 314 (460 - 597)
 NFPA Rating²: Health: 0 Flammability: 1 Reactivity: 0
 Flammable Limits (% by volume in air): Lower: ND Upper: ND
 Extinguishing Media: CO₂, dry chemical, foam, water fog.
 Special Fire Fighting Procedure: None.
 Unusual Fire or Explosion Hazard: Water may cause frothing.

²Hazard Rating: least-0; slight-1; moderate-2; high-3; extreme-4.

CITGO assigned these values based upon an evaluation conducted pursuant to NFPA guidelines.

4.0 REACTIVITY DATA

Stability:	Stable.
Conditions Contributing to Instability:	Excessive heat.
Incompatibility:	Strong oxidants
Hazardous Decomposition Products (thermal, unless otherwise specified):	CO ₂ , (CO with incomplete combustion) and trace oxides of phosphorus, sulfur and zinc.
Hazardous Polymerization:	Hazardous polymerization is not expected to occur.

5.0 SPILL, LEAK AND DISPOSAL PROCEDURES

Procedure if Material is Spilled:

- Remove all ignition sources.
- Isolate the area of the spill and restrict access to persons wearing protective clothing.
- Ventilate area of release, as necessary, to disperse vapors and mists.
- **Small Spills:** Absorb released material with non-combustible absorbent. Place into containers for later disposal. (See Waste Disposal section below.)
- **Large Spills:** Evacuate area in the event of significant spills. Evaluate exposure potential. Potential exposure may require the use of respiratory protection. Use protective clothing. Contain spill in temporary dikes to avoid product migration and to assist in recovery. Do not allow material to escape into sewers, ground water, drainage ditches or surface waters.
- Administer appropriate first aid.
- Report releases as required to the appropriate Federal, State and local authorities.

Waste Disposal:

- It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal.
- Determine compliance status with all applicable requirements prior to disposal.
- Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

Protective Measures During Repair and Maintenance of Contaminated Equipment:

- Refer to Section 7.0 - Special Protection Information.
- Drain and purge equipment, as necessary, to remove material residues.
- Use gloves constructed of impervious materials such as heavy nitrile rubber or neoprene and protective work clothing if direct, extended contact is anticipated.
- Eliminate heat and ignition sources.
- Wash exposed skin thoroughly with soap and water.
- Remove contaminated clothing. Launder before reuse.
- Keep unnecessary persons from hazard area.

6.0 HEALTH HAZARD DATA

Health Hazard Classification (Per 29 CFR 1910.1200):

Highly Toxic	No	Sensitizer	No
Toxic	No	Reproductive Effects	No
Corrosive	No	Mutagen	No
Irritant	No	Target Organ	No

6.0 HEALTH HAZARD DATA (continued)

Carcinogen:

Product/Component	CAS No.	Conc. (%)	NTP	IARC	OSHA	Other
CITGO Gas Engine Oils, SUS 450-2,000	Mixture	100	No	No	No	No

Toxicity Summary: Generally of a low order of toxicity.

Major Route of Entry: Inhalation of incidental mists or vapors and dermal contact with liquid.

Acute Exposure Symptoms:

Inhalation: Over exposure to mists or fumes at elevated temperatures cause drowsiness, dizziness, headache, nausea or lung irritation. Exposures well over applicable workplace exposures levels can cause lung damage.

Dermal: Products represented by this MSDS can cause mild transient skin irritation in some individuals.

Eye: Products represented by this MSDS can cause mild to moderate eye irritation in some individuals.

Ingestion: If swallowed, gastrointestinal discomfort, diarrhea, and headache may occur.

Injection: Injection under the skin, in muscle or into the blood stream may cause irritation, inflammation, swelling or severe, permanent tissue damage.

Chronic Exposure Symptoms:

Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

Other Special Effects:

None expected.

Medical Conditions Aggravated by Exposure:

None.

First Aid and Emergency Procedures for Acute Effects:

Inhalation: Move victim to fresh air. If victim is not breathing, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

Dermal: Remove contaminated clothing. Wash exposed skin with soap and water. Launder clothing before use. Seek medical attention if tissue appears damaged or if irritation persists.

Eyes: Flush eyes with cool water while occasionally lifting and lowering eyelids. Remove contact lenses if worn. Seek medical attention if excessive tearing, irritation or pain persists.

Ingestion: Induce vomiting only upon the advice of a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.

Injection: Injection under the skin, in muscle or into the blood stream is a medical emergency. Seek medical attention immediately.

5.0 HEALTH HAZARD DATA (continued)

Notes to Physician:

The viscosity range of the products represented by this MSDS is 450 to 2,000 SUS at 100° F. If ingested, there is a risk of aspiration of vomitus into the lungs. Removal of material by emesis or lavage may be considered. However, protection of the airway is recommended.

Subcutaneous or intramuscular injection requires prompt surgical debridement.

7.0 SPECIAL PROTECTION INFORMATION

Ventilation Requirements:

Use in well ventilated area. In confined space, mechanical ventilation may be required to keep levels of certain components below applicable workplace exposure levels as evaluated by designated and properly trained personnel.

Applicable Workplace Exposure Levels:

Chemical Component	ACGIH TLV TWA ppm (mg/M ³)	ACGIH TLV STEL/ Ceiling (C) ppm (mg/M ³)	ACGIH TLV Skin notation?	OSHA PEL TWA ppm (mg/ M ³)	OSHA PEL STEL/ Ceiling (C) ppm (mg/M ³)	OSHA PEL Skin notation?
Oil Mist, Mineral	(5)	(10)	No	(5)	NE	No

Specific Personal Protective Equipment:

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations.

- Respirator:** At elevated temperatures, vapor or mist concentrations above applicable workplace exposure levels may be expected. Use a NIOSH or MSHA approved organic vapor/mist chemical cartridge respirator when elevated airborne concentrations are anticipated.
- Eyes:** Safety glasses or chemical splash goggles if splashing is anticipated.
- Dermal:** Use gloves constructed of impervious materials such as heavy nitrile rubber or neoprene if frequent or prolonged contact is anticipated.
- Clothing or Equipment:** Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder contaminated work clothes before reuse.

8.0 TRANSPORTATION AND SPECIAL PRECAUTIONS

- Storage:** Store in a cool, dry, well ventilated area. Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.
- Caution:** Empty containers may contain product residue which could include flammable vapors. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

8.0 TRANSPORTATION AND SPECIAL PRECAUTIONS (continued)

DOT Information:

Proper Shipping Name:	Petroleum Lubricating Oils
Hazard Class:	Non-Hazardous
Hazard Identification No.:	None assigned
Packaging Group:	None assigned
Placard:	None
Compatibility Category:	Group 33
CHRIS Code:	OLB

9.0 ENVIRONMENTAL DATA

Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 313 - Toxic Chemicals:

This product is not known to contain any components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA.

Section 311/312 - Hazard Categories:

This product may meet one or more of the criteria for the hazard categories defined in 40 CFR Part 370 as established by Sections 311 and 312 of SARA as indicated below:

Immediate (Acute) Health Hazard:	<u>No</u>	Sudden Release of Pressure Hazard:	<u>No</u>
Delayed (Chronic) Health Hazard:	<u>No</u>	Reactive Hazard:	<u>No</u>
Fire Hazard:	<u>No</u>		

Section 302 - Extremely Hazardous Substances:

This product is not known to contain any components in concentrations greater than one percent that are listed as Extremely Hazardous Substances in 40 CFR Part 355 pursuant to the requirements of Section 302(a) of SARA.

Clean Water Act (CWA):

Under the CWA, discharges of crude oil and petroleum products to surface water without proper Federal and State permits must be reported immediately to the National Response Center at (800) 424-8802.

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) Section 102 Hazardous Substances:

As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance.

California Proposition 65 (The Safe Drinking Water and Toxics Enforcement Act):

This material contains components that are known to the State of California to be:

Carcinogenic:	<u>No</u>	Reproductive Hazard:	<u>No</u>
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New Jersey Worker and Community Right-to-Know Act:

Petroleum Oil

Toxic Substances Control Act (TSCA):

Reported in TSCA Inventory as:	Product	Components
CITGO Gas Engine Oils SUS 450 - 2,000		X

NA-Not Applicable

ND-No Data

NE-Not Established

CITGO Gas Engine Oils SUS 450-2000 (GE-S1a, May30, 1997, CIN: 1954)

Page 6 of 7

10.0 LABELING

NOTE:

This product has been determined not to be a physical or a health hazard as defined by the OSHA Hazard Communication Standard.

Avoid prolonged skin contact with used motor oil. Continuous contact has caused skin cancer in laboratory animals. After draining oil, wash skin thoroughly with soap and water. Launder contaminated clothing before reuse.

11.0 REFINED PETROLEUM OILS

The products represented by this MSDS contains one or more of the following base oils:

<u>Chemical / Common Name</u>	<u>CAS No.</u>
Solvent Refined Light Paraffinic Distillate	64741-89-5
Solvent Refined Heavy Paraffinic Distillate	64741-88-4
Solvent Dewaxed Heavy Paraffinic Distillate	64742-65-0
Hydrotreated Light Paraffinic Distillate	64742-55-8
Hydrotreated Neutral Lubricating Oil	72623-87-1
Hydrotreated High Viscosity Neutral Lubricating Oil	72623-85-9

ALL STATEMENTS, INFORMATION, AND DATA PROVIDED IN THIS MATERIAL SAFETY DATA SHEET ARE BELIEVED TO BE ACCURATE AND RELIABLE, BUT ARE PRESENTED WITHOUT GUARANTEE, REPRESENTATION, WARRANTY, OR RESPONSIBILITY OF ANY KIND, EXPRESSED OR IMPLIED. ANY AND ALL REPRESENTATIONS AND/OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE. NOTHING CONTAINED HEREIN IS INTENDED AS PERMISSION, INDUCEMENT OR RECOMMENDATION TO VIOLATE ANY LAWS OR TO PRACTICE ANY INVENTION COVERED BY EXISTING PATENTS, COPYRIGHTS OR INVENTIONS.



El Cedro Complex

P.O. Box 215
Bloomfield, NM 87413

Hwy 64 Millemarker 100.5
Blanco, NM 87412

505-632-4870
505-632-4875 Fax

GET THE FAX!!!!!!!!!!!!!!

Date:

11-23-99

TO:

COMPANY:

INGRID DEHAN WILLIAMS SLL

Fax Number:

Telephone Number:

7760 X6543

FROM:

Telephone Number:

WILL S X4879

REGARDING:

ANNUAL WASTE WATER SAMPLES

PLEASE CALL

☐

URGENT

☐

PLEASE FAX INFORMATION

☐

IMPORTANT

☐

FOR YOUR INFORMATION



CONFIDENTIAL

☐

NO REPLY NEEDED

☐

OTHER

☐

Total Pages Including Cover Sheet

6

If you did not receive all pages of this transmission, or the pages are not legible PLEASE notify the sender at the above phone numbers.

Millemarker 100.5 Hwy 64 East, Blanco, NM 87412

OWAL LABORATORIES, INC.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #:

9910993

SENT WILLIAMS GAS PIPELINE

DATE REPORTED: 11/11/99

TO: PO BOX 213

DATE COLLECTED: 10/28/99

BLOOMFIELD, NM 87413

DATE RECEIVED: 10/30/99

WILL SMITH

P.O. #: 392-0795-M5

PROJECT PLANT AND RECIPIE WATER *(Signature)*Sample ID: PLANT TANK *(EXEMPT)*

Sample Matrix: WATER

Collection Date: 10/28/99

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYSED	EXTRACTED
TCLP EXTRACTION	EPA 1311	DCNE			DLB	11/01/99
SILVER, TCLP	SW 846 6010	<3.01	MG/L	0.01	11/04/99JMM	
ARSENIC, TCLP	SW 846 7060	0.001	MG/L	0.001	11/04/99JMM	
BARIUM, TCLP	SW 846 6010	0.020	MG/L	0.005	11/04/99JMM	
CADMIUM, TCLP	SW 846 6010	0.028	MG/L	0.005	11/04/99JMM	
CHROMIUM, TCLP	SW 846 6010	1.07	MG/L	0.01	11/04/99JMM	
MERCURY, TCLP	SW 846 7470	<0.0002	MG/L	0.0002	11/02/99JMM	
LEAD, TCLP	SW 846 6010	0.04	MG/L	0.01	11/04/99JMM	
SELENIUM, TCLP	SW 846 7740	<0.002	MG/L	0.002	11/06/99JMM	
TCLP VOLATILES	SW 846 8260					
BENZENE	71-43-2	0.112	UG/L	5.0	11/03/99TK	
CARBON TETRACHLORIDE	56-23-5	ND	UG/L	5.0	11/03/99TK	
CHLOROBENZENE	106-90-7	ND	UG/L	5.0	11/03/99TK	
CHLOROFORM	67-66-3	0.017	UG/L	5.0	11/03/99TK	
1,2-DICHLOROETHANE	107-06-2	ND	UG/L	5.0	11/03/99TK	
1,1-DICHLOROETHYLENE	75-35-4	ND	UG/L	5.0	11/03/99TK	
METHYL ETHYL KETONE	78-93-3	ND	UG/L	5.0	11/03/99TK	
TETRACHLOROETHYLENE	127-10-4	ND	UG/L	5.0	11/03/99TK	
TRICHLOROETHYLENE	79-01-6	ND	UG/L	5.0	11/03/99TK	
VINYL CHLORIDE	75-01-4	ND	UG/L	5.0	11/03/99TK	
TCLP SEMI-VOLATILES	SW 846 8270					
O-CRESOL	75-43-7	ND	MG/L	0.10	11/07/99DN	11/02/99
P-CRESOL	106-44-5	ND	MG/L	0.10	11/07/99DN	11/02/99
M-CRESOL	99-50-7	ND	MG/L	0.10	11/07/99DN	11/02/99
1,4-DICHLOROBENZENE	541-73-1	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4-DINITROTOLUENE	121-14-2	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROBENZENE	118-74-1	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROBUTADIENE	87-68-3	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROETHANE	67-72-1	ND	MG/L	0.10	11/07/99DN	11/02/99
NITROBENZENE	98-95-3	ND	MG/L	0.10	11/07/99DN	11/02/99
PENTACHLOROPHENOL	87-86-5	ND	MG/L	0.50	11/07/99DN	11/02/99
PYRIDINE	110-86-1	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4,5-TRICHLOROPHENOL	95-95-4	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4,6-TRICHLOROPHENOL	88-06-2	ND	MG/L	0.10	11/07/99DN	11/02/99

REFERENCE #: 9910993

PAGE: 1

Sample ID: RECIP JANK **NON-EXEMPT**
Collection Date: 10/29/99

Sample Matrix: WATER

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED	EXTRACTED
TCLP EXTRACTION	3PA 1311	DONE			DLB	11/01/99
SILVER, TCLP	SW 846 6010	<0.01	MG/L	0.01	11/04/99JMM	
ARSENIC, TCLP	SW 846 7060	<0.001	MG/L	0.001	11/04/99JMM	
BARIUM, TCLP	SW 846 5010	0.016	MG/L	0.005	11/04/99JMM	
CADMIUM, TCLP	SW 846 6010	<0.005	MG/L	0.005	11/04/99JMM	
CHROMIUM, TCLP	SW 846 6010	<0.01	MG/L	0.01	11/04/99JMM	
MERCURY, TCLP	SW 846 7470	<0.0002	MG/L	0.0002	11/02/99JMM	
LEAD, TCLP	SW 846 6010	0.01	MG/L	0.01	11/04/99JMM	
SELENIUM, TCLP	SW 846 7740	<0.003	MG/L	0.002	11/05/99JMM	
TCLP VOLATILES	SW 846 8260					
BENZENE	71-43-2	0.014	MG/L	0.050	11/03/99TK	
CARBON TETRACHLORIDE	56-23-5	ND	MG/L	0.050	11/03/99TK	
CHLOROBENZENE	108-90-7	ND	MG/L	0.050	11/03/99TK	
CHLOROPORM	67-66-3	ND	MG/L	0.050	11/03/99TK	
1,1-DICHLOROETHANE	107-06-2	ND	MG/L	0.050	11/03/99TK	
1,1-DICHLOROETHYLENE	75-35-4	ND	MG/L	0.050	11/03/99TK	
METHYL ETHYL KETONE	78-93-3	ND	MG/L	0.050	11/03/99TK	
TETRACHLOROETHYLENE	127-18-4	ND	MG/L	0.050	11/03/99TK	
TRICHLOROETHYLENE	79-01-6	ND	MG/L	0.050	11/03/99TK	
VINYL CHLORIDE	75-01-4	ND	MG/L	0.050	11/03/99TK	
TCLP SEMI-VOLATILES	SW 846 8270					
O-CRESOL	75-48-7	ND	MG/L	0.10	11/07/99DN	11/02/99
P-CRESOL	106-44-5	ND	MG/L	0.10	11/07/99DN	11/02/99
M-CRESOL	99-50-7	ND	MG/L	0.10	11/07/99DN	11/02/99
1,4-DICHLOROBENZENE	941-73-1	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4-DINITROTOLUENE	121-14-2	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROBENZENE	118-74-1	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROCYCLOHEPTADIENE	87-68-3	ND	MG/L	0.10	11/07/99DN	11/02/99
HEXACHLOROETHANE	67-72-1	ND	MG/L	0.10	11/07/99DN	11/02/99
NITROBENZENE	98-95-3	ND	MG/L	0.10	11/07/99DN	11/02/99
PENTACHLOROPHENOL	87-86-5	ND	MG/L	0.50	11/07/99DN	11/02/99
PYRIDINE	110-86-1	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4,5-TRICHLOROPHENOL	95-93-4	ND	MG/L	0.10	11/07/99DN	11/02/99
2,4,6-TRICHLOROPHENOL	68-06-2	ND	MG/L	0.10	11/07/99DN	11/02/99

Sample ID: MATRIX SPIKE
Collection Date: 10/28/99

Sample Matrix: WATER

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED	EXTRACTED
TCLP EXTRACTION	EPA 1311	DONE			DLB	11/01/99
SILVER, TCLP	SW 846 6010	97.9	µ REC		11/04/99JMM	
ARSENIC, TCLP	SW 846 7060	90.9	µ REC		11/04/99JMM	
BARIUM, TCLP	SW 846 6010	108.6	µ REC		11/04/99JMM	
CADMIUM, TCLP	SW 846 6010	93.9	µ REC		11/04/99JMM	
CHROMIUM, TCLP	SW 846 6010	97.7	µ REC		11/04/99JMM	
MERCURY, TCLP	SW 846 7470	89.9	µ REC		11/02/99JMM	

REFERENCE #: 9910953

PAGE: 2

Sample ID: MATRIX SPIKE
Collection Date: 10/28/99

Sample Matrix: WATER

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED	EXTRACTED
LEAD, TCLP	SW 846 6010	95.7	µ REC		11/04/99JMM	
SELENIUM, TCLP	SW 846 1740	98.5	µ REC		11/05/99JMM	
TCLP SEMI-VOLATILES	SW 846 8270					
O-CRESOL	75-48-7	18	µRECOV	0.10	11/07/99DN	11/02/99
M-CRESOL	106-44-5	60	µRECOV	0.10	11/07/99DN	11/02/99
P-CRESOL	59-50-7	60	µRECOV	0.10	11/07/99DN	11/02/99
1,4-DICHLOROBENZENE	541-73-1	46	µRECOV	0.10	11/07/99DN	11/02/99
2,4-DINITROTOLUENE	121-14-2	15	µRECOV	0.10	11/07/99DN	11/02/99
HEXACHLOROBENZENE	118-74-1	67	µRECOV	0.10	11/07/99DN	11/02/99
HEXACHLOROCYCLOHEPTADIENE	87-68-3	49	µRECOV	0.10	11/07/99DN	11/02/99
HEXACHLOROETHANE	67-72-1	45	µRECOV	0.10	11/07/99DN	11/02/99
NITROBENZENE	98-95-3	35	µRECOV	0.10	11/07/99DN	11/02/99
PENTACHLOROPHENOL	87-86-5	10	µRECOV	0.10	11/07/99DN	11/02/99
PYRIDINE	110-86-1	17	µRECOV	0.10	11/07/99DN	11/02/99
2,4,5-TRICHLOROPHENOL	95-95-4	38	µRECOV	0.10	11/07/99DN	11/02/99
2,4,6-TRICHLOROPHENOL	88-06-2	31	µRECOV	0.10	11/07/99DN	11/02/99
TCLP VOLATILES	SW 846 8260					
BENZENE	71-43-2	90.6	µ REC	1.0	11/03/99TK	
CARBON TETRACHLORIDE	56-23-5	87.3	µ REC	1.0	11/03/99TK	
CHLOROBENZENE	108-90-7	103	µ REC	1.0	11/03/99TK	
CHLOROFORM	67-66-3	79.0	µ REC	1.0	11/03/99TK	
1,2-DICHLOROETHANE	107-06-2	79.1	µ REC	1.0	11/03/99TK	
1,1-DICHLOROETHYLENE	75-35-4	92.9	µ REC	1.0	11/03/99TK	
METHYL ETHYL KETONE	78-93-3	79.0	µ REC	1.0	11/03/99TK	
TETRACHLOROETHYLENE	127-18-4	95.3	µ REC	1.0	11/03/99TK	
TRICHLOROETHYLENE	79-01-6	96.0	µ REC	1.0	11/03/99TK	
VINYL CHLORIDE	75-01-4	106	µ REC	1.0	11/03/99TK	

ND=NOT DETECTED

PQL=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

*BACKGROUND CONTAMINATION

SUR=SURROGATE

Q=OUTSIDE LIMITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

TERRY KOESTER
LABORATORY DIRECTOR

REFERENCE #: 9910933

PAGE: 3

Q.W.A.L. LABORATORIES, INC.

Established 1976

12911 Rotary Terrace • Pittsburg, Kansas 66762

TO ORDER: FAX 1-316-232-7730 OR PHONE 1-316-232-1970

AK
8975800

① Company Name: <u>Williams</u> Attention: <u>Will Smith</u> Address: <u>PO Box 215</u> <u>Bloomfield NM 87413</u> City, State, Zip Code		④ Phone #: <u>505-632-4877</u> ⑤ Fax #: <u>505-6327-4878</u>		③ TURNAROUND TIME REQUESTED (Additional Charges May Apply) <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Same Day * Note: Please contact lab for availability of priority service.	
② Project Name or Number: <u>Plant & Recip Waste Water</u> ⑥ Sampling Personnel Signature(s): <i>Jim Coufal</i> Sampling Personnel (print name): <u>Jim Coufal</u>		⑤ Purchase Order #: <u>392-0795-WK</u>		① ANALYSIS REQUEST (Write Tests Here)	
⑦ Sample ID: <u>10/26/99</u> <u>Recip Tank</u>	Date: <u>10/26/99</u> Time: <u>1300</u>	⑧ Comp.: <u>X</u> ⑨ Grab: <u>X</u> ⑩ # of Containers: <u>4</u>	⑪ Method Preserved: IDSO4 <u>X</u> ASNO <u>X</u> NaOH <u>X</u> HCL <u>X</u> Ice <u>X</u> None <u>X</u> Water <u>X</u> Soil <u>X</u> Sludge <u>X</u> Other <u>X</u>	⑫ Sample Matrix: <u>ICLP mixed Pests</u> <u>Herbicides</u> <u>VOL, Semivol</u> <u>Metals</u>	REMARKS (If special detection limits are required please note below.)
⑬ Relinquished By: <u>Jim Coufal</u> Date: <u>10-28-99</u> Time: <u>1330</u> Received By: <u>[Signature]</u> Date: <u>10-30-99</u> Time: <u>1115</u> Relinquished By: <u>[Signature]</u> Date: <u>10-30-99</u> Time: <u>1115</u> Received By: <u>[Signature]</u> Date: <u>10-30-99</u> Time: <u>1115</u> Relinquished By: <u>[Signature]</u> Date: <u>10-30-99</u> Time: <u>1115</u> Received By: <u>[Signature]</u> Date: <u>10-30-99</u> Time: <u>1115</u>					
⑭ Send Report to: Company: <u>Williams</u> Attn: <u>Will Smith</u> Address: <u>PO Box 215</u> City/State: <u>Bloomfield NM 87413</u> Phone: <u>505-632-4877</u> Fax: <u>505-632-4878</u>			⑮ Send Invoice to: (if different from report address) Company: <u>Same</u> Attn: <u>Same</u> Address: <u>Same</u> City/State: <u>Same</u> Phone: <u>Same</u> Fax: <u>Same</u>		

*FAILURE TO COMPLETE THIS FORM MAY DELAY LABORATORY RESULTS.

11.11.98 16:23

.316327730

QWAL LAB

G102

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

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <u>WAS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>EL CEDRO COMPLEX</u>
2. Management Facility Destination <u>Key Disposal</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>Hwy 64 NM 100.5</u>	
9. <u>Circle One:</u> (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:

Exempt Amine Treating fluid 95% Brine water
2.5% Amine
2.5% TREATING TEG

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

Estimated Volume 50066L cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MR DATE: 12-16-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Zent TITLE: Geologist DATE: _____
APPROVED BY: Charles T. Lerner TITLE: Deputy Inspector DATE: 12/16/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: WILLIAMS EL CEDRO COMPLEX HWY 6A MILE MARKER 100.5	2. Destination Name: KEY DISPOSAL
3. Originating Site (name): EL CEDRO COMPLEX	Location of the Waste (Street address &/or ULSTR):
Attach list of originating sites as appropriate	
4. Source and Description of Waste AMINE TREATING - 95% RAIN WATER 2.5% AMINE 2.5% TREATING TEG	

I, WILL SMITH representative for:
WILLIAMS FIELD SERVICE (Print Name)
do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

☒ EXEMPT oilfield waste
TREATING PLANT
☐ 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): WILL SMITH

Title: PSM COORDINATOR (505) 632-4879

Date: 12-14-99

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 743-1283
311 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
NM 87410
District IV - (505) 827-7131

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Generator <u>Baker Oil Tools</u>
2. Management Facility Destination <u>Waste Energy Disposal</u>	5. Originating Site <u>FARMINGTON YARD</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC NM</u>	6. Transporter <u>Key</u>
7. Location of Material (Street Address or ULSTR) <u>1732 E. MAIN FARMINGTON, NM</u>	8. State <u>N.M.</u>
9. <u>Circle One</u> : A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Wash water used to wash Downhole oilfield service tools

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

Estimated Volume 200 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: mgr DATE: 12-16-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Fount TITLE: Geologist DATE: 12/16/99

APPROVED BY: Chen + Lin TITLE: Deputy Inspector DATE: 12/16/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: M Lee Whiting Box 718 Farmington NM 87499	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): Baker Oil Tools 1732 E main Farmington NM 87401	
Location of the Waste (Street address &/or ULSTR): 	
<small>Attach list of originating sites as appropriate</small>	
4. Source and Description of Waste Water used to wash Downhole tools	

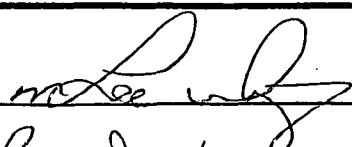
I, M Lee Whiting representative for:
 (Print Name)
Baker Oil Tools do hereby certify that,
 according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
 1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): 
 Title: Operations Coordinator
 Date: 12-14-88

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
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 22 1999
OIL CON. DIV.
DIST. 3

Form C-13
Originated 8/8

Submit Origin
Plus 1 Co
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>EL PASO NATURAL GAS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Bluewater Station</u>
2. Management Facility Destination <u>Key Energy Disposal</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC N.M.</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>Interstate 40, Exit 53 1/2 mile south</u>	<u>Thoreau, NM</u>
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

WATER MIXED WITH ANTIFREEZE FROM THE ENGINE COOLING SYSTEM.
Some oil is also in the mixture (<1% of used engine oil)

RECEIVED

DEC 21 1999

Environmental Bureau
Oil Conservation Division

RECEIVED
DEC 13 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 750 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich
Waste Management Facility Authorized Agent

TITLE: MGR

DATE: 12-13-99

TYPE OR PRINT NAME: MICHAEL TALOVICH

TELEPHONE NO. 505 334-6186

(This space for State Use)

APPROVED BY: Gerry D. Zant

TITLE: Geologist

DATE: 12/15/99

APPROVED BY: Tom R. ...

TITLE: Env Bureau Chief

DATE: 12/20/99

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
311 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
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 8/89

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>EL PASO NATURAL GAS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Bluewater STATION</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC N.M.</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>Interstate 40, Exit 53 1/2 mile, south</u>	<u>Thoreau, NM</u>
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:

WATER MIXED WITH ANTIFREEZE FROM THE ENGINE COOLING SYSTEM.
Some oil is also in the mixture (<1% of used engine oil)

RECEIVED
DEC 13 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 750 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGR DATE: 12-13-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505 334-6186

(This space for State Use)

APPROVED BY: Dennis G. Faint TITLE: Geologist DATE: 12-15-99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: El Paso Natural Gas Co. Bluewater Station 3801 Atrisco Blvd NW Albuquerque, NM 87120	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): El Paso Natural Gas Company Bluewater Station Attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR): Interstate 40, Exit 53 1/4-mile, south Thoreau, NM
4. Source and Description of Waste Water mixed w/ antifreeze (< 5%) from the engine cooling system. Some oil is also in the mixture. (< 1% of used engine oil)	

I, Richard Duarte representative for:

El Paso Natural Gas Company do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory determination, the above-described waste is: (Check appropriate classification)

☐ EXEMPT oilfield waste

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

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

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

☐ MSDS Information

☐ Other (description):

☒ RCRA Hazardous Waste Analysis

☒ Chain of Custody

Name (Original Signature): Richard Duarte

Title: Principle Environmental Engr

Date: 12/13/99.

NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

Reno Division
1030 Matley Lane • Reno, Nevada 89502
(702) 348-2522 • Fax: (702) 348-2546
1-800-368-5221

CLIENT: El Paso Natural Gas Co.
8645 Railroad Dr.
El Paso, TX 79904
ATTN: Darrell Campbell

PROJECT NAME: Bluewater Station
PROJECT #: NA

NEL ORDER ID: P9908051

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 8/13/99.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Extract for method 8270 for TCLP was analyzed at dilution due to the presence of 2-methyl-2-butenal and 2-methyl-2-pentenal.

Some results have been flagged as follows:

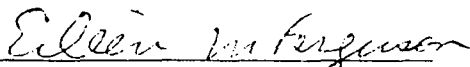
JI - The batch MS and/or MSD were outside acceptance limits. The LCS was acceptable.

Some QA results have been flagged as follows:

JI - The batch MS and/or MSD were outside acceptance limits. The LCS was acceptable.

Some surrogate results have been flagged as follows:

D - Sample was run at dilution. Surrogates were diluted outside calibration range.


Eileen M. Ferguson
Laboratory Manager

8/27/99
Date

CERTIFICATIONS:

	Reno	Las Vegas	S. California		Reno	Las Vegas	S. California
Arizona	AZ0520	AZ0518	AZ0605	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified		Nevada	NV033	NV052	CA084
				L.A.C.S.D.			10228

NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: F990068
DATE SAMPLED: 8/11/99
NEL SAMPLE ID: P9908051-01

TEST: Inorganic Non-Metals
MATRIX: Aqueous

PARAMETER	REPORTING			METHOD	UNITS	ANALYZED
	RESULT	LIMIT	D. F.			
Cyanide, Reactive	ND	0.02	1	SW846 Chapter Seven	mg/L	8/19/99
Ignitability	>212	212	1	EPA 1010	Temp °F	8/19/99
pH	5.22	2.	1	EPA 9040B	pH Units	8/16/99
pH Temperature	10.5	1.	1	EPA 9040B	°C	8/16/99
Sulfide, Reactive	0.35	0.15	5	SW846 Chapter Seven	mg/L	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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

NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.

PROJECT ID: Bluewater Station

PROJECT #: NA

TEST: Non-Metals

CLIENT ID: Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 990819CN-BLK

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Cyanide, Reactive	ND	0.02	1	SW846 Chapter Seven	mg/L	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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

NEL LABORATORY

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA
TEST: Non-Metals

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 990819SULFREAC1-BLK

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Sulfide, Reactive	ND	0.03	1	SW846 Chapter Seven	mg/L	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATC

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: F990068
DATE SAMPLED: 8/11/99
NEL SAMPLE ID: P9908051-01

TEST: TCLP-8 Metals
MATRIX: Aqueous

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	TCLP/STLC EXTRACTION		
					DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Barium	ND	1. mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Mercury	ND	0.002 mg/L	10	EPA 7470A	NA	8/19/99	8/19/99
Selenium	0.11	Jl 0.1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Silver	ND	0.02 mg/L	1	EPA 6010	NA	8/19/99	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATO

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: P08051-T7-BLK

TEST: TCLP Metals
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING		TCLP/STLC			
		LIMIT	D. F.	METHOD	DATE	DIGESTED	ANALYZED
Arsenic	ND	0.1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Barium	ND	1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Chromium	ND	0.01 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Lead	ND	0.05 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Selenium	ND	0.1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Silver	ND	0.02 mg/L	1	EPA 6010	NA	8/19/99	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATC

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: P08051-THg-BLK

TEST: TCLP Metals
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING LIMIT	D. F.	TCLP/STLC EXTRACTION			
				METHOD	DATE	DIGESTED	ANALYZED
Mercury	ND	0.002 mg/L	10	EPA 7470A	NA	8/19/99	8/19/99

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORY

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: F990068
DATE SAMPLED: 8/11/99
NEL SAMPLE ID: P9908051-01

TEST: TCLP by EPA 1311, July 1992 & Volatile Organics by EPA 8260B, Dec. 1996

METHOD: EPA 8260B

TCLP EXTRACT DATE: NA

MATRIX: Aqueous

EXTRACTED 8/18/99

DILUTION: 1

ANALYZED: 8/18/99

<u>PARAMETER</u>	<u>Result mg/L</u>	<u>Reporting Limit</u>
Benzene	ND	0.1 mg/L
Carbon tetrachloride	ND	0.1 mg/L
Chlorobenzene	ND	0.1 mg/L
Chloroform	ND	0.1 mg/L
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L
1,2-Dichloroethane (1,2-DCA)	ND	0.1 mg/L
1,1-Dichloroethene (1,1-DCE)	ND	0.1 mg/L
Methyl Ethyl Ketone	ND	2. mg/L
Tetrachloroethene (PCE)	ND	0.1 mg/L
Trichloroethene	ND	0.1 mg/L
Vinyl chloride	ND	0.1 mg/L

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	106	74 - 121
Dibromofluoromethane	96	80 - 120
Toluene-d8	100	81 - 117

ND - Not Detected

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NEL LABORAT S

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: F990068
DATE SAMPLED: 8/11/99
NEL SAMPLE ID: P9908051-01

TEST: TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, December 1996
METHOD: EPA 8270
MATRIX: Aqueous
DILUTION: 10

TCLP EXTRACT DATE: NA
EXTRACTED: 8/17/99
ANALYZED: 8/17/99

PARAMETER	Result mg/L	Reporting Limit
1,4-Dichlorobenzene (p-DCB)	ND	1. mg/L
2,4-Dinitrotoluene (DNT)	ND	1. mg/L
Hexachlorobenzene	ND	1. mg/L
Hexachlorobutadiene	ND	1. mg/L
Hexachloroethane	ND	1. mg/L
2-Methylphenol	ND	1. mg/L
3,4-Methylphenol (isomeric pair)	ND	1. mg/L
Nitrobenzene	ND	1. mg/L
Pentachlorophenol	ND	1. mg/L
Pyridine	ND	1. mg/L
2,4,5-Trichlorophenol	ND	1. mg/L
2,4,6-Trichlorophenol	ND	1. mg/L

See F99-0088

QUALITY CONTROL DATA:

Surrogate	% Recovery		Acceptable Range
2,4,6-Tribromophenol	D		10 - 123
2-Fluorobiphenyl	D	D	43 - 116
2-Fluorophenol	D		21 - 100
Nitrobenzene-d5	D		35 - 114
p-Terphenyl-d14	D		33 - 141
Phenol-d5	D		10 - 94

ND - Not Detected

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NEL LABORATOR

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 081799-E1_tclp-BLK

TEST: TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, December 1996
METHOD: EPA 8270
MATRIX: TCLP Extract
TCLP EXTRACT DATE: NA
EXTRACTED: 8/17/99
ANALYZED: 8/17/99

PARAMETER	Result mg/L	Reporting Limit
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L
2,4-Dinitrotoluene (DNT)	ND	0.1 mg/L
Hexachlorobenzene	ND	0.1 mg/L
Hexachlorobutadiene	ND	0.1 mg/L
Hexachloroethane	ND	0.1 mg/L
2-Methylphenol	ND	0.1 mg/L
3,4-Methylphenol (isomeric pair)	ND	0.1 mg/L
Nitrobenzene	ND	0.1 mg/L
Pentachlorophenol	ND	0.1 mg/L
Pyridine	ND	0.1 mg/L
2,4,5-Trichlorophenol	ND	0.1 mg/L
2,4,6-Trichlorophenol	ND	0.1 mg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	72	10 - 123
2-Fluorobiphenyl	74	43 - 116
2-Fluorophenol	47	21 - 100
Nitrobenzene-d5	77	35 - 114
p-Terphenyl-d14	93	33 - 141
Phenol-d5	30	10 - 94
ND - Not Detected		

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NEL LABORATORY

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 081899-V1-TCLPB-BLK

TEST: TCLP by EPA 1311, July 1992 & Volatile Organics by EPA 8260B, Dec. 1996

METHOD: EPA 8260B

MATRIX: TCLP Extract

TCLP EXTRACT DATE: NA

EXTRACTED 8/18/99

ANALYZED: 8/18/99

PARAMETER	Result mg/L	Reporting Limit
Benzene	ND	0.1 mg/L
Carbon tetrachloride	ND	0.1 mg/L
Chlorobenzene	ND	0.1 mg/L
Chloroform	ND	0.1 mg/L
1,4-Dichlorobenzene (p-DCB)	ND	0.1 mg/L
1,2-Dichloroethane (1,2-DCA)	ND	0.1 mg/L
1,1-Dichloroethene (1,1-DCE)	ND	0.1 mg/L
Methyl Ethyl Ketone	ND	2 mg/L
Tetrachloroethene (PCE)	ND	0.1 mg/L
Trichloroethene	ND	0.1 mg/L
Vinyl chloride	ND	0.1 mg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	106	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	98	81 - 117

ND - Not Detected

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NEL LABORATORY

CLIENT: El Paso Natural Gas Co.
 PROJECT ID: Bluewater Station
 PROJECT #: NA
 TEST: TCLP by EPA 1311, September 1992 & Semivolatile Organics by EPA Method 8270C, December 1996
 MATRIX: Solid

PARAMETER	NEL Sample ID	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Pyridine	081799-E1_tclp-LCS	80	44.7	56	10 - 130	
Pyridine	P9908038-01-MS	80	46.1	58	10 - 130	
Pyridine	P9908038-01-MSD	80	43.3	54	10 - 130	6.3
1,4-Dichlorobenzene (p-DCB)	081799-E1_tclp-LCS	80	68.4	86	48 - 101	
1,4-Dichlorobenzene (p-DCB)	P9908038-01-MS	80	69.7	87	48 - 101	
1,4-Dichlorobenzene (p-DCB)	P9908038-01-MSD	80	66.6	83	48 - 101	4.6
Hexachloroethane	081799-E1_tclp-LCS	80	65.7	82	43 - 104	
Hexachloroethane	P9908038-01-MS	80	69.2	87	43 - 104	
Hexachloroethane	P9908038-01-MSD	80	64.6	81	43 - 104	6.9
Nitrobenzene	081799-E1_tclp-LCS	80	68.3	85	28 - 124	
Nitrobenzene	P9908038-01-MS	80	69	86	28 - 124	
Nitrobenzene	P9908038-01-MSD	80	70.4	88	28 - 124	2.
Hexachlorobutadiene	081799-E1_tclp-LCS	80	69.8	87	39 - 111	
Hexachlorobutadiene	P9908038-01-MS	80	74.1	93	39 - 111	
Hexachlorobutadiene	P9908038-01-MSD	80	70.7	88	39 - 111	4.7
2-Methylphenol	081799-E1_tclp-LCS	80	67.4	84	30 - 130	
2-Methylphenol	P9908038-01-MS	80	68.3	85	30 - 130	
2-Methylphenol	P9908038-01-MSD	80	69.8	87	30 - 130	2.2
3,4-Methylphenol (isomeric pair)	081799-E1_tclp-LCS	80	61	76	30 - 130	
3,4-Methylphenol (isomeric pair)	P9908038-01-MS	80	62.8	79	30 - 130	
3,4-Methylphenol (isomeric pair)	P9908038-01-MSD	80	63.6	80	30 - 130	1.3
2,4,6-Trichlorophenol	081799-E1_tclp-LCS	80	79.1	99	43 - 110	
2,4,6-Trichlorophenol	P9908038-01-MS	80	82.6	103	43 - 110	
2,4,6-Trichlorophenol	P9908038-01-MSD	80	82.3	103	43 - 110	0.4
2,4,5-Trichlorophenol	081799-E1_tclp-LCS	80	79	99	30 - 130	
2,4,5-Trichlorophenol	P9908038-01-MS	80	85.4	107	30 - 130	
2,4,5-Trichlorophenol	P9908038-01-MSD	80	86	108	30 - 130	0.7
2,4-Dinitrotoluene (DNT)	081799-E1_tclp-LCS	80	70.2	88	50 - 111	
2,4-Dinitrotoluene (DNT)	P9908038-01-MS	80	65.3	82	50 - 111	
2,4-Dinitrotoluene (DNT)	P9908038-01-MSD	80	71.2	89	50 - 111	8.7
Hexachlorobenzene	081799-E1_tclp-LCS	80	71.8	90	41 - 125	
Hexachlorobenzene	P9908038-01-MS	80	74.2	93	41 - 125	
Hexachlorobenzene	P9908038-01-MSD	80	72.2	90	41 - 125	2.7
Pentachlorophenol	081799-E1_tclp-LCS	80	78.2	98	47 - 127	
Pentachlorophenol	P9908038-01-MS	80	79.4	99	47 - 127	
Pentachlorophenol	P9908038-01-MSD	80	81.9	102	47 - 127	3.1

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA
TEST: TCLP by EPA 1311, July 1992 & Volatile Organics by EPA 8260B, Dec. 1996
MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	081899-V1-TCLPB-LCS	20	20.4	102	66 - 142	
Chlorobenzene	081899-V1-TCLPB-LCS	20	21.6	108	60 - 133	
1,1-Dichloroethene (1,1-DCE)	081899-V1-TCLPB-LCS	20	20.9	105	59 - 172	
Toluene	081899-V1-TCLPB-LCS	20	20.6	103	59 - 139	
Trichloroethene (TCE)	081899-V1-TCLPB-LCS	20	20.5	102	62 - 137	

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA
TEST: Inorganic Non-Metals
MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
7.00 Buffer	990816PH-LCS	7	7.04	101	99 - 101	

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA
TEST: Inorganic Non-Metals
MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Ignitability	990819FLASH1-LCS	81	81	100	102 - 98	

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.
 PROJECT ID: Bluewater Station
 PROJECT #: NA
 TEST: TCLP/STLC Metals
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Arsenic	P08051-T7-LCS	0.5	0.526	105	85 - 115	
Arsenic	P9908051-01-MS	0.5	0.39	78	75 - 125	
Arsenic	P9908051-01-MSD	0.5	0.382	76	75 - 125	2.1
Barium	P08051-T7-LCS	1	1.02	102	85 - 115	
Barium	P9908051-01-MS	1	1.08	108	75 - 125	
Barium	P9908051-01-MSD	1	1.09	109	75 - 125	
Cadmium	P08051-T7-LCS	0.2	0.204	102	85 - 115	
Cadmium	P9908051-01-MS	0.2	0.181	90	75 - 125	
Cadmium	P9908051-01-MSD	0.2	0.178	89	75 - 125	1.7
Chromium	P08051-T7-LCS	0.5	0.505	101	85 - 115	
Chromium	P9908051-01-MS	0.5	0.493	99	75 - 125	
Chromium	P9908051-01-MSD	0.5	0.496	99	75 - 125	0.6
Lead	P08051-T7-LCS	1	1.03	103	85 - 115	
Lead	P9908051-01-MS	1	0.927	93	75 - 125	
Lead	P9908051-01-MSD	1	0.915	92	75 - 125	1.3
Selenium	P08051-T7-LCS	0.5	0.518	104	85 - 115	
Selenium	P9908051-01-MS	0.5	0.856	149 JI	75 - 125	
Selenium	P9908051-01-MSD	0.5	0.848	148 JI	75 - 125	1.1
Silver	P08051-T7-LCS	0.5	0.468	94	85 - 115	
Silver	P9908051-01-MS	0.5	0.411	82	75 - 125	
Silver	P9908051-01-MSD	0.5	0.407	81	75 - 125	1.

ND - Not Detected

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NEL LABORATORIES

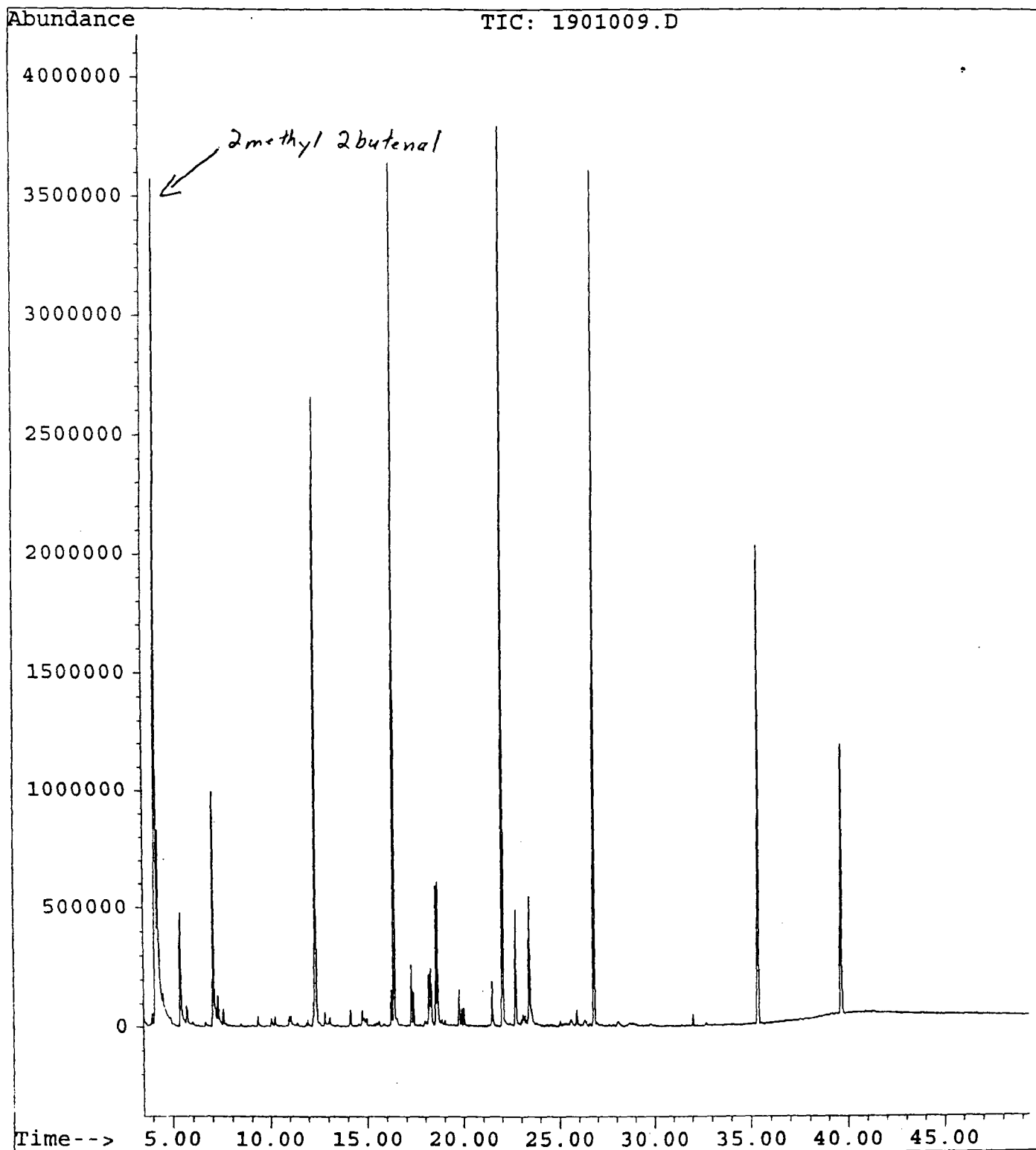
CLIENT: El Paso Natural Gas Co.
PROJECT ID: Bluewater Station
PROJECT #: NA
TEST: TCLP/STLC Metals
MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	P08051-THg-LCS	0.005	0.00537	107	85 - 115	
Mercury	P9908051-01-MS	0.05	0.0541	108	75 - 125	
Mercury	P9908051-01-MSD	0.05	0.053	106	75 - 125	2.1

ND - Not Detected

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File : C:\HPCHEM\1\DATA\081791\1901009.D
Operator : Ruggieri
Acquired : 17 Aug 99 10:20 pm using AcqMethod 8270KS
Instrument : 5971 - In
Sample Name: 1:100 P9908051-01 (8270) *fl*
Misc Info :
Vial Number: 19



PROJECT NUMBER		PROJECT NAME <i>Bluewater Station</i>				TOTAL NUMBER OF CONTAINERS	COMPOSITE OR GRAB	REQUESTED ANALYSIS						CONTRACT LABORATORY	
SAMPLERS: (Signature) <i>Charles R. Padilla</i>		DATE:						<div style="display: flex; justify-content: space-between;"> <div> <i>Metals (TEP)</i> <i>8270 (TEP)</i> <i>8260 (TEP)</i> <i>Corrosion</i> <i>Reactivity</i> <i>Ignitability</i> </div> <div> <i>P9908051</i> <i>N.E.L.</i> </div> </div>						REMARKS	
LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER											
	8-11-99	1645	Quartz	F990068	6	G	✓	✓	✓	✓	✓	✓	<i>* TEP overlooked, not put on COC by sampler.</i> <i>8/18/99 JF</i> <i>Due 8/20/99</i>		
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border-left: 2px solid black; border-right: 2px solid black;"></div> </div>															
RELINQUISHED BY: (Signature) <i>Charles R. Padilla</i>		DATE/TIME 8-12-99 11:15		RECEIVED BY: (Signature) <i>Kevin Vallyp</i>		RELINQUISHED BY: (Signature)		DATE/TIME 8/13/99 140		RECEIVED BY: (Signature)					
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED OF LABORATORY BY: (Signature)					
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH				SAMPLE RECEIPT REMARKS				RESULTS & INVOICES TO: LABORATORY SERVICES EL PASO NATURAL GAS COMPANY 8645 RAILROAD DRIVE EL PASO, TEXAS 79904 915-759-2229 FAX: 915-759-2335							
CARRIER CO.														CHARGE CODE	
BILL NO.:															



NEL LABORATORIES

Reno • Las Vegas
Phoenix • Irvine

Southern California Division
3189 Airway Ave., Bldg. C • Costa Mesa, CA 92626
(714) 437-5200 • Fax: (714) 556-5625
1-800-320-6595

CLIENT: El Paso Natural Gas Company
8645 Railroad Drive
El Paso, TX 79904
ATTN: Darrell Campbell

PROJECT NAME: Bluewater Station
PROJECT #: NA

NEL ORDER ID: P9910032

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 10/9/99.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Greg Anderson
Laboratory Manager

Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: F990088
DATE SAMPLED: 10/8/99
NEL SAMPLE ID: P9910032-01

TEST: Semi-Volatile Organic Compounds by EPA 8270C, December 1996
METHOD: EPA 8270
MATRIX: Aqueous
DILUTION: 1

EXTRACTED: 10/18/99
ANALYZED: 10/18/99
ANALYST: MCR - Division

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acenaphthene	ND	10. µg/L	4,6-Dinitro-2-methyl phenol	ND	50. µg/L
Acenaphthylene	ND	10. µg/L	2,4-Dinitrotoluene (DNT)	ND	10. µg/L
Aniline	ND	10. µg/L	2,6-Dinitrotoluene (DNT)	ND	10. µg/L
Anthracene	ND	10. µg/L	2,4-Dinitrophenol	ND	50. µg/L
Azobenzene	ND	10. µg/L	Di-n-octyl phthalate	ND	10. µg/L
Benzo (a) anthracene	ND	10. µg/L	Fluoranthene	ND	10. µg/L
Benzo (b&k) fluoranthene	ND	10. µg/L	Fluorene	ND	10. µg/L
Benzoic Acid	ND	50. µg/L	Hexachlorobenzene	ND	10. µg/L
Benzo (g,h,i) perylene	ND	20. µg/L	Hexachlorobutadiene	ND	10. µg/L
Benzo (a) pyrene	ND	10. µg/L	Hexachlorocyclopentadiene	ND	10. µg/L
Benzyl alcohol	ND	20. µg/L	Hexachloroethane	ND	10. µg/L
bis (2-Chloroethyl) ether	ND	10. µg/L	Indeno (1,2,3-c,d) pyrene	ND	20. µg/L
bis (2-Chloroethoxy) methane	ND	10. µg/L	Isophorone	ND	10. µg/L
bis (2-chloroisopropyl) ether	ND	10. µg/L	2-Methylnaphthalene	ND	10. µg/L
bis (2-Ethylhexyl)phthalate	ND	10. µg/L	2-Methylphenol	ND	10. µg/L
Butylbenzylphthalate	ND	10. µg/L	4-Methylphenol	ND	10. µg/L
4-Bromophenyl phenyl ether	ND	10. µg/L	Naphthalene	ND	10. µg/L
Carbazole	ND	10. µg/L	2-Nitroaniline	ND	50. µg/L
4-Chloroaniline	ND	20. µg/L	3-Nitroaniline	ND	50. µg/L
4-Chloro-3-methyl phenol	ND	20. µg/L	4-Nitroaniline	ND	20. µg/L
2-Chloronaphthalene	ND	10. µg/L	Nitrobenzene	ND	10. µg/L
2-Chlorophenol	ND	10. µg/L	2-Nitrophenol	ND	20. µg/L
4-Chlorophenyl phenyl ether	ND	10. µg/L	4-Nitrophenol	ND	50. µg/L
Chrysene	ND	10. µg/L	N-Nitroso-Dimethylamine	ND	10. µg/L
Dibenzo (a,h) anthracene	ND	20. µg/L	N-Nitrosodi-n-propylamine	ND	10. µg/L
Dibenzofuran	ND	10. µg/L	N-Nitrosodiphenylamine	ND	10. µg/L
Di-n-butyl phthalate	ND	10. µg/L	Pentachlorophenol	ND	50. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	10. µg/L	Phenol	ND	10. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	10. µg/L	Phenanthrene	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	10. µg/L	Pyrene	ND	10. µg/L
2,4-Dichlorophenol	ND	20. µg/L	Pyridine	ND	10. µg/L
3,3'-Dichlorobenzidine	ND	20. µg/L	1,2,4-Trichlorobenzene	ND	10. µg/L
Diethylphthalate	ND	10. µg/L	2,4,5-Trichlorophenol	ND	20. µg/L
2,4-Dimethylphenol	ND	10. µg/L	2,4,6-Trichlorophenol	ND	20. µg/L
Dimethylphthalate	ND	10. µg/L			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	15	10 - 123 %
2-Fluorobiphenyl	61	43 - 116 %
2-Fluorophenol	47	21 - 100 %
Nitrobenzene-d5	66	35 - 114 %
p-Terphenyl-d14	75	33 - 141 %
Phenol-d6	38	10 - 94 %

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: Bluewater Station
PROJECT #: NA

CLIENT ID: Method Blank
DATE SAMPLED: NA
NEL SAMPLE ID: 101899-8270-BLK

TEST: Semi-Volatile Organic Compounds by EPA 8270C, December 1996

METHOD: EPA 8270

MATRIX: Aqueous

ANALYST: MCR - Division

EXTRACTED: 10/18/99

ANALYZED: 10/18/99

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acenaphthene	ND	10 µg/L	4,6-Dinitro-2-methyl phenol	ND	50 µg/L
Acenaphthylene	ND	10 µg/L	2,4-Dinitrotoluene (DNT)	ND	10 µg/L
Aniline	ND	10 µg/L	2,6-Dinitrotoluene (DNT)	ND	10 µg/L
Anthracene	ND	10 µg/L	2,4-Dinitrophenol	ND	50 µg/L
Azobenzene	ND	10 µg/L	Di-n-octyl phthalate	ND	10 µg/L
Benzo (a) anthracene	ND	10 µg/L	Fluoranthene	ND	10 µg/L
Benzo (b&k) fluoranthene	ND	10 µg/L	Fluorene	ND	10 µg/L
Benzoic Acid	ND	50 µg/L	Hexachlorobenzene	ND	10 µg/L
Benzo (g,h,i) perylene	ND	20 µg/L	Hexachlorobutadiene	ND	10 µg/L
Benzo (a) pyrene	ND	10 µg/L	Hexachlorocyclopentadiene	ND	10 µg/L
Benzyl alcohol	ND	20 µg/L	Hexachloroethane	ND	10 µg/L
bis (2-Chloroethyl) ether	ND	10 µg/L	Indeno (1,2,3-c,d) pyrene	ND	20 µg/L
bis (2-Chloroethoxy) methane	ND	10 µg/L	Isophorone	ND	10 µg/L
bis (2-chloroisopropyl) ether	ND	10 µg/L	2-Methylnaphthalene	ND	10 µg/L
bis (2-Ethylhexyl)phthalate	ND	10 µg/L	2-Methylphenol	ND	10 µg/L
Butylbenzylphthalate	ND	10 µg/L	4-Methylphenol	ND	10 µg/L
4-Bromophenyl phenyl ether	ND	10 µg/L	Naphthalene	ND	10 µg/L
Carbazole	ND	10 µg/L	2-Nitroaniline	ND	50 µg/L
4-Chloroaniline	ND	20 µg/L	3-Nitroaniline	ND	50 µg/L
4-Chloro-3-methyl phenol	ND	20 µg/L	4-Nitroaniline	ND	20 µg/L
2-Chloronaphthalene	ND	10 µg/L	Nitrobenzene	ND	10 µg/L
2-Chlorophenol	ND	10 µg/L	2-Nitrophenol	ND	20 µg/L
4-Chlorophenyl phenyl ether	ND	10 µg/L	N-Nitroso-Dimethylamine	ND	10 µg/L
Chrysene	ND	10 µg/L	4-Nitrophenol	ND	50 µg/L
Dibenzo (a,h) anthracene	ND	20 µg/L	N-Nitrosodi-n-propylamine	ND	10 µg/L
Dibenzofuran	ND	10 µg/L	N-Nitrosodiphenylamine	ND	10 µg/L
Di-n-butyl phthalate	ND	10 µg/L	Pentachlorophenol	ND	50 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	10 µg/L	Phenol	ND	10 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	10 µg/L	Phenanthrene	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	10 µg/L	Pyrene	ND	10 µg/L
2,4-Dichlorophenol	ND	20 µg/L	Pyridine	ND	10 µg/L
3,3'-Dichlorobenzidine	ND	20 µg/L	1,2,4-Trichlorobenzene	ND	10 µg/L
Diethylphthalate	ND	10 µg/L	2,4,5-Trichlorophenol	ND	20 µg/L
2,4-Dimethylphenol	ND	10 µg/L	2,4,6-Trichlorophenol	ND	20 µg/L
Dimethylphthalate	ND	10 µg/L			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
2,4,6-Tribromophenol	106	10 - 123
2-Fluorobiphenyl	97	43 - 116
2-Fluorophenol	92	21 - 100
Nitrobenzene-d5	94	35 - 114
p-Terphenyl-d14	102	33 - 141
Phenol-d6	92	10 - 94

ND - Not Detected

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NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
 PROJECT ID: Bluewater Station
 PROJECT #: NA
 TEST: Semi-Volatile Organic Compounds by EPA 8270C, December 1996
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Acenaphthene	101899-8270-LCS	50	41.62	83	46 - 118	
Acenaphthene	101899-8270-LCSD	50	41.44	83	46 - 118	0.4
4-Chloro-3-methyl phenol	101899-8270-LCS	100	72.55	73	23 - 97	
4-Chloro-3-methyl phenol	101899-8270-LCSD	100	72.04	72	23 - 97	0.7
2-Chlorophenol	101899-8270-LCS	100	77.17	77	27 - 123	
2-Chlorophenol	101899-8270-LCSD	100	71.93	72	27 - 123	7.
1,4-Dichlorobenzene (p-DCB)	101899-8270-LCS	50	39.21	78	36 - 97	
1,4-Dichlorobenzene (p-DCB)	101899-8270-LCSD	50	37.06	74	36 - 97	5.6
2,4-Dinitrotoluene (DNT)	101899-8270-LCS	50	31.9	64	24 - 96	
2,4-Dinitrotoluene (DNT)	101899-8270-LCSD	50	32.73	65	24 - 96	2.6
4-Nitrophenol	101899-8270-LCS	100	53.97	54	10 - 80	
4-Nitrophenol	101899-8270-LCSD	100	55.14	55	10 - 80	2.1
N-Nitrosodi-n-propylamine	101899-8270-LCS	50	41.22	82	41 - 116	
N-Nitrosodi-n-propylamine	101899-8270-LCSD	50	39.19	78	41 - 116	5.
Pentachlorophenol	101899-8270-LCS	100	48.48	48	9 - 103	
Pentachlorophenol	101899-8270-LCSD	100	47.94	48	9 - 103	1.1
Phenol	101899-8270-LCS	100	79.15	79	12 - 89	
Phenol	101899-8270-LCSD	100	75.24	75	12 - 89	5.1
Pyrene	101899-8270-LCS	50	51.24	102	26 - 127	
Pyrene	101899-8270-LCSD	50	56.45	113	26 - 127	9.7
1,2,4-Trichlorobenzene	101899-8270-LCS	50	38.89	78	39 - 98	
1,2,4-Trichlorobenzene	101899-8270-LCSD	50	39.02	78	39 - 98	0.3

ND - Not Detected

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**EL PASO
NATURAL GAS**

CHAIN OF CUSTODY RECORD

14110037

Page 1 of 1

PROJECT NUMBER PROJECT NAME

Burro

S

SAMPLERS: (S)

DATE:

REQUESTED ANALYSIS

CONTRACT LABORATORY

CL

LAB ID DATE TIME MATRIX

SAMPLE NUMBER

TOTAL NUMBER
OF CONTAINERS

COMPOSITE OR
GRAB

10228

REMARKS

01 11/10/99

88

2 G

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED BY: (Signature)

SPEC E

DATE/TIME

RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)

DATE/TIME

RECEIVED OF LABORATORY BY: (Signature)

REQUESTED TURNAROUND TIME:

☐ ROUTINE ☐ RUSH

CARRIER CO.

SAMPLE RECEIPT REMARKS

RESULTS & INVOICES TO:

LABORATORY SERVICES
EL PASO NATURAL GAS COMPANY
8645 RAILROAD DRIVE
EL PASO, TEXAS 79904

915-759-2229 FAX: 915-759-2335

BILL NO.:

CHARGE CODE

White - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

District I - (505) 393-6161
P.O. Box 650
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
Roswell, 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

RECEIVED

DEC 17 1999

Environmental Bureau
Oil Conservation Division

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Generator Oil & Gas Equipment
2. Management Facility Destination KEY DISPOSAL	5. Originating Site YACD Sump
3. Address of Facility Operator 4345 AZTEC RD AZTEC NM	6. Transporter Key
7. Location of Material (Street Address or ULSTR) 4910 E. MAIN FARMINGTON NM 87402	8. State 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:

CLEANING Sump for production equipment see MSDS
City water mixed with cleaning agents

RECEIVED
DEC 20 1999
OIL CON. DIV.
DIST. 3

RECEIVED
DEC - 8 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 580 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGR DATE: 12-8-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Hunt TITLE: Geologist DATE: 12/9/99
APPROVED BY: Matthew J. Hunt TITLE: Environmental Geologist DATE: 12/17/99

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

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Generator OIL + GAS EQUIPMENT 5. Originating Site YACD Gump 6. Transporter Key 8. State N.M.
2. Management Facility Destination KEY DISPOSAL	
3. Address of Facility Operator 4345 AZ + CR 3500 AZTEC NM	
7. Location of Material (Street Address or ULSTR) 4910 E. MAIN FARMINGTON NM 87402	
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:

CLEANING SUMP FOR PRODUCTION EQUIPMENT see MSDS
City water mixed with cleaning agents

Verbal - DGF 12/17/99

RECEIVED
DEC - 8 1999
OIL CONSERVATION
DIST. 3

Estimated Volume 480 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGE DATE: 12-8-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Fount TITLE: Geologist DATE: 12/9/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Oil + Gas Equipment 4910 E. MAIN Farmington, N. MEX. 87402	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): SAME Location of the Waste (Street address &/or ULSTR): SAME <small>Attach list of originating sites as appropriate</small>	
4. Source and Description of Waste Hot bath for cleaning Glycol Pumps + Valves used on oilfield production equipment.	

I, Philip Cheney representative for: Oil + Gas Equipment Corp. do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory determination, the above-described waste is: (Check appropriate classification)

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

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

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

☒ MSDS Information ☒ Other (description): P.H. = 8 - used PH paper
☐ RCRA Hazardous Waste Analysis
☐ Chain of Custody

Name (Original Signature): Philip Cheney
 Title: Pump Shop
 Date: 8th Dec, 1999



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ZEP MANUFACTURING COMPANY
P.O. BOX 2015
ATLANTA, GEORGIA 30301

MATERIAL SAFETY DATA SHEET AND SAFE HANDLING AND DISPOSAL INFORMATION

ISSUE DATE: 02/01/89

SUPERSEDES: 12/30/88

Date printed: 11/17/99

ZEP VAT NEUTRALIZER

Product No: 1465 Vat Neutralizer

SECTION I - EMERGENCY CONTACTS

TELEPHONE: (404) 352-1680 BETWEEN 8:00 AM - 5:00 PM (EST)
MEDICAL EMERGENCY: (770) 439-4200 NON OFFICE HOURS, WEEKENDS
(770) 432-2873 AND HOLIDAYS, PLEASE CALL YOUR
(770) 455-8160 LOCAL POISON CONTROL
(770) 552-8836
(770) 424-2048
(770) 424-4789
TRANSPORTATION EMERGENCY: (770) 922-0923
CHEMTREC: (800) 424-9300 TOLL FREE - ALL CALLS RECORDED
DISTRICT OF COLUMBIA: (202) 483-7616 ALL CALLS RECORDED

SECTION II - HAZARDOUS INGREDIENTS

DESIGNATIONS	(PPM)	EFFECTS (SEE NOTICE)	% IN PROD.
@ ** SULFURIC ACID ** oil of vitriol; CAS# 7664-93-9; RTECS# WS5600000; OSHA PEL-1 mg/m3 (for mists only).	0.25	TOX COR	60-70

@ IDENTIFIES CHEMICALS LISTED UNDER SARA-SECTION 313 FOR RELEASE REPORTING.

SECTION III - HEALTH HAZARD DATA

SPECIAL NOTE: MSDS data pertains to the product as dispensed from the container. Adverse health effects would not be expected under recommended conditions of use (diluted) so long as prescribed safety precautions are practiced.

ACUTE EFFECTS OF OVEREXPOSURE:

Corrosive to skin and eyes on contact. Eye contact can produce corneal damage or blindness. Skin contact can produce inflammation, reddening, and blistering. Inhalation of spray mist or vapors may produce irritation, burning, or destruction of tissues in the respiratory tract, characterized by coughing choking, pain, or shortness of breath. Severe overexposure may lead to fatal lung damage. Ingestion can cause abdominal pain, nausea, vomiting, and collapse, along with tissue destruction in the gastrointestinal tract.

CHRONIC EFFECTS OF OVEREXPOSURE:

Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

None of the ingredients are listed as carcinogens by IARC, NTP, or OSHA.

EST'D PEL/TLV: Not established PRIMARY ROUTES OF ENTRY: N/A

HMIS CODES: HEALTH 3; FLAM. 0; REACT. 2; PERS. PROTECT. G ; CHRONIC HAZ. YES

FIRST AID PROCEDURES:

SKIN: Immediately flush contaminated skin with plenty of water for at least 15 minutes. Get medical attention immediately.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting upper and lower lids. Get medical attention at once.

INHALE: Move exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Get medical attention immediately.

INGEST: If this product is swallowed, do not induce vomiting. If victim is conscious give plenty of water to drink. Get medical attention at once.

SECTION IV - SPECIAL PROTECTION INFORMATION

PROTECTIVE CLOTHING: Wear rubber or neoprene gloves and a face shield when using. A rubber apron and boots are strongly recommended.

EYE PROTECTION: Wear splash-proof safety goggles especially if contact lenses are worn.

RESPIRATORY PROTECTION: If ventilation is inadequate, wear a properly fitting MSHA or OSHA-approved respirator.

VENTILATION: If vapors are detected, ventilate work area by opening windows and using exhaust fans.

SECTION V - PHYSICAL DATA

BOILING POINT (F):	~ 220	SPECIFIC GRAVITY:	1.55
VAPOR PRESSURE(mmHg):	N/A	EVAPORATION RATE (= 1):	N/A
VAPOR DENSITY(AIR = 1):	N/A	pH(CONCENTRATE):	< 1.0
SOLUBILITY IN WATER:	COMPLETE	pH(USE DILUTION OF 1% SOLUTION):	1.0
VOC CONTENT (CONCENTRATE):	0.0%		
APPEARANCE AND ODOR: A COLORLESS LIQUID WITH NO ODOR.			

(Continued on Page: 2)

Product No: 1465 SECTION VII - FIRE AND EXPLOSION DATA (continued)

FLASH POINT(F) (METHOD USED): None (N/A)
FLAMMABLE LIMITS: LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, and water fog.
SPECIAL FIRE FIGHTING: Encapsulated suit with SCBA or supplied air.
UNUSUAL FIRE HAZARDS: Exploding containers may produce sulfuric acid mist.

SECTION VII - REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY(AVOID): Strong alkalis, oxidizers, and active metals.
POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION: HYDROGEN GAS FROM REACTION WITH STEEL OR ACTIVE METALS, SULFUR DIOXIDE
SULFUR TRIOXIDE.

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Observe safety precautions in sections 4 & 9 during clean-up. Absorb spill on an inert absorbent material (e.g. Zep-O-Zorb); pick up and place in a clean D.O. T. specification container for disposal. Wash area thoroughly with a detergent solution and then rinse well with water.
WASTE DISPOSAL METHOD:
Liquids cannot be sent to landfills unless solidified. Unusable product and some collected, spent use-dilutions may require disposal as a hazardous waste at a permitted treatment/storage/disposal facility. In most states hazardous wastes in total amounts of 220 lbs. or less per month may be disposed of in a chemical or industrial waste landfill. If company effluent is ultimately treated by a publicly owned treatment works, neutralization of spent tank-solutions with subsequent discharge to the sewer may be possible. Consult local, state and federal agencies for proper disposal method in your area.
RCRA HAZ. WASTE NOS.: D002

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING AND STORING:
Store tightly-closed container in a dry area at temps. between 4-49 degrees C.
Store away from highly alkaline products and oxidizing compounds.
Keep product away from skin and eyes.
Do not breathe spray mists or vapors.
Keep away from food and food products.
Clothing or shoes which become contaminated with substance should be removed promptly and not reworn until thoroughly cleaned.
Keep out of the reach of children.

SECTION X - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: SULFURIC ACID
NOTE: DOT information applies to larger package sizes of affected products. For some products, DOT may require alternate names and labeling in accordance with packaging group requirements.
DOT HAZARD CLASS: 8 DOT PACKING GROUP: II
DOT I.D. NUMBER: UN1830 DOT LABEL/PLACARD: CORROSIVE
EPA TSCA CHEMICAL INVENTORY - ALL INGREDIENTS ARE LISTED
EPA CWA 40CFR PART 117 SUBSTANCE(RQ IN A SINGLE CONTAINER): SULFURIC ACID, 1000#

Date Last Reviewed by Compliance Services : 03/16/99

**** NOTICE ****

Thank you for your interest in, and use of, Zep products. Zep Manufacturing Co. is pleased to be of service to you by supplying this Material Safety Data Sheet for your files. Zep Manufacturing is concerned for your health and safety. Zep products can be used safely with proper protective equipment and proper handling practices consistent with label instructions and the MSDS. Before using any Zep product, be sure to read the complete label and the Material Safety Data Sheet.

As a further word of caution, Zep wishes to advise that serious accidents have resulted from the misuse of "emptied" containers. "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, or other sources of ignition; they may explode or develop harmful vapors and possibly cause injury or death. Clean empty containers by triple rinsing with water or an appropriate solvent. Empty containers must be sent to a drum reconditioner before reuse.

TERMS AND ABBREVIATIONS LISTED ALPHABETICALLY BY SECTION

SECTION II: HAZARDOUS INGREDIENTS

CAR; Carcinogen - A chemical listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA as a definite or possible human cancer causing agent.

CAS #; Chemical Abstract Services Registry Number - A universally accepted numbering system for chemical substances.

CBL; Combustible - At temperatures between 100F and 200F chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

CNS; Central Nervous System depressant reduces the activity of the brain and spinal cord.

COR; Corrosive - Causes irreversible injury to living tissue (e.g. burns).

DESIGNATIONS; Chemical and common names of hazardous ingredients.

ER; Eye Irritant Only - Causes reversible reddening and/or inflammation of eye tissues.

EXPOSURE LIMITS; The time weighted average (TWA) airborne concentration at which most workers can be exposed without any expected adverse effects. Primary sources include ACGIH TLVs, and OSHA PELs (TWA, STEL and ceiling limits).

ACGIH; American Conference of Governmental Industrial Hygienists.

CEILING; The concentration that should not be exceeded in the workplace during any part of the working exposure.

OSHA; Occupational Safety and Health Administration

PEL; Permissible Exposure Limit - A set of time weighted average exposure values, established by OSHA, for a normal 8-hour day and a 40-hour work week.

PPM; Parts per million - unit of measure for exposure limits. (S) SKIN; Skin contact with substance can contribute to overall exposure.

STEL; Short Term Exposure Limit - Maximum concentration for a continuous 15-minute exposure period.

TLV; Threshold Limit Value - A set of time weighted average exposure limits, established by the ACGIH, for a normal 8-hour day and a 40-hour work week.

FBL; Flammable - At temperatures under 100F, chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

HAZARDOUS INGREDIENTS; Chemical substances determined to be potential health or physical hazards by the criteria established in the OSHA Hazard Communication Standard - 29 CFR 1910.1200

HTX; Highly toxic - the probable lethal dose for a 70kg (150 lb.) man and may be approximated as less than 6 teaspoons (2 tablespoons).

IRR; Irritant - Causes reversible effects in living tissues (e.g. inflammation) - primarily skin and eyes.

N/A; Not Applicable - Category is not appropriate for this product.

N/D; Not Determined - Insufficient information for a determination for this item.

RTECS#; Registry of Toxic Effects of Chemical Substances - an unreviewed listing of published toxicology data on chemical substances.

SARA; Superfund Amendments and Reauthorization Act - Section 313 designates chemicals for possible reporting for the Toxics Release Inventory.

SEN; Sensitizer - Causes allergic reaction after repeated exposure.

TOX; Toxic - The probable lethal dose for a 70 kg (150 lb.) man is one ounce (2 tablespoons) or more.

SECTION III: HEALTH HAZARD DATA

ACUTE EFFECT; An adverse effect on the human body from a single exposure with symptoms developing almost immediately after exposure or within a relatively short time.

CHRONIC EFFECT; Adverse effects that are most likely to occur from repeated exposure over a long period of time.

ESTD PEL/TLV; This estimated, time-weighted average, exposure limit, developed by using a formula provided by the ACGIH, pertains to airborne concentrations from the product as a whole. This value should serve as guide for providing safe workplace conditions to nearly all workers.

HMIS CODES; Hazardous Material Identification System - a rating system developed by the National Paint and Coating Association for estimating the hazard potential of a chemical under normal workplace conditions. These risk estimates are indicated by a numerical rating given in each of three hazard areas (Health/Flammability/reactivity) ranging from a low of zero to a high of 4. A chronic hazard is indicated with a yes.

Consult HMIS training guides for Personal Protection letter codes which indicate necessary protective equipment.

PRIMARY ROUTE OF ENTRY; The way one or more hazardous ingredients may enter the body and cause a generalized-systemic or specific-organ toxic effect.

ING; Ingestion - A primary route of exposure through swallowing of material.

INH; Inhalation - A primary route of exposure through breathing of vapors.

SKIN; A primary route of exposure through contact with the skin.

SECTION IV: SPECIAL PROTECTION INFORMATION

Where respiratory protection is recommended, use only MSHA and NIOSH approved respirators and dust masks.

MSHA; Mine Safety and Health Administration

NIOSH; National Institute for Occupational Safety and Health

SECTION V: PHYSICAL DATA

EVAPORATION RATE; it refers to the rate of change from the liquid state to the vapor state at ambient temperature and pressure in comparison to a given substance (e.g. water).

pH; A value representing the acidity or alkalinity of an aqueous solution (Acidic pH = 1; Neutral pH = 7; Alkaline pH = 14)

VOC CONTENT; The percentage of or amount in pounds per gallon of the product that is regulated as a Volatile Organic Compound under the Clean Air Act of 1990 and various state jurisdictions.

SOLUBILITY IN WATER; A description of the ability of the product to dissolve in water.

SECTION VII: REACTIVITY DATA

HAZARDOUS DECOMPOSITION; Breakdown products expected to be produced upon product decomposition or fire.

INCOMPATIBILITY; Material contact and the conditions to avoid to prevent hazardous reactions.

POLYMERIZATION; Indicates the tendency of the product's molecules to combine with themselves in a chemical reaction, releasing excess pressure and heat.

STABILITY; Indicates the susceptibility of the product to spontaneously and dangerously decompose.

SECTION VIII: SPILL AND DISPOSAL PROCEDURES

RCRA WASTE NOS; RCRA (Resource Conservation and Recovery Act) waste codes (40 CFR 261) applicable to the disposal of spilled or unusable product from the original container.

SECTION X: TRANSPORTATION DATA

CWA; Clean Water Act- Federal Law which regulates chemical releases to bodies of water.

RQ; Reportable Quantity - The amount of the specific ingredient that, when spilled to the ground and can enter a storm sewer or natural watershed, must be reported to the National Response Center, and other regulatory agencies.

TSCA; Toxic Substances Control Act - a federal law requiring all commercial chemical substances to appear on an inventory maintained by the EPA.

DISCLAIMER

All statements, technical information and recommendations contained herein are based on available scientific tests or data which we believe to be reliable. The accuracy and completeness of such data are not warranted or guaranteed. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. Zep assumes no liability or responsibility for loss or damage resulting from the improper use or handling of our products, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the product's label and Material Safety Data Sheet.



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ZEP MANUFACTURING COMPANY
P.O. BOX 2015
ATLANTA, GEORGIA 30301

MATERIAL SAFETY DATA SHEET AND SAFE HANDLING AND DISPOSAL INFORMATION

ISSUE DATE: 04/12/90

SUPERSEDES: 08/14/87

Date printed: 11/17/99

ZEP FORMULA 9862

Product No: 0627 Hot Vat Rust Stripper

SECTION I - EMERGENCY CONTACTS

TELEPHONE:
(404) 352-1680 BETWEEN 8:00 AM - 5:00 PM (EST)
MEDICAL EMERGENCY:
(770) 439-4200 NON OFFICE HOURS, WEEKENDS
(770) 432-2873 AND HOLIDAYS, PLEASE CALL YOUR
(770) 455-8160 LOCAL POISON CONTROL
(770) 552-8836
(770) 424-2048
(770) 424-4789
TRANSPORTATION EMERGENCY:
(770) 922-0923
CHEMTREC:
(800) 424-9300 TOLL FREE - ALL CALLS RECORDED
DISTRICT OF COLUMBIA:
(202) 483-7616 ALL CALLS RECORDED

SECTION II - HAZARDOUS INGREDIENTS

DESIGNATIONS	(PPM)	EFFECTS (SEE NOTICE)	% IN PROD.
** SODIUM HYDROXIDE ** caustic soda; soda lye; CAS# 1310-73-2; RTECS# WB4900000; OSHA/ACGIH CEILING LIMIT-2 MG/M3	N/D	TOX COR	50-60
** SODIUM CARBONATE ** soda ash; carbonic acid, disodium salt; CAS# 497-19-8; RTECS# VZ4050000; OSHA/ ACGIH DUST LIMIT = 15mg/m3	N/D	IRR	20-30
** TRIETHANOLAMINE ** TEA; CAS# 102-71-6; RTECS# - KL9275000	N/D	EIR	< 5
** alpha-DODECYL-omega-HYDROXY-POLY(OXY-1,2-ETHANEDIYL)PHOSPHATE	N/D	COR	< 5
** CAS# 39464-66-9; RTECS# NONE			

SECTION III - HEALTH HAZARD DATA

SPECIAL NOTE: MSDS data pertains to the product as dispensed from the container. Adverse health effects would not be expected under recommended conditions of use (diluted) so long as prescribed safety precautions are practiced.

ACUTE EFFECTS OF OVEREXPOSURE:

Corrosive to skin and eyes. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe overexposure can produce lung damage, choking, unconsciousness or death. Ingredients in this product may aggravate existing skin, eye, or respiratory disorders.

CHRONIC EFFECTS OF OVEREXPOSURE:

Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction or dermatitis. Repeated inhalation of dust can produce varying degrees of respiratory irritation or lung damage.

None of the ingredients are listed as carcinogens by IARC, NTP, or OSHA.

EST'D PEL/TLV: Not established PRIMARY ROUTES OF ENTRY: Inh.

HMIS CODES: HEALTH 3; FLAM. 0; REACT. 0; PERS. PROTECT. D ; CHRONIC HAZ. YES

FIRST AID PROCEDURES:

SKIN: Immediately flush contaminated skin with plenty of water for at least 15 minutes. Get medical attention immediately.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting upper and lower lids. Get medical attention at once.

INHALE: Move victim to fresh air. Flush mouth and nasal passages with water repeatedly. Get medical attention if irritation persists.

INGEST: If this product is swallowed, do not induce vomiting. If victim is conscious give plenty of water to drink. Get medical attention at once.

SECTION IV - SPECIAL PROTECTION INFORMATION

PROTECTIVE CLOTHING: Wear rubber, neoprene, or nitrile gloves, alkali resistant footwear, face shield, apron, and arm coverings.

EYE PROTECTION: Wear splash-proof safety goggles especially if contact lenses are worn.

RESPIRATORY PROTECTION: Use NIOSH-approved dust mask if dust is present.

VENTILATION: If dust is detected, ventilate work area by opening windows and using exhaust fans.

Product No: 0627 SECTION - PHYSICAL DATA

BOILING POINT (F):	N/A	SPECIFIC GRAVITY:	
VAPOR PRESSURE(mmHg):	N/A	EVAPORATION RATE (N/A = 1):	N/A
VAPOR DENSITY(AIR = 1):	N/A	pH(CONCENTRATE):	N/A
SOLUBILITY IN WATER:	1.5 lb./gal.	pH(USE DILUTION OF 1% SOLUTION):	13.0-13.3
VOC CONTENT (CONCENTRATE):	N/A		

APPEARANCE AND ODOR: WHITE, FREE-FLOWING GRANULATED POWDER WITH STRONG ODOR.

SECTION VI - FIRE AND EXPLOSION DATA

FLASH POINT(F) (METHOD USED): N/A ()
FLAMMABLE LIMITS: LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: Noncombustible.
SPECIAL FIRE FIGHTING: Wear self-contained positive pres. breathing apparatus.
UNUSUAL FIRE HAZARDS: None

SECTION VII - REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY(AVOID): Strong oxidizers, acids, and active metals.
POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION: Carbon dioxide, carbon monoxide and toxic/corrosive fumes as oxides of phosphorous.

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Observe safety precautions in sections 4 & 9 during clean-up. Sweep powder or absorb spilled tank-solution on inert absorbent material (e.g. Zep-O-Zorb) and place in a clean D.O.T. specification container for disposal.
Wash area thoroughly with a detergent solution and rinse well with water.
WASTE DISPOSAL METHOD:
Liquids cannot be sent to landfills unless solidified. Never dispose of this product with general waste.
Unusable product and spent tank-solutions may require disposal as a hazardous waste at a permitted treatment/storage/disposal facility. In most states hazardous wastes in total amounts of 220 lbs. or less-per month may be disposed of in a chemical or industrial waste landfill. If company effluent is ultimately treated by a publicly owned treatment works, neutralization of spent tank-solutions with subsequent discharge to sewer may be possible. Consult local, state, and federal agencies for proper disposal method in your area.
RCRA HAZ. WASTE NOS.: D002 (SEE ABOVE)

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING AND STORING:
Store tightly closed container in a dry area at temps. between 40-120 degrees F.
Store away from strong acids and oxidizing compounds.
Keep product away from skin and eyes.
Do not breathe dust.
Clothing or shoes which become contaminated with substance should be removed promptly and not reworn until thoroughly cleaned.
Add chemical to solution slowly.
Keep out of the reach of children.

SECTION X - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: CORROSIVE SOLIDS, BASIC, INORGANIC, N.O.S (SODIUM HYDROXIDE)

NOTE: DOT information applies to larger package sizes of affected products. For some products, DOT may require alternate names and labeling in accordance with packaging group requirements.

DOT HAZARD CLASS: 8 DOT PACKING GROUP: II

DOT I.D. NUMBER: UN3262 DOT LABEL/PLACARD: CORROSIVE

EPA TSCA CHEMICAL INVENTORY - ALL INGREDIENTS ARE LISTED

EPA CWA 40CFR PART 117 SUBSTANCE(RQ IN A SINGLE CONTAINER): SODIUM HYDROXIDE-1000#

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As a further word of caution, Zep wishes to advise that serious accidents have resulted from the misuse of "emptied" containers. "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, or other sources of ignition; they may explode or develop harmful vapors and possibly cause injury or death. Clean empty containers by triple rinsing with water or an appropriate solvent. Empty containers must be sent to a drum reconditioner before reuse.

TERMS AND ABBREVIATIONS LISTED ALPHABETICALLY BY SECTION

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CAS #; Chemical Abstract Services Registry Number - A universally accepted numbering system for chemical substances.

CBL; Combustible - At temperatures between 100F and 200F chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

CNS; Central Nervous System depressant reduces the activity of the brain and spinal cord.

COR; Corrosive - Causes irreversible injury to living tissue (e.g. burns).

DESIGNATIONS; Chemical and common names of hazardous ingredients.

EFIR; Eye Irritant Only - Causes reversible reddening and/or inflammation of eye tissues.

EXPOSURE LIMITS; The time weighted average (TWA) airborne concentration at which most workers can be exposed without any expected adverse effects. Primary sources include ACGIH TLVs, and OSHA PELs (TWA, STEL and ceiling limits).

ACGIH; American Conference of Governmental Industrial Hygienists.

CEILING; The concentration that should not be exceeded in the workplace during any part of the working exposure.

OSHA; Occupational Safety and Health Administration

PEL; Permissible Exposure Limit - A set of time weighted average exposure values, established by OSHA, for a normal 8-hour day and a 40-hour work week.

PPM; Parts per million - unit of measure for exposure limits.

(S) SKIN; Skin contact with substance can contribute to overall exposure.

STEL; Short Term Exposure Limit - Maximum concentration for a continuous 15-minute exposure period.

TLV; Threshold Limit Value - A set of time weighted average exposure limits, established by the ACGIH, for a normal 8-hour day and a 40-hour work week.

FBL; Flammable - At temperatures under 100F, chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

HAZARDOUS INGREDIENTS; Chemical substances determined to be potential health or physical hazards by the criteria established in the OSHA Hazard Communication Standard - 29 CFR 1910.1200

HTX; Highly toxic - the probable lethal dose for a 70kg (150 lb.) man and may be approximated as less than 6 teaspoons (2 tablespoons).

IRR; Irritant - Causes reversible effects in living tissues (e.g. inflammation) - primarily skin and eyes.

N/A; Not Applicable - Category is not appropriate for this product.

N/D; Not Determined - Insufficient information for a determination for this item.

RTECS#; Registry of Toxic Effects of Chemical Substances - an unreviewed listing of published toxicology data on chemical substances.

SARA; Superfund Amendments and Reauthorization Act - Section 313 designates chemicals for possible reporting for the Toxics Release Inventory.

SEN; Sensitizer - Causes allergic reaction after repeated exposure.

TOX; Toxic - The probable lethal dose for a 70 kg (150 lb.) man is one ounce (2 tablespoons) or more.

SECTION III: HEALTH HAZARD DATA

ACUTE EFFECT; An adverse effect on the human body from a single exposure with symptoms developing almost immediately after exposure or within a relatively short time.

CHRONIC EFFECT; Adverse effects that are most likely to occur from repeated exposure over a long period of time.

ESTD PEL/TLV; This estimated, time-weighted average, exposure limit, developed by using a formula provided by the ACGIH, pertains to airborne concentrations from the product as a whole. This value should serve as guide for providing safe workplace conditions to nearly all workers.

HMS CODES; Hazardous Material Identification System - a rating system developed by the National Paint and Coating Association for estimating the hazard potential of a chemical under normal workplace conditions. These risk estimates are indicated by a numerical rating given in each of three hazard areas (Health/Flammability/reactivity) ranging from a low of zero to a high of 4. A chronic hazard is indicated with a yes.

Consult HMIS training guides for Personal Protection letter codes which indicate necessary protective equipment.

PRIMARY ROUTE OF ENTRY; The way one or more hazardous ingredients may enter the body and cause a generalized-systemic or specific-organ toxic effect.

ING; Ingestion - A primary route of exposure through swallowing of material

INH; Inhalation - A primary route of exposure through breathing of vapors.

SKIN; A primary route of exposure through contact with the skin.

SECTION IV: SPECIAL PROTECTION INFORMATION

Where respiratory protection is recommended, use only MSHA and NIOSH approved respirators and dust masks.

MSHA; Mine Safety and Health Administration

NIOSH; National Institute for Occupational Safety and Health

SECTION V: PHYSICAL DATA

EVAPORATION RATE; it refers to the rate of change from the liquid state to the vapor state at ambient temperature and pressure in comparison to a given substance (e.g. water).

pH; A value representing the acidity or alkalinity of an aqueous solution (Acidic pH = 1; Neutral pH = 7; Alkaline pH = 14)

VOC CONTENT; The percentage of or amount in pounds per gallon of the product that is regulated as a Volatile Organic Compound under the Clean Air Act of 1990 and various state jurisdictions.

SOLUBILITY IN WATER; A description of the ability of the product to dissolve in water.

SECTION VII: REACTIVITY DATA

HAZARDOUS DECOMPOSITION; Breakdown products expected to be produced upon product decomposition or fire.

INCOMPATIBILITY; Material contact and the conditions to avoid to prevent hazardous reactions.

POLYMERIZATION; Indicates the tendency of the product's molecules to combine with themselves in a chemical reaction, releasing excess pressure and heat.

STABILITY; Indicates the susceptibility of the product to spontaneously and dangerously decompose.

SECTION VIII: SPILL AND DISPOSAL PROCEDURES

RCRA WASTE NOS; RCRA (Resource Conservation and Recovery Act) waste codes (40 CFR 261) applicable to the disposal of spilled or unusable product from the original container.

SECTION X: TRANSPORTATION DATA

CWA; Clean Water Act - Federal Law which regulates chemical releases to bodies of water.

RQ; Reportable Quantity - The amount of the specific ingredient that, when spilled to the ground and can enter a storm sewer or natural watershed, must be reported to the National Response Center, and other regulatory agencies.

TSCA; Toxic Substances Control Act - a federal law requiring all commercial chemical substances to appear on an inventory maintained by the EPA.

DISCLAIMER

All statements, technical information and recommendations contained herein are based on available scientific tests or data which we believe to be reliable. The accuracy and completeness of such data are not warranted or guaranteed. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. Zep assumes no liability or responsibility for loss or damage resulting from the improper use or handling of our products, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the product's label and Material Safety Data Sheet.

MATERIAL SAFETY DATA SHEET

SECTION I
IDENTIFICATION

KRYLON INDUSTRIAL
31500 SOLON ROAD
SOLON, OH 44139

EMERGENCY TELEPHONE NO.
(216) 292-7400
INFORMATION TELEPHONE NO.
(800) 247-3266

DATE OF PREPARATION
20 - JUL - 94

©1994, The Sherwin-Williams Co.

Primers

PRIMER/KRI

SECTION II HAZARDOUS INGREDIENT (percent by weight)						All Purpose				Rust Inhibitive		
No.		ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	1340 Zinc Rich	1365 White	1367 Ruddy Brown	1368 Gray	1345 Yellow	1346 Green	1373 Sandable Filler Surface Primer
74-85-6	Propane (propellant)		1000	PPM	780.0	15	17	17	17	16	16	16
742-89-8	V. M. & P. Naphthalene	300	300 <400>	PPM	12.0	1						4
106-88-3	[§] Toluene	50	100 <150>	PPM (Skin)	22.0		23	27	27	6	6	
330-20-7	[§] Xylene	100 <150>	100 <150>	PPM	5.9	10				12	12	18
78-83-1	2-Methyl-1-Propanol	50	50	PPM	8.7							2
78-83-3	[§] Methyl Ethyl Ketone	200 <300>	200 <300>	PPM	70.0	34						
67-64-1	[§] Acetone	750 <1000>	750 <1000>	PPM	780.0		34	34	34	48	48	41
440-88-6	[§] Zinc	Not Established				35						
1067-88-6	Talc	2	2	Mg/M3 as Resp. Dust						5	5	9
1483-87-7	Titanium Dioxide	10	10(5)	Mg/M3 as Dust (Resp. Fraction)			6		3			1
471-34-1	[§] Zinc Molybdate	Not Established								2	2	
VOC as a percent by weight per BAAQMD Rule 49						59	82	80	82	83	83	82
NFPA Code 308 Level						3	3	3	3	3	3	3
HMSE Ratings (Health - Flammability - Reactivity)						2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0

Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

Section III — PHYSICAL DATA

PRODUCT WEIGHT	- N.A.	EVAPORATION RATE	- Faster than Ether
SPECIFIC GRAVITY	- N.A.	VAPOR DENSITY	- Heavier than Air
BOILING RANGE	- 49-289 °F	NEUTRAL POINT	- N.A.
SOLUBILITY IN WATER	- N.A.		

Section IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION	FLASH POINT	< 0 °F PHCC	LEL	1.0	UEL	12.8
Extremely Flammable, Flash below 21 °F						
Y1 18180 MSD/1A						
Carbon Dioxide, Dry Chemical, Form						
USUAL FIRE AND EXPLOSION HAZARDS						
Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Vapors may not be immediately apparent. Obtain medical attention.						
USUAL FIRE FIGHTING PROCEDURES						
Full protective equipment including self-contained breathing apparatus should be used. Spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or when exposed to extreme heat.						

Section V — HEALTH HAZARD DATA

WAYS OF EXPOSURE	
Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use.	
Immediate exposure, follow recommendations for proper use, ventilation, and personal protective equipment.	
USUAL HEALTH HAZARDS	
EFFECTS OF OVEREXPOSURE	
Irritation of eyes, skin and respiratory system. May cause nervous system depression. Chronic overexposure may result in unconsciousness and possibly death.	
SIGNS AND SYMPTOMS OF OVEREXPOSURE	
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.	
Redness and itching or burning sensation may indicate eye or excessive skin exposure.	
USUAL CONDITIONS AGGRAVATED BY EXPOSURE	
generally recognized.	
USUAL FIRST AID PROCEDURES	
If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.	
If on SKIN: Wash affected area thoroughly with soap and water.	
Remove contaminated clothing and launder before re-use.	
If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.	
If SWALLOWED: Get medical attention.	
CHRONIC HEALTH HAZARDS	
No ingredient in these products is an IARC, NTP or OSHA listed carcinogen.	
Methyl Ethyl Ketone may increase the nervous system effects of other solvents.	
Chronic overexposure to solvent ingredients in Section II may cause adverse effects to liver, urinary, blood-forming, cardiovascular, and reproductive systems.	
Exposure to titanium dioxide dust at 250 mg./m ³ developed lung cancer, however, such exposure levels are not attainable in the workplace.	
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.	

Section VI — REACTIVITY DATA

STABILITY	- Stable
INCOMPATIBILITY	- None known.
HAZARDOUS DECOMPOSITION PRODUCTS	
By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Metals in Section II	
HAZARDOUS POLYMERIZATION	- Will Not Occur

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Remove all sources of ignition. Ventilate and remove with inert absorbent.	
WASTE DISPOSAL METHOD	
Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Waste from products containing Methyl Ethyl Ketone and/or Zinc may also require testing for extractability.	
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.	

Section VIII — PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE	
Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.	
These coatings may contain materials classified as nuisance particulates (listed "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m ³ (total dust), OSHA PEL 15 mg./m ³ (total dust), 5 mg./m ³ (respirable fraction).	
VENTILATION	
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.	
RESPIRATORY PROTECTION	
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II.	
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section II.	
PROTECTIVE GLOVES	
None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.	
EYE PROTECTION	
Wear safety spectacles with unperforated sideshields.	

Section IX — PRECAUTIONS

DOL STORAGE CATEGORY - 1A	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Contents are EXTREMELY FLAMMABLE. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.	
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.	
Consult NFPA Code. Use approved bonding and grounding procedures.	
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120 °F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.	
OTHER PRECAUTIONS	
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.	

Section X — OTHER REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65	
Several products (see table) contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.	

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name	Triethylene Glycol Reprocessed	Code	93101
Supplier	COASTAL CHEMICAL CO., L.L.C. 3520 Veterans Memorial Drive ABBEVILLE, LA 70610 318-893-3862	MSDS#	Not available.
Synonym	Not available.	Validation Date	8/8/96
Trade name	Not available.	Print Date	5/12/99
Material Uses	Not available.	In case of Emergency	Transportation Emergency Call CHEMTREC 800-424-9300 Other Information Call Joe Hudman 713-477-6675
Manufacturer	Various		

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	TLV/PEL	LC50/LD50
Diethylene glycol	111-46-6	0-5	Not available.	ORAL (LD50) mg/kg: Acute: 12565 (Hamster). 14800 (Rat). DERMAL (LD50) mg/kg: Acute: 11890 (Hamster). 11900 (Rabbit).
Triethylene Glycol	112-27-6	95-100		

Section 3. Hazards Identification

Emergency Overview	CAUTION MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
Routes of Entry	Eye contact. Ingestion. Skin contact. Inhalation.
Potential Acute Health Effects	Slightly dangerous to dangerous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. of Inhalation. This product may irritate eyes and skin upon contact.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. The substance is toxic to blood, kidneys, liver. Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4. First Aid Measures

Eye Contact	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.
Skin Contact	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Hazardous Inhalation	No additional information.
Ingestion	DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention.

Continued on Next Page

Triethylene Glycol Reprocessed

Page Number: 2

Hazardous Ingestion	DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
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Section 5. Fire and Explosion Data

Flammability of the Product	Combustible.
Auto-Ignition Temperature	The lowest known value is 227.78°C (442°F) (Diethylene glycol).
Flash Points	The lowest known value is CLOSED CUP: 138°C (280.4°F) OPEN CUP: 143°C (280.4°F) (Cleveland) (Diethylene glycol)
Flammable Limits	The greatest known range is LOWER: 2% UPPER: 12.3% (Diethylene glycol)
Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Hazards in Presence of Various Substances	Very slightly to slightly flammable in presence of open flames and sparks, of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Special Remarks on Fire Hazards	When heated to decomposition, it emits acrid smoke and irritating fumes. (Diethylene glycol)
Special Remarks on Explosion Hazards	No additional remark.

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Handling	Not available.
Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.	
Personal Protection	Safety glasses. Lab coat. Gloves (impervious).	
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.	
Chemical Name or Product Name	CAS #	Exposure Limits
2,2'-Oxydiethanol	111-46-6	No: available.
Trichylene Glycol	112-27-6	

Continued on Next Page

Triethylene Glycol Reprocessed

Page Number: 3

Section 9. Physical and Chemical Properties

Physical state and appearance	Liquid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Neutral.	Color	Not available.
Boiling Point	The lowest known value is 245.8°C (474.4°F) (Diethylene glycol). Weighted average: 284.02°C (543.2°F)		
Melting Point/Pour Point	May start to solidify at -5°C (23°F) based on data for: Triethylene Glycol. Weighted average: -5.09°C (22.8°F)		
Critical Temperature	Not available.		
Specific Gravity	Weighted average: 1.12 (Water = 1)		
Vapor Pressure	The highest known value is 0.01 mm of Hg (@ 20°C) (Diethylene glycol).		
Vapor Density	The highest known value is 6.7 (Air = 1) (Tetraethylene glycol). Weighted average: 6.7 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Evaporation rate	Not available.		
Viscosity	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Unicity (in Water)	Not available.		
Dispersion Properties	See solubility in water, methanol, diethyl ether.		
Solubility	Easily soluble in cold water, hot water, methanol, diethyl ether.		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity Data

Chemical Stability	The product is stable.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Very slightly to slightly reactive with oxidizing agents.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Not available.

Section 11. Toxicological Information

Toxicity to Animals	Acute oral toxicity (LD50): > 5000 mg/kg. (Hamster.) (Calculated value for the mixture). Acute dermal toxicity (LD50): > 5000 mg/kg. (Hamster.) (Calculated value for the mixture).
Chronic Effects on Humans	The substance is toxic to blood, kidneys, liver. Toxicity of the product to the reproductive system: Not available.
Other Toxic Effects on Humans	Slightly dangerous to dangerous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on other Toxic Effects on Humans	Experimentally tumorigen by inhalation. Exposure can cause nausea, headache and vomiting. (Diethylene glycol)

Continued on Next Page

Triethylene Glycol Reprocessed

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Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Disposal


Section 14. Transport Information

Proper Shipping Name	NONE
DOT Classification	Not a DOT-controlled material (United States).
DOT Identification Number	Not applicable (PIN and PG).
Packing Group	NONE
Hazardous Substances Reportable Quantity (kg)	Not available.
Special Provisions for Transport	Not applicable.

Section 15. Regulatory Information

Federal and State Regulations	The following product(s) is (are) listed by the State of Minnesota: Diethylene glycol
Other Classifications	WHMIS (Canada) Not controlled under WHMIS (Canada). DSCI (EEC) Not controlled under DSCI (Europe).

Section 16. Other Information

HMIS (U.S.A.)	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr><tr><td>Personal Protection</td><td>B</td></tr></table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	Personal Protection	B	National Fire Protection Association (U.S.A.)	
Health Hazard	2										
Fire Hazard	1										
Reactivity	0										
Personal Protection	B										
References	Not available.	Health	Fire Hazard Reactivity Specific hazard								
Other Special Considerations	No additional remark.										
Validated by Joe Hudman on 8/8/96.	Verified by Joe Hudman.										
	Printed 5/12/99.										
Transportation Emergency Call CHEMTREC 800-424-9300 Other Information Call Joe Hudman 713-477-6675											

Continued on Next Page

Triethylene Glycol Reprocessed

Page Number: 5

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

NOV-23-1999 09:39

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P.06

Triethylene Glycol Reprocessed

Page Number: 5

Notice to Reader

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District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
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 8/8/91

RECEIVED

DEC 01 1999

Environmental Bureau

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>Verbal by D. Faust 11-23-99 (phone)</i>	4. Generator <i>Burlington</i>
2. Management Facility Destination <i>KEY ENERGY DISPOSAL</i>	5. Originating Site <i>SEYMORE #6 B</i>
3. Address of Facility Operator <i>#345 CR 3500 AZTEC NM</i>	6. Transporter <i>key</i>
7. Location of Material (Street Address or ULSTR) <i>SW/14/31N/9W</i>	8. State <i>NM</i>
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:

Reserve Pit Fluid mixed with Diesel fuel

RECEIVED

DEC - 6 1999

OIL CON. DIV.
DIST. 3

RECEIVED
NOV 29 1999

Verbal notification Martyne Kieling 11/23/99

Estimated Volume 80 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: *Michael Talovich* TITLE: *MR* DATE: *11-24-99*
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: *MICHAEL TALOVICH* TELEPHONE NO. *505-334-6136*

(This space for State Use)

APPROVED BY: *Denny B. Faust* TITLE: *Geologist* DATE: *11/30/99*

APPROVED BY: *Martyn Kieling* TITLE: *Environmental Geologist* DATE: *12-3-99*

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

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>Verbal by D. Foust 11-23-99 (Phone)</i>	4. Generator <i>Buelwa for</i>
2. Management Facility Destination <i>KEY ENERGY DISPOSAL</i>	5. Originating Site <i>Seymour #6 B</i>
3. Address of Facility Operator <i>#345 CR 3500 AZtec NM</i>	6. Transporter <i>key</i>
7. Location of Material (Street Address or ULSTR) <i>SW/14/31N/9W</i>	8. State <i>NM</i>
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BRIEF DESCRIPTION OF MATERIAL:

Reserve Pit Fluid mixed with Diesel fuel

RECEIVED
NOV 29 1999

OIL CON. DIV.
DIST. 3

Verbal notification Martyne Kieling 11/23/99

Estimated Volume 80 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: *Michael Talovich* TITLE: *mgr* DATE: *11-24-99*
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: *MICHAEL TALOVICH* TELEPHONE NO. *505-334-6186*

(This space for State Use)

APPROVED BY: *Denny G. Foust* TITLE: *Geologist* DATE: *11/30/99*
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Burlington Resources 3535 East 30 th Street Farmington NM 87401	2. Destination Name: Sunco
3. Originating Site (name): Seymour #6B Unit: SW	Location of the Waste (Street address /or ULSTR): Seymour #6B Section: 14 Township: 31N Range: 9W
4. Source and Description of Waste: From spill cleanup of diesel fuel in reserve pit.	

I, Ed Hasely representative for:
Burlington Resources 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 the appropriate classification)

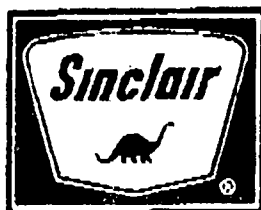
☐ EXEMPT oilfield waste ☒ NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification.

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

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

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

Name (Original Signature): Ed Hasely
Title: Environmental Rep.
Date: Tuesday, November 23, 1999



MATERIAL SAFETY DATA SHEET

DIESEL

November, 1996

MSDS No. 58

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name (Used on Label): Diesel
 Description: Diesel
 Synonyms: Diesel, Distillate, Cycle Oil, Fuel Oil, Diesels Cycle Oil, Furnace Oil
 CAS Registry Number: #1 Diesel 8008-20-6;
 #2 Diesel 68476-34-6
 Chemical Family: Liquid Hydrocarbons

MANUFACTURER:

Sinclair Oil Corporation
 P. O. Box 30825
 Salt Lake City, UT 84130-0825
 (801) 524-2700

EMERGENCY TELEPHONE NUMBERS:

Medical/Spill/Transportation
 CHEMTREC #:1(800)424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

	<u>Typical wt. %</u>	<u>CAS Registry #</u>
<u>#1 Diesel</u>		
Toluene	1.1	108-88-3
Naphthalene	2.0	91-20-3
Petroleum Distillate-Gas Oil	97%	64741-44-2
<u>#2 Diesel</u>		
Toluene	1.1	108-88-3
Naphthalene	16.3	91-20-3
Petroleum Distillate-Gas Oil	86%	64741-44-2

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

EXPOSURE GUIDELINES:

<u>COMPONENTS</u>	<u>OSHA</u>			<u>ACGIH</u>		<u>UNIT</u>
	<u>TWA</u>	<u>STEL</u>	<u>CEILING</u>	<u>TWA</u>	<u>STEL</u>	
Toluene	200		300			ppm
Naphthalene	10			10	15	ppm
Petroleum Distillates (Naphtha)	2					mg/m ³

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Colorless, red, blue, or amber liquid with kerosene odor. May cause eye, skin and respiratory tract irritation.

POTENTIAL HEALTH EFFECTS:

Trauma and burns secondary to explosions and fires can result. In enclosed spaces, oxygen may be displaced by vapors or consumed by combustion. Incomplete combustion will produce carbon monoxide and other toxic gases.

INHALATION:

Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness and other central nervous system effects.

EYE CONTACT:

Contact may cause eye irritation. Naphthalene vapor causes eye irritation.

SKIN CONTACT:

Contact may irritate or burn skin. Absorption through the skin may cause symptoms of intoxication, followed by kidney damage.

INGESTION:

If aspirated (liquid enters lung) following ingestion, severe lung irritation and pulmonary edema (swelling of lung tissue) may occur. Aspiration may also result in central nervous system depression or excitement. Serious permanent lung damage may result. Nausea, vomiting, diarrhea, and abdominal pain may occur following ingestion.

4. FIRST AID MEASURES

Remove all clothing impregnated with material immediately. Consult a physician for major exposures of inhalation or skin contact.

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

INHALATION:

Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance. If breathing stops, use mouth-to-mouth resuscitation.

EYE CONTACT:

Flush immediately with water for at least 15 minutes minimum. Seek medical attention promptly.

SKIN CONTACT:

Discard contaminated leather articles. Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INGESTION:

DO NOT INDUCE VOMITING. Get medical assistance promptly. (Note to physician: Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately.)

5. FIRE FIGHTING MEASURES

Flashpoint and Method:	100°F Minimum
Flammable Limits:	LEL - 1.3 UEL - 6
Autoignition Temperature:	490° - 545°F

GENERAL HAZARD:

Incomplete burning can produce carbon monoxide. Vapors will be released above flash point and when mixed with air, can burn or explode in confined space if exposed to sources of ignition.

FIRE FIGHTING INSTRUCTIONS:

Use foam, dry chemical, CO₂, water fog or vaporizing liquid (Halon). Keep personnel removed from and up-wind of fire. Cool adjacent structures and storage drums with water spray. Evacuate area. Prevent runoff from fire control dilution from entering streams or drinking water supply.

FIRE FIGHTING EQUIPMENT:

Use of SCBA in enclosed or confined spaces, or as otherwise needed. Bunker gear.

HAZARDOUS COMBUSTION PRODUCTS:

May produce carbon monoxide

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:

Shut off and eliminate all ignition sources. Keep people away. Remove leaking containers to a safe area. Contain and remove by mechanical means. Add sand, earth or other suitable absorbent to spill area than scrape off the ground. Guard against contamination of water supplies. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations.

WATER SPILL:

Spill may be removed from water with mechanical dredges or lifts. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations.

7. HANDLING AND STORAGE

GENERAL:

Ground and bond all transfer and storage equipment. Drums must be grounded/ bonded/ equipped with self- closing valves, pressure vacuum bungs and flame arrestors. Store away from ignition sources in a cool area. Outside or detached storage is preferred.

When handling use non-sparking tools and equipment. Do not use as a cleaner or solvent, use only as fuel. Do not siphon by mouth.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide ventilation sufficient to prevent exceeding recommended exposure limit or build-up of explosive concentrations of vapor in air. Use explosion-proof equipment.

PERSONAL PROTECTION:

RESPIRATOR:

Approved respiratory protection must be used when vapors or mist concentrations are unknown or exceed the TLV. Avoid prolonged or repeated breathing of vapor or mists.

PROTECTIVE CLOTHING:

Use full face shield, chemical goggles, impervious gloves, boots and whole body protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: < 1 PSIA

Vapor Density: >1

Specific Gravity: 0.75 - 0.90

(Air = 1)

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

Solubility in Water: No

pH: N/A

Boiling Point: 550° F

Freezing Point: 0° F

Appearance: colorless, red, blue or amber

Physical State: Liquid

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong acids, alkalies and oxidizers. Avoid heat, sparks, flame and static electricity.

HAZARDOUS DECOMPOSITION:

Incomplete burning can produce carbon monoxide.

11. TOXICOLOGICAL INFORMATION

SYSTEMIC:

Petroleum-derived fuels and fuel oils are complex and variable mixtures of hydrocarbons. In general, the more viscous the mixture, the less toxic it will be. At high level exposures, humans experience multiple organ failures, some of which may be due to hypoxia and secondary to the failure of other organ systems. In humans kidney failure has been noted only at high, acute levels of exposures, and appears reversible. Liver enzymes may be transiently elevated. At lower level exposures, most acute health effects are reversible. People can be exposed by inhalation, ingestion and dermal contact. Frequently, people are exposed by combined dermal and inhalation exposure.

ACUTE:

Inhalation: Headaches, confusion, disorientation, blurred vision occur with inhalation. Higher exposures may cause hallucinations, CNS excitation, drowsiness, CNS depression. Seizure and coma occur from very high exposures and death may result from respiratory depression. ECG changes, cardiac arrhythmias, tachycardia, shock and cardiovascular collapse can occur. Pneumonia, pulmonary edema and hemorrhages can occur.

Inhalation of 8000-16000 mg/m³ for 2 to 4 hours was lethal to rats.

Ingestion: Central nervous system, cardiovascular, and respiratory effects have been reported with acute exposures to various hydrocarbon fuels and oils similar to those reported with inhalation. Nausea, vomiting, cramping and diarrhea may occur.

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

Eye: Conjunctivitis and burning, watery eyes have been reported in acute exposures to various hydrocarbon fuels and oils.

Skin: Mild erythema to full thickness chemical burns have occurred after prolonged exposure to various hydrocarbon fuels and oils.

Chronic:

Chronic dermatitis with acanthosis, inflammation, parakeratosis and hyperkeratosis have occurred with chronic exposures to various hydrocarbon fuels and oils.

Occupational exposures in petroleum refining are considered Group 2A (probably carcinogenic) by IARC.

12. DISPOSAL CONSIDERATIONS

RCRA: Disposal of this product or material contaminated with this product may be regulated by RCRA due to the characteristic of ignitability.

EPA Hazard Class: Acute Hazard/Chronic Hazard/Fire Hazard

Dispose of in accordance with Federal, State, and Local regulations.

13. TRANSPORT INFORMATION

DOT (Department of Transportation):

PROPER SHIPPING NAME: Combustible Liquid nos (Diesel #1, Diesel #2)

HAZARD CLASS: Combustible Liquid

IDENTIFICATION NUMBER: UN 1993 PG III

NAERG96 NUMBER 128

14. REGULATORY INFORMATION

CERCLA (Comprehensive Environmental Response Compensation, and Liability Act): Naphthalene and Toluene are hazardous substances under CERCLA and therefore are subject to emergency notification requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act): Naphthalene and Toluene are subject to SARA Title III, Sections 311 and 312, which require MSDS reporting and hazardous chemical inventory reporting.

MSDS - Diesel
Sinclair Oil Corporation - November, 1996

Naphthalene and Toluene are also subject to SARA Title III, Section 313, which requires chemical release reporting.

15. OTHER INFORMATION

NFPA 704/HMIS

Health - 0 Flammability - 2 Reactivity - 0
(0=insignificant, 1=slight, 2=moderate, 3=high, 4=extreme)

REVISION SUMMARY:

Complete review of MSDS, November, 1996.

THIS PRODUCT MATERIAL SAFETY DATA SHEET PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT SHOULD BE USED IN APPLICATIONS CONSISTENT WITH THIS PRODUCT LITERATURE. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HANDLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS.

THIS MATERIAL SAFETY DATA SHEET IS PROVIDED IN GOOD FAITH AND MEETS THE REQUIREMENTS OF THE HAZARDOUS COMMUNICATION PROVISIONS OF SARA TITLE III AND 29CFR1910.1200(g) OF THE OSHA REGULATIONS. THE ABOVE INFORMATION IS BASED ON REVIEW OF AVAILABLE INFORMATION SINCLAIR BELIEVES IS RELIABLE AND IS SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. SINCLAIR DOES NOT GUARANTEE ITS COMPLETENESS OR ACCURACY. SINCE CONDITIONS OF USE ARE OUTSIDE THE CONTROL OF SINCLAIR, SINCLAIR DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, AND ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA. NOTHING HEREIN IS INTENDED TO PERMIT INFRINGEMENT OF VALID PATENTS AND LICENSES.

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

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <u>WPS</u>
Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Originating Site <u>LA MOQUINA Plant</u>
2. Management Facility Destination <u>Key Energy Disposal</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>345 CR 3500 Aztec, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>3.8 miles EAST ON C.R. 2770, Aztec NM</u>	
9. <u>Circle One:</u> 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:

Rainwater mixed with small amounts of Amine and TEG

RECEIVED
NOV - 5 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 500 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: Manager DATE: 11-4-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Fout TITLE: Geologist DATE: 11/5/99
APPROVED BY: E. Busch TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Williams Energy Group 3.8 miles East on C.R. 2770 P.O. Box 760 Aztec, N.M. 87410	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): Williams Energy Group LA Maguina Plant 3.8 miles East on County Road 2770 Attach list of originating sites as appropriate	
4. Source and Description of Waste 90% rain water / wash down water. 5% amine 5% Triethelene glycol.	

I, Ron Mahaffey representative for: Williams Energy Group do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory determination, the above-described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): Ron Mahaffey
 Title: PSM Coordinator
 Date: 11-4-99

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

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

Form C-138
Originated 8/8/95

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District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <u>Williams</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>EL CEDRO</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR3500 AZtec NM (Physical)</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>EL CEDRO COMPLEX HWY 64 NM 100.5</u>	
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:

Amine Treating Fluid 95% Rain water
2.5% Amine
2.5% Treating TEG

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

Estimated Volume 400 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: Mgr DATE: 10-29-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-3346186

(This space for State Use)

APPROVED BY: Denny G. Faint TITLE: Geologist DATE: 11/3/99
APPROVED BY: [Signature] TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: WILLIAMS EL CEDRO COMPLEX Hwy 64 MILE MARKER 100.5	2. Destination Name: KEY DISPOSAL
3. Originating Site (name): EL CEDRO COMPLEX	
Location of the Waste (Street address &/or ULSTR):	
Attach list of originating sites as appropriate	
4. Source and Description of Waste AMWE TREATING - 95% RAIN WATER 2.5% AMWE 2.5% TREATING TEG	

I, WILL SMITH 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
TREATING PLANT

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

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

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

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

Name (Original Signature):

WILL SMITH

Title:

PSM COORDINATOR

(505) 632-4879

Date:

10-29-99

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Oil Conservation Division
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Environmental Bureau
Oil Conservation Division

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>VAN KATERS + ROGERS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>YARD</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>CR3500 #345 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>#15 CR 5860 Farmington NM</u>	

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.

RECEIVED
OCT 21 1999

BRIEF DESCRIPTION OF MATERIAL:

PAID WATER MIXED WITH TRACE AMOUNTS OF GLYCOL AND METHANOL

OIL CON. DIV.
DIST. 3

RECEIVED
OCT 15 1999

OIL CON. DIV.
DIST. 3

Estimated Volume 2,200 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: [Signature] TITLE: MR DATE: 10-15-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6181

(This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 10/15/99
APPROVED BY: [Signature] TITLE: Environmental Geologist DATE: 10/18/99

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>VAN WATERS + ROGERS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>YARD</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>CR3500 #345 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>#15 CR 5860 Farmington NM</u>	
9. <u>Circle One</u> : 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. <u>B.</u> 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:

PAID WATER MIXED WITH TRACE AMOUNTS OF GLYCOL AND METHANOL

RECEIVED
OCT 15 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 2200 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MR DATE: 10-15-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6181

(This space for State Use)

APPROVED BY: Denny G. Fount TITLE: Geologist DATE: 10/15/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: VAN WATERS & ROGERS INC #15550 COUNTY ROAD 5860 FARMINGTON, NM 87401	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): SAME AS ABOVE TANK FARM CONTAINMENT AREA	Location of the Waste (Street address &/or ULSTR): SAME AS ABOVE
Attach list of originating sites as appropriate	
4. Source and Description of Waste RAINWATER w/TRACE CONTAMINATION INCLUDING GLYCOLS AND METHANOL	

I, BRIAN HANEY representative for:
(Print Name)
VAN WATERS & ROGERS INC do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): BH

Title: AREA REGULATORY MGR

Date: 10/11/99

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

PAGE: 001

MSDS NO: DW24758

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

VERSION: 002

PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO:

PROD NO :

VAN WATERS & ROGERS INC. , A ROYAL PAKHOED COMPANY (425)889-3400
6100 CARILLON POINT , KIRKLAND , WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT NAME:

TRIETHYLENE GLYCOL TECHNICAL - E

MSDS #: DW24758

2. COMPOSITION/INFORMATION ON INGREDIENTS

TRIETHYLENE GLYCOL

CAS# 000112-27-6

98% (MIN)

DIETHYLENE GLYCOL

CAS# 000111-46-6

1% (MAX)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* COLORLESS LIQUID. SLIGHT ODOR. NO SIGNIFICANT IMMEDIATE HAZARDS FOR *
* EMERGENCY RESPONSE ARE KNOWN. *
* *

POTENTIAL HEALTH EFFECTS (SEE SECTION 11 FOR TOXICOLOGICAL DATA.)

EYE: MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) EYE IRRITATION.
MISTS MAY CAUSE EYE IRRITATION.

SKIN CONTACT: PROLONGED OR REPEATED EXPOSURE MAY CAUSE SKIN
IRRITATION. MAY CAUSE MORE SEVERE RESPONSE IF SKIN IS ABRADED

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

PAGE: 002

MSDS NO: DW24758

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

VERSION: 002

PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO:

PROD NO :

(SCRATCHED OR CUT).

SKIN ABSORPTION: A SINGLE PROLONGED EXPOSURE IS NOT LIKELY TO RESULT IN THE MATERIAL BEING ABSORBED THROUGH SKIN IN HARMFUL AMOUNTS. MASSIVE CONTACT WITH DAMAGED SKIN OR OF MATERIAL SUFFICIENTLY HOT TO BURN SKIN MAY RESULT IN ABSORPTION OF POTENTIALLY LETHAL AMOUNTS.

INGESTION: SINGLE DOSE ORAL TOXICITY IS LOW. INGESTION OF LARGE AMOUNTS MAY CAUSE INJURY. THE ORAL LD50 FOR RATS IS 16,800 - 22,060 MG/KG.

INHALATION: AT ROOM TEMPERATURE, VAPORS ARE MINIMAL DUE TO PHYSICAL PROPERTIES. MISTS MAY CAUSE IRRITATION OF UPPER RESPIRATORY TRACT. THE LCSO FOR RATS IS GREATER THAN 4.5 MG/LITER AS AN AEROSOL.

SYSTEMIC & OTHER EFFECTS: BASED ON AVAILABLE DATA, REPEATED EXPOSURES ARE NOT EXPECTED TO CAUSE SIGNIFICANT ADVERSE EFFECTS EXCEPT AT VERY HIGH AEROSOL CONCENTRATIONS. REPEATED EXCESSIVE EXPOSURES MAY CAUSE RESPIRATORY TRACT IRRITATION AND EVEN DEATH.

CANCER INFORMATION: DID NOT CAUSE CANCER IN LONG-TERM ANIMAL STUDIES.

TERATOLOGY (BIRTH DEFECTS): BIRTH DEFECTS ARE UNLIKELY. IN LABORATORY ANIMALS HOWEVER, EXPOSURES HAVING NO ADVERSE EFFECTS ON THE MOTHER HAD OTHER HARMFUL EFFECTS ON THE FETUS. HAS BEEN TOXIC TO THE FETUS IN LABORATORY ANIMALS AT DOSES NONTOXIC TO THE MOTHER. (ORAL GAVAGE ROUTE IN MICE). HAS BEEN TOXIC TO THE FETUS IN LABORATORY ANIMALS AT DOSES TOXIC TO THE MOTHER. (ORAL GAVAGE ROUTE IN RATS). DOSE LEVELS PRODUCING THESE EFFECTS WERE MANY TIMES HIGHER THAN ANY DOSE LEVELS EXPECTED FROM EXPOSURE DUE TO USE.

REPRODUCTIVE EFFECTS: IN ANIMAL STUDIES, HAS BEEN SHOWN NOT TO INTERFERE WITH REPRODUCTION.

4. FIRST AID

EYES: FLUSH EYES WITH PLENTY OF WATER.

SKIN: WASH OFF IN FLOWING WATER OR SHOWER.

INGESTION: INDUCE VOMITING IF LARGE AMOUNTS ARE INGESTED.
CONSULT MEDICAL PERSONNEL.

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

PAGE: 003

MSDS NO: DW24758

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

VERSION: 002

PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO:

PROD NO :

INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A
PHYSICIAN.

NOTE TO PHYSICIAN: NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE.
TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO
THE PATIENT.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 350F; 177C

METHOD USED: PMCC

AUTOIGNITION TEMPERATURE: NOT AVAILABLE

FLAMMABILITY LIMITS

LFL: 0.9%

UFL: 9.2%

HAZARDOUS COMBUSTION PRODUCT:

EXTINGUISHING MEDIA: WATER FOG, ALCOHOL RESISTANT FOAM, CO2, DRY
CHEMICAL.

FIRE FIGHTING INSTRUCTIONS: NO FIRE AND EXPLOSION HAZARDS
EXPECTED UNDER NORMAL STORAGE AND HANDING CONDITIONS (I.E.
AMBIENT TEMPERATURES). HOWEVER, TRIETHYLENE GLYCOL OR SOLUTIONS
OF TRIETHYLENE GLYCOL AND WATER CAN FORM FLAMMABLE VAPORS WITH
AIR IF HEATED SUFFICIENTLY.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: WEAR POSITIVE PRESSURE
SELF-CONTAINED BREATHING APPARATUS.

6. ACCIDENTAL RELEASE MEASURES (SEE SECTION 15 FOR REGULATORY INFORMATION)

PROTECT PEOPLE: CLEAR NON-EMERGENCY PERSONNEL FROM AREA.

PROTECT THE ENVIRONMENT: DO NOT DISCHARGE INTO SEWERS AND/OR
NATURAL WATER.

CLEANUP: SMALL SPILLS: SOAK UP WITH ABSORBENT MATERIAL AND
COLLECT FOR DISPOSAL. LARGE SPILLS: DIKE TO PREVENT
CONTAMINATION OF WATERWAYS, THEN PUMP INTO SUITABLE CONTAINERS
FOR DISPOSAL.

7. HANDLING AND STORAGE

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PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO:

PROD NO :

HANDLING: PRACTICE REASONABLE CARE TO AVOID EXPOSURE.

STORAGE: THIS PRODUCT HAS A SHELF LIFE OF APPROXIMATELY 6 MONTHS IN AN UNLINED BULK STEEL TANK AT AMBIENT CONDITIONS. THE SHELF LIFE CAN BE UP TO 12 MONTHS IF THE BULK TANK OR DRUM IS LINED. HIGH COLOR AND A DROP IN PH ARE SIGNS THAT THE PRODUCT IS STARTING TO DETERIORATE. IF SIGNS OF DETERIORATION ARE STARTING TO OCCUR, THE CUSTOMER NEEDS TO VERIFY THAT THE MATERIAL STILL MEETS SPECIFICATIONS PRIOR TO USE. SEE DOW'S "A GUIDE TO GLYCOLS" FOR FURTHER INFORMATION ON STORAGE OF GLYCOLS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT FOR MOST CONDITIONS. LOCAL EXHAUST VENTILATION MAY BE NECESSARY FOR SOME OPERATIONS.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: USE SIDE SHIELD SAFETY GLASSES OR MONOGOGGLES AS MINIMUM EYE PROTECTION.

SKIN PROTECTION: WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON OR FULL-BODY SUIT WILL DEPEND ON OPERATION. IF HANDS ARE CUT OR SCRATCHED, USE GLOVES IMPERVIOUS TO THIS MATERIAL EVEN FOR BRIEF EXPOSURES. WHEN HANDLING HOT MATERIAL, PROTECT SKIN FROM THERMAL BURNS AS WELL AS FROM SKIN ABSORPTION. SAFETY SHOWER SHOULD BE LOCATED IN IMMEDIATE WORK AREA. REMOVE CONTAMINATED CLOTHING IMMEDIATELY, WASH SKIN AREA WITH SOAP AND WATER, AND LAUNDER CLOTHING BEFORE REUSE.

RESPIRATORY PROTECTION: IN MISTY ATMOSPHERES, USE AN APPROVED MIST RESPIRATOR.

EXPOSURE GUIDELINE: NONE ESTABLISHED.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: COLORLESS LIQUID.

ODOR: SLIGHT

VAPOR PRESSURE: < 1.0 MMHG @ 20C

VAPOR DENSITY: 5.18

BOILING POINT: 545.9F; 286C

SOLUBILITY IN WATER: COMPLETELY MISCIBLE

SPECIFIC GRAVITY: 1.1225 @ 25/25C

FREEZE POINT: -7.2C (19F)

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10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: WILL IGNITE IN AIR AT 700F.

CONDITIONS TO AVOID: NONE KNOWN.

INCOMPATIBILITY WITH OTHER MATERIALS: OXIDIZING MATERIAL. AVOID CONTAMINATION WITH STRONG OXIDIZERS AND MATERIALS THAT WILL REACT WITH HYDROXYL COMPOUNDS. AVOID STRONG ACIDS AND BASES AT ELEVATED TEMPERATURES SINCE THIS MAY RESULT IN EXPLOSIVE DECOMPOSITION.

HAZARDOUS DECOMPOSITION PRODUCTS: BURNING PRODUCES NORMAL PRODUCTS OF COMBUSTION, INCLUDING CARBON MONOXIDE, CARBON DIOXIDE, AND WATER.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION (SEE SECTION 3 FOR POTENTIAL HEALTH

EFFECTS. FOR DETAILED TOXICOLOGICAL DATA, WRITE OR CALL THE

ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

SKIN: THE LD50 FOR SKIN ABSORPTION IN RABBITS IS GREATER THAN 5000 MG/KG.

INGESTION: THE ORAL LD50 FOR RATS IS 16,800-22,060 MG/KG.

INHALATION: THE LC50 FOR RATS IS GREATER THAN 4.5 MG/LITER AS AN AEROSOL.

MUTAGENICITY: IN VITRO MUTAGENICITY STUDIES WERE NEGATIVE.

12. ECOLOGICAL INFORMATION (FOR DETAILED ECOLOGICAL DATA, WRITE OR CALL

THE ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

13. DISPOSAL CONSIDERATIONS (SEE SECTION 15 FOR REGULATORY INFORMATION)

DISPOSAL METHOD: BURN IN AN APPROVED INCINERATOR IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

14. TRANSPORT INFORMATION

FOR TDG REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR DOW REPRESENTATIVE.

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FOR DOT REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, PRODUCT SHIPPING PAPERS, OR YOUR DOW REPRESENTATIVE.

15. REGULATORY INFORMATION (NOT MEANT TO BE ALL-INCLUSIVE--SELECTED REGULATIONS REPRESENTED)

NOTICE: THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE AS OF THE EFFECTIVE DATE SHOWN ABOVE. HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED IS GIVEN. REGULATORY REQUIREMENTS ARE SUBJECT TO CHANGE AND MAY DIFFER FROM ONE LOCATION TO ANOTHER; IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT ITS ACTIVITIES COMPLY WITH FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS. THE FOLLOWING SPECIFIC INFORMATION IS MADE FOR THE PURPOSE OF COMPLYING WITH NUMEROUS FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS AND REGULATIONS. SEE OTHER SECTIONS FOR HEALTH AND SAFETY INFORMATION.

SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

NOT TO HAVE MET ANY HAZARD CATEGORY

TOXIC SUBSTANCES CONTROL ACT (TSCA):

ALL INGREDIENTS ARE ON THE TSCA INVENTORY OR ARE NOT REQUIRED TO BE LISTED ON THE TSCA INVENTORY.

STATE RIGHT-TO-KNOW: THE FOLLOWING PRODUCT COMPONENTS ARE CITED ON CERTAIN STATE LISTS AS MENTIONED. NON-LISTED COMPONENTS MAY BE SHOWN IN THE COMPOSITION SECTION OF THE MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
DIETHYLENE GLYCOL	000111-46-6	PA1
TRIETHYLENE GLYCOL	000112-27-6	PA1

PA1=PENNSYLVANIA HAZARDOUS SUBSTANCE (PRESENT AT GREATER THAN OR EQUAL TO 1.0%).

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PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO:

PROD NO :

OSHA HAZARD COMMUNICATION STANDARD:

THIS PRODUCT IS NOT A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA
HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200.

CANADIAN REGULATIONS
=====

WHMIS INFORMATION: THE CANADIAN WORKPLACE HAZARDOUS MATERIALS
INFORMATION SYSTEM (WHMIS) CLASSIFICATION FOR THIS PRODUCT IS:

D2A - MATERIAL IS TERATOGENIC, EMBRYOTOXIC, OR FETOTOXIC
REFER ELSEWHERE IN THE MSDS FOR SPECIFIC WARNINGS AND
SAFE HANDLING INFORMATION. REFER TO THE EMPLOYER'S
WORKPLACE EDUCATION PROGRAM.
- - - - -

CPR STATEMENT: THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE
HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS (CPR)
AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.
- - - - -

HAZARDOUS PRODUCTS ACT INFORMATION: THIS PRODUCT CONTAINS THE FOLLOWING
INGREDIENTS WHICH ARE CONTROLLED PRODUCTS AND/OR ON THE INGREDIENT
DISCLOSURE LIST (CANADIAN HPA SECTION 13 AND 14):

COMPONENTS:	CAS #	AMOUNT(%W/W)
TRIETHYLENE GLYCOL	CAS# 112-27-4	98%

16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

CATEGORY	RATING
HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

MSDS STATUS: REVISED SECTIONS 3, 7,, 11

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----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR

VAN WATERS & ROGERS INC.

DURING BUSINESS HOURS, PACIFIC TIME

(425)889-3400

10/15/99 08:27

PRODUCT:

CUST NO:

ORDER NO:

----- NOTICE -----

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HEREIN, AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR

CONSEQUENTIAL DAMAGES. **

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* * * E N D O F M S D S * * *

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VAN WATERS & ROGERS INC. , A ROYAL PAKHOED COMPANY (425)889-3400
6100 CARILLON POINT , KIRKLAND , WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT NAME:
METHANOL

MSDS #: HZ216830

1. CHEMICAL PRODUCT IDENTIFICATION

PRODUCT NAME: METHANOL

SYNONYMS: CARBINOL

METHYL ALCOHOL

METHYL HYDROXIDE

MONOHYDROXYMETHANE

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT

METHANOL *

CAS NUMBER

67-56-1

99.5 -99.85%

*OSHA HAZARDOUS ACCORDING TO 29 CFR 1910.1200

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

METHANOL IS A CLEAR, COLORLESS, MOBILE LIQUID WITH A MILD
ALCOHOL ODOR.

DANGER!

FLAMMABLE (FLASH POINT: TOC, 60 F; TCC, 54 F)

VAPOR IS HEAVIER THAN AIR AND CAN TRAVEL CONSIDERABLE

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DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.
MATERIAL CAN BURN WITH LITTLE OR NO VISIBLE FLAME.
POTENTIAL HEALTH EFFECTS

ROUTES OF EXPOSURE:
SKIN, EYES, INHALATION, INGESTION.
IMMEDIATE EFFECTS

SKIN:
REPEATED OR PROLONGED CONTACT CAUSES DRYING, BRITTLINESS,
CRACKING AND IRRITATION. PROLONGED AND REPEATED SKIN CON-
TACT WITH METHANOL-SOAKED MATERIAL HAS PRODUCED TOXIC
EFFECTS INCLUDING VISION EFFECTS AND DEATH.

EYES:
MAY CAUSE EYE INJURY WHICH MAY PERSIST FOR SEVERAL DAYS.
LIQUID (AND VAPOR IN HIGH CONCENTRATIONS) CAUSES IRRITATION,
TEARING AND A BURNING SENSATION.

INHALATION:
EXTREMELY HIGH LEVELS CAUSE STUPOR, HEADACHE, NAUSEA, DIZZI-
NESS, UNCONSCIOUSNESS AND MAY PRODUCE ADVERSE EFFECTS ON
VISION.

INGESTION:
POISONOUS OR FATAL IF SWALLOWED. A SMALL AMOUNT (USUALLY
TWO OR MORE OUNCES) CAN CAUSE MENTAL SLUGGISHNESS, NAUSEA
AND VOMITING LEADING TO SEVERE ILLNESS, AND MAY PRODUCE
ADVERSE EFFECTS ON VISION WITH POSSIBLE BLINDNESS OR DEATH
IF TREATMENT IS NOT RECEIVED.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
SIGNIFICANT EXPOSURE TO THIS CHEMICAL MAY ADVERSELY AFFECT
PEOPLE WITH CHRONIC DISEASE OF THE CENTRAL NERVOUS SYSTEM,
SKIN, GASTROINTESTINAL TRACT AND/OR EYES.

FOR FURTHER INFORMATION, SEE:
SECTION 4 - FIRST AID MEASURES
SECTION 5 - FIRE FIGHTING MEASURES
SECTION 6 - ACCIDENTAL RELEASE MEASURES
SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES
SECTION 10 - STABILITY AND REACTIVITY
4. FIRST AID MEASURES

SKIN:
REMOVE CONTAMINATED CLOTHING AND WASH CONTAMINATED SKIN WITH
LARGE AMOUNTS OF SOAP AND WATER. IF IRRITATION PERSISTS,
CONTACT A PHYSICIAN.

EYES:
FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES. CONTACT A

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PHYSICIAN IMMEDIATELY.

INHALATION:

REMOVE PATIENT FROM CONTAMINATED AREA. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION, THEN OXYGEN IF NEEDED.

CONTACT A PHYSICIAN IMMEDIATELY.

INGESTION:

INDUCE VOMITING OF CONSCIOUS PATIENT IMMEDIATELY BY GIVING TWO GLASSES OF WATER AND PRESSING FINGER DOWN THROAT.

CONTACT A PHYSICIAN IMMEDIATELY.

NOTE TO PHYSICIANS:

WHEN PLASMA METHANOL CONCENTRATIONS ARE HIGHER THAN 20 MG/DECILITER, WHEN INGESTED DOSES ARE GREATER THAN 30 MILLILITERS, AND WHEN THERE IS EVIDENCE OF ACIDOSIS OR VISUAL ABNORMALITIES, A 10% SOLUTION OF ETHANOL IN 5% AQUEOUS DEXTROSE, ADMINISTERED INTRAVENOUSLY, IS A SAFE EFFECTIVE ANTIDOTE (WESTERN JOURNAL OF MEDICINE, MARCH 1985, P. 337).

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT CLOSED CU: 60.0 F (15.6 C)

FLASHPOINT OPEN CUP : 54.0 F (12.2 C)

UPPER EXPLOSIVE LMT : 36.5 %

IN AIR BY VOLUME.

LOWER EXPLOSIVE LMT : 5.5 %

IN AIR BY VOLUME.

HAZARDOUS PRODUCTS OF COMBUSTION:

CARBON MONOXIDE.

EXTINGUISHING MEDIA:

USE CARBON DIOXIDE OR DRY CHEMICAL FOR SMALL FIRES; ALCOHOL-TYPE AQUEOUS FILM-FORMING FOAM OR WATER SPRAY FOR LARGE FIRES. WATER MAY BE INEFFECTIVE BUT SHOULD BE USED TO COOL FIRE-EXPOSED STRUCTURES AND VESSELS.

FIRE FIGHTING INSTRUCTIONS:

IF POTENTIAL FOR EXPOSURE TO VAPORS OR PRODUCTS OF COMBUSTION EXISTS, WEAR COMPLETE PERSONAL PROTECTIVE EQUIPMENT, INCLUDING SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE-PIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE. WATER SPRAY CAN BE USED TO REDUCE INTENSITY OF FLAMES AND TO DILUTE SPILLS TO NONFLAMMABLE MIXTURE. VAPOR IS HEAVIER THAN AIR AND CAN TRAVEL CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. MATERIAL CAN BURN WITH LITTLE OR NO VISIBLE FLAME.

6. ACCIDENTAL RELEASE MEASURES

ELIMINATE IGNITION SOURCES. AVOID EYE OR SKIN CONTACT; SEE "SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION" FOR RESPIRATOR INFORMATION. PLACE LEAKING CONTAINERS IN WELL-

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VENTILATED AREA WITH SPILL CONTAINMENT. IF FIRE POTENTIAL EXISTS, BLANKET SPILL WITH ALCOHOL-TYPE AQUEOUS FILM-FORMING FOAM OR USE WATER SPRAY TO DISPERSE VAPORS. CONTAIN SPILL TO FACILITATE CLEAN-UP. CLEAN-UP METHODS MAY INCLUDE ABSORBENT MATERIALS, VACUUM TRUCK, ETC. AVOID RUNOFF INTO STORM SEWERS AND DITCHES WHICH LEAD TO NATURAL WATERWAYS.

CALL THE NATIONAL RESPONSE CENTER (800 424 8802) IF THE QUANTITY (OF ANY COMPONENT) SPILLED IS EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY (RQ) UNDER CERCLA "SUPERFUND": 5000 LB/DAY.

FOR MORE INFORMATION, SEE "SECTION 15 - REGULATORY INFORMATION".

7. HANDLING AND STORAGE

HANDLING:

USE WITH ADEQUATE VENTILATION. KEEP CONTAINERS CLOSED WHEN NOT IN USE. ALWAYS OPEN CONTAINERS SLOWLY TO ALLOW ANY EXCESS PRESSURE TO VENT. AVOID BREATHING VAPOR. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. DECONTAMINATE SOILED CLOTHING THOROUGHLY BEFORE RE-USE. DESTROY CONTAMINATED LEATHER CLOTHING.

DO NOT EXPOSE TO TEMPERATURES ABOVE 49 C (120 F). USE SPARK-RESISTANT TOOLS. DO NOT LOAD INTO COMPARTMENTS ADJACENT TO HEATED CARGO. PROVIDE EMERGENCY EXHAUST. CLOTHING.

STORAGE:

KEEP ALL CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. STORE OUT OF DIRECT SUNLIGHT AND ON AN IMPERMEABLE FLOOR.

DO NOT STORE WITH INCOMPATIBLE MATERIALS; SEE "SECTION 10 - STABILITY AND REACTIVITY".

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

GENERAL OR DILUTION VENTILATION IS FREQUENTLY INSUFFICIENT AS THE SOLE MEANS OF CONTROLLING EMPLOYEE EXPOSURE. LOCAL VENTILATION IS USUALLY PREFERRED.

EXPLOSION-PROOF EQUIPMENT (FOR EXAMPLE, FANS, SWITCHES, GROUNDED DUCTS) SHOULD BE USED IN MECHANICAL VENTILATION SYSTEMS.

PROTECTIVE EQUIPMENT

A SAFETY SHOWER AND EYE BATH SHOULD BE READILY AVAILABLE.

SKIN:

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WEAR IMPERVIOUS CLOTHING AND GLOVES TO PREVENT REPEATED OR
PROLONGED CONTACT. THE RECOMMENDED MATERIAL OF CONSTRUCTION
IS:

BUTYL RUBBER.

EYES:

WEAR CHEMICAL GOGGLES WHEN THERE IS A REASONABLE CHANCE OF
EYE CONTACT.

INHALATION:

BASED ON WORKPLACE CONTAMINATE LEVEL AND WORKING LIMITS OF
THE RESPIRATOR, USE A RESPIRATOR APPROVED BY NIOSH/MSHA.
THE FOLLOWING IS THE MINIMUM RECOMMENDED EQUIPMENT FOR AN
ACCEPTABLE LEVEL OF EXPOSURE. TO ESTIMATE AN ACCEPTABLE
LEVEL OF EXPOSURE, SEE "SECTION 3 - HAZARDS IDENTIFICATION",
"SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION" AND
"SECTION 11 - TOXICOLOGICAL INFORMATION".

FOR CONCENTRATIONS ≥ 1 AND ≤ 100 TIMES THE ACCEPTABLE
LEVEL: USE TYPE C FULL FACEPIECE SUPPLIED-AIR RESPIRATOR
OPERATED IN PRESSURE-DEMAND OR CONTINUOUS-FLOW MODE.
POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS ESCAPE
SYSTEM.

FOR CONCENTRATIONS ≥ 100 TIMES THE ACCEPTABLE LEVEL OR IDLH
LEVEL OR UNKNOWN CONCENTRATION (SUCH AS IN EMERGENCIES):
USE SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE
IN PRESSURE-DEMAND MODE. TYPE C POSITIVE-PRESSURE FULL
FACEPIECE SUPPLIED-AIR RESPIRATOR WITH AN AUXILIARY
POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS ESCAPE
SYSTEM.

FOR ESCAPE: USE SELF-CONTAINED BREATHING APPARATUS WITH
FULL FACEPIECE OR ANY RESPIRATOR SPECIFICALLY APPROVED FOR
ESCAPE.

EXPOSURE GUIDELINES:

METHANOL (67-56-1)

OSHA PEL	ACGIH TLV
200 PPM (TWA)	250 PPM (STEL)

200 PPM (TWA)

ACGIH HAS GIVEN THIS SUBSTANCE A SKIN DESIGNATION.

CELANESE HAS ADOPTED THE ACGIH TLV.

1990 NIOSH IDLH*: 25,000 PPM

1994 NIOSH IDLH: 6000 PPM

*RECOGNIZED BY OSHA.

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9. PHYSICAL AND CHEMICAL PROPERTIES.

APPEARANCE : CLEAR, COLORLESS, MOBILE LIQUID.
ODOR : MILD ALCOHOL ODOR.
PHYSICAL STATE : LIQUID
VAPOR PRESSURE : 96.0 HG
(20 C)
VAPOR DENSITY : 1.11
AIR = 1 AT 20 C
BOILING POINT : 64.6 C (148.3 F)
(760 MM HG)
FREEZING POINT : -97.8 C (-144.0 F)
SOLUBILITY : COMPLETE IN WATER.
SPECIFIC GRAVITY : 0.792
H2O = 1 @ 20/20 C
EVAPORATION RATE : 2.0
BUAC = 1
% VOLATILES : 100.0
MOLECULAR WEIGHT : 32.0

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

STABLE.

CONDITIONS TO AVOID:

HEAT, SPARKS, FLAME.

INCOMPATIBILITY:

SULFURIC ACID; OXIDIZING AGENTS SUCH AS HYDROGEN PEROXIDE,
NITRIC ACID, PERCHLORIC ACID AND CHROMIUM TRIOXIDE.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

ORAL LD50 : 7.5 G/KG (RATS); PRACTICALLY NON-TOXIC TO
RATS.

DERMAL : MINIMUM LETHAL DOSE, 1.6 G/KG (MONKEYS);
LOW TOXICITY TO ANIMALS BY SKIN CONTACT.

INHALATION LC50 : 64,000 PPM (RATS, 4 HRS) PRACTICALLY NON-
TOXIC IN RATS. REPEATED EXPOSURE OF MONKEYS TO 5000 PPM,
6 HRS/DAY, 5 DAYS/WK FOR 4 WEEKS CAUSED NO TOXIC RESPONSE OR
EFFECTS ON VISION.

MUTAGENICITY : IN VITRO, LIMITED EVIDENCE OF MUTAGENI-
CITY (MOUSE LYMPHOMA FORWARD MUTATION ASSAY). IN VIVO, NO
INFORMATION.

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CARCINOGENICITY : NO EVIDENCE OF CARCINOGENIC POTENTIAL IN LIMITED ANIMAL STUDIES IN WHICH METHANOL WAS GIVEN ORALLY OR APPLIED TO THE SKIN.

REPRODUCTION : REPORTED TO CAUSE BIRTH DEFECTS IN RATS EXPOSED TO VERY HIGH LEVELS OF VAPORS (20,000 PPM).

12. ECOLOGICAL INFORMATION

THIS INFORMATION IS BEING RESEARCHED.

13. DISPOSAL CONSIDERATIONS

ALL NOTIFICATION, CLEAN-UP AND DISPOSAL SHOULD BE CARRIED OUT IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. PREFERRED METHODS OF WASTE DISPOSAL ARE INCINERATION OR BIOLOGICAL TREATMENT IN FEDERAL/STATE APPROVED FACILITY.

HAZARDOUS WASTE (40 CFR 261): YES; U154, D001.

14. TRANSPORT INFORMATION

SHIPPING NAME : METHANOL
HAZARD CLASS : 3, FLAMMABLE LIQUID
SUBSIDIARY HAZARD : 6, POISONOUS MATERIALS
UNITED NATIONS NO. : UN1230
PACKING GROUP : II
NORTH AMERICAN ER GUIDE : 131
DOT REPORTABLE QUANTITY (RQ): 5000 LB/2270 KG

CANADIAN TRANSPORTATION OF DANGEROUS GOODS

CLASSIFICATION : FLAMMABLE LIQUID 3 (6.1)

15. REGULATORY INFORMATION

RECIPIENT MUST COMMUNICATE ALL PERTINENT INFORMATION HEREIN TO EMPLOYEES AND CUSTOMERS.

STATE REGULATIONS

THE FOLLOWING CHEMICALS ASSOCIATED WITH THE PRODUCT ARE SUBJECT TO THE RIGHT-TO-KNOW REGULATIONS IN THESE STATES:

METHANOL (67-56-1): CT, FL, IL, LA, MA, NJ, NY, PA, RI

U.S. FEDERAL REGULATIONS

WE CERTIFY THAT ALL COMPONENTS ARE EITHER ON THE TSCA INVENTORY OR QUALIFY FOR AN EXEMPTION.

SARA 313 : METHANOL 99.85% (67-56-1)

ENVIRONMENTAL:

CERCLA : METHANOL 99.85% (67-56-1)

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

PAGE: 008

MSDS NO: HZ216830

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/08/99

VERSION: 001

PRODUCT: METHANOL

ORDER NO:

PROD NO :

SARA 304 : METHANOL 99.85% (67-56-1)

SARA 311 :

ACUTE HEALTH----- YES

CHRONIC HEALTH----- YES

FIRE----- YES

SUDDEN RELEASE OF PRESSURE-- NO

REACTIVE----- NO

INTERNATIONAL REGULATIONS

LISTED ON THE CHEMICAL INVENTORIES OF THE FOLLOWING

COUNTRIES: AUSTRALIA, CANADA, EUROPE (EINECS), JAPAN AND KOREA.

WHMIS INGREDIENT DISCLOSURE LISTED COMPONENTS:

WHMIS CLASSIFICATION: CLASS B, DIVISION 2; CLASS D, DIVISION 1, SUBDIVISION A.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. OTHER INFORMATION

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

PAGE: 009

MSDS NO: HZ216830

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/08/99

VERSION: 001

PRODUCT: METHANOL

ORDER NO:

PROD NO :

----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR

VAN WATERS & ROGERS INC.

DURING BUSINESS HOURS, PACIFIC TIME

(425)889-3400

10/15/99 08:26

PRODUCT:

CUST NO:

ORDER NO:

----- NOTICE -----

** VAN WATERS & ROGERS INC. ("VW&R"), A ROYAL PAKHOED COMPANY, EXPRESSLY

DISCLAIMS ALL EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR

A PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED

HEREIN, AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR

CONSEQUENTIAL DAMAGES. **

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, VW&R MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR SUFFICIENCY. CONDITIONS OF USE ARE BEYOND VW&RS CONTROL AND THEREFORE USERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM THE PUBLICATION OR USE OF, OR RELIANCE UPON, INFORMATION CONTAINED HEREIN. THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER PROCESS.

*** END OF MSDS ***

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

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>El Paso Field Serv.</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Chaco Plant</u>
2. Management Facility Destination <u>Key Energy Disposal</u>	6. Transporter <u>Key and/or others</u>
3. Address of Facility Operator <u>CR3500 #345 AZtec, N.M.</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>SEC 16, T26N, R12W S.J. Co NM</u>	
9. <u>Circle One</u> : 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:

CONTACT waste water from lined evaporation ponds

RECEIVED
SEP 14 1999

OIL CON. DIV.
DIST. 3

Estimated Volume 43,000 BBLs cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGR DATE: 9-13-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny L. Fent TITLE: Geologist DATE: 9/14/99
APPROVED BY: Matthew Philp TITLE: Env Geologist DATE: 10/1/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: El Paso Field Services Co. 614 Reilly Avenue Farmington, NM 87401	2. Destination Name: Key Energy Services – Attn. Mike Tolvich P. O. Box 900 Farmington, New Mexico 87499
3. Originating Site (name): Chaco Plant	Location of Waste(Street address &/or ULSTR): Sec. 16, T26N, R12W, San Juan Co., NM
Attach list of originating sites as appropriate	
4. Source and Description of Waste Contact wastewater from the lined evaporation ponds	

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

Name (Original Signature): David Bays

Title: Principal Environmental Scientist

Date: September 9, 1999

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW



September 2, 1999

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

Project No.: 99039
Job No.: 903901

Dear Mr. Lambdin,

Enclosed are the analytical results for the samples collected from the location designated as "Chaco Plant". One solid sample and two water samples were collected by EPFS personnel on 08/26/99, and received by the Envirotech laboratory on 08/27/99 for Hazardous Waste Characterization analysis (Volatiles, Semi-volatiles, Metals, Ignitability, Reactivity and Corrosivity).

The samples were documented on Envirotech Chain of Custody No. 6082 and assigned Laboratory Nos. G010 (EPFS No. 990377), G011 (EPFS No. 990378), and G012 (EPFS No. 990379) for tracking purposes.

The samples were analyzed 08/27/99 through 08/31/99 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. Sender
Environmental Scientist/Laboratory Manager

*Reviewed + Approved
J. Sender
9/3/99*

enc.

SWS\sws

99039lb1.wpd

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990377	Date Reported:	08-31-99
Lab ID#:	G010	Date Sampled:	08-26-99
Sample Matrix:	Solid	Date Received:	08-27-99
Preservative:	Cool	Date Analyzed:	08-27-99
Condition:	Cool and Intact	Chain of Custody:	6082

Parameter	Result
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IGNITABILITY: Negative

CORROSIVITY: Negative pH = 6.90

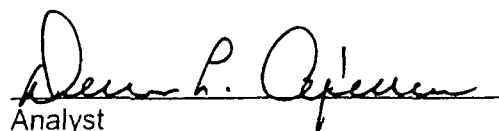
REACTIVITY: Negative

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: Chaco Plant. N. Contact Pond.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990378	Date Reported:	08-31-99
Lab ID#:	G011	Date Sampled:	08-26-99
Sample Matrix:	Water	Date Received:	08-27-99
Preservative:	Cool	Date Analyzed:	08-27-99
Condition:	Cool and Intact	Chain of Custody:	6082

Parameter	Result
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IGNITABILITY: Negative

CORROSIVITY: Negative pH = 5.85

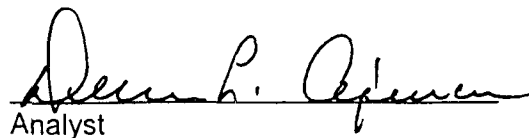
REACTIVITY: Negative

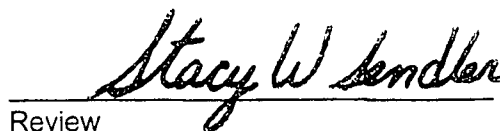
RCRA Hazardous Waste Criteria

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: Chaco Plant. N. Contact Pond.


Analyst


Review

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990379	Date Reported:	08-31-99
Lab ID#:	G012	Date Sampled:	08-26-99
Sample Matrix:	Water	Date Received:	08-27-99
Preservative:	Cool	Date Analyzed:	08-27-99
Condition:	Cool and Intact	Chain of Custody:	6082

Parameter	Result
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IGNITABILITY: Negative

CORROSIVITY: Negative pH = 6.57

REACTIVITY: Negative

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
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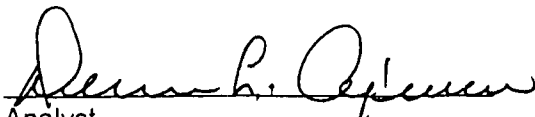
IGNITABILITY: Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21.
(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)

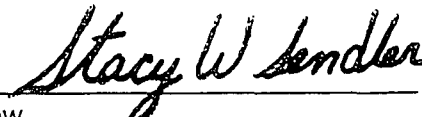
CORROSIVITY: Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22.
(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)

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: Chaco Plant. S. Contact Pond.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

A METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990377	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-27-99
Preservative:	Cool	Date Analyzed:	08-30-99
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)	0.0225	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0275	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

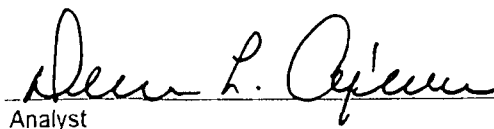
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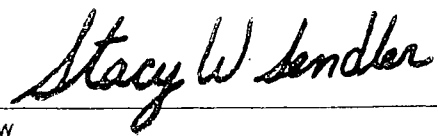
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990378	Date Reported:	08-31-99
Laboratory Number:	G011	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-30-99
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)	0.0257	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0393	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

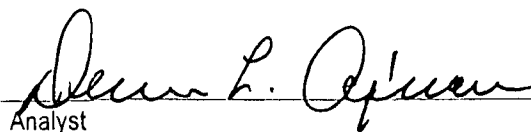
ND - Parameter not detected at the stated detection limit.


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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990379	Date Reported:	08-31-99
Laboratory Number:	G012	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-30-99
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	0.0113	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

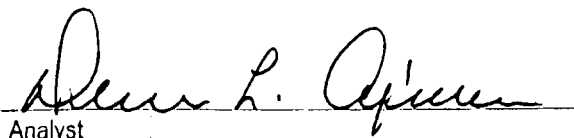
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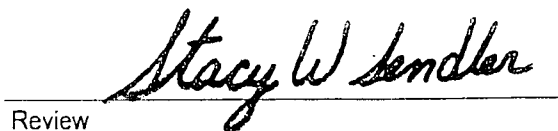
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

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: Chaco Plant. S. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990377	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-27-99
Preservative:	Cool	Date Analyzed:	08-31-99
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%

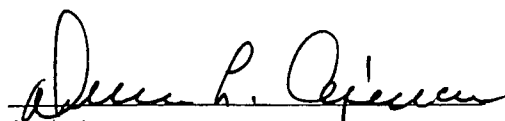
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

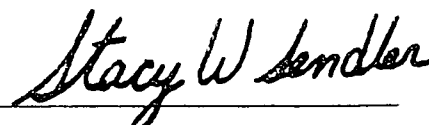
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990378	Date Reported:	08-31-99
Laboratory Number:	G011	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-31-99
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%

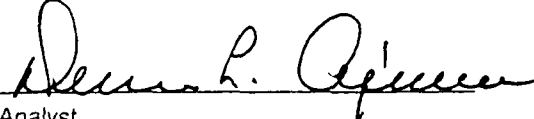
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

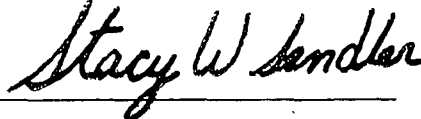
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990379	Date Reported:	08-31-99
Laboratory Number:	G012	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-31-99
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	0.064	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%

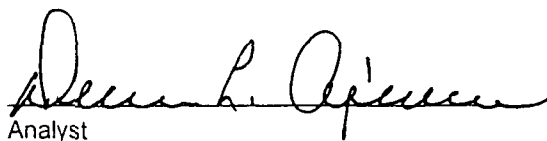
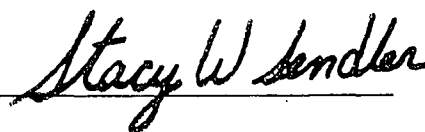
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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: Chaco Plant. S. Contact Pond.


Analyst
Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990377	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	TCLP Extract	Date Extracted:	08-27-99
Preservative:	Cool	Date Analyzed:	08-30-99
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	0.039	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

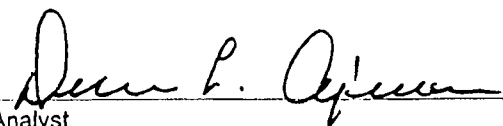
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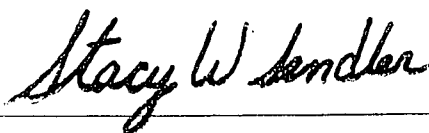
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	99%

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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990378	Date Reported:	08-31-99
Laboratory Number:	G011	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-30-99
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	0.026	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

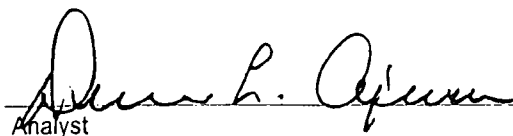
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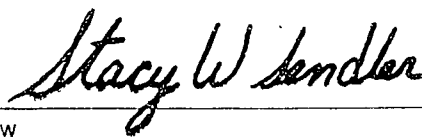
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	96%

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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990379	Date Reported:	08-31-99
Laboratory Number:	G012	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-30-99
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	0.056	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

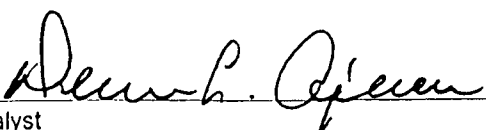
ND - Parameter not detected at the stated detection limit.


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: Chaco Plant. S. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990377	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	TCLP Extract	Date Analyzed:	08-30-99
Preservative:	Cool	Date Extracted:	08-27-99
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	1.86	0.01	21
Cadmium	0.021	0.001	0.11
Chromium	0.01	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.

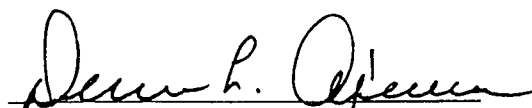
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

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: Chaco Plant. N. Contact Pond.


Analyst


Review

**EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS**

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990378	Date Reported:	08-31-99
Laboratory Number:	G011	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Analyzed:	08-30-99
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	0.002	0.001	5.0
Barium	2.22	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	0.001	0.001	5.7
Silver	ND	0.01	0.14

ND - Parameter not detected at the stated detection limit.

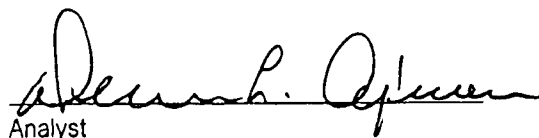
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.


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: Chaco Plant. N. Contact Pond.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990379	Date Reported:	08-31-99
Laboratory Number:	G012	Date Sampled:	08-26-99
Chain of Custody:	6082	Date Received:	08-27-99
Sample Matrix:	Water	Date Analyzed:	08-30-99
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	0.001	0.001	5.0
Barium	1.37	0.01	21
Cadmium	0.018	0.001	0.11
Chromium	0.01	0.01	0.60
Lead	ND	0.05	0.75
Mercury	ND	0.0001	0.025
Selenium	0.001	0.001	5.7
Silver	ND	0.01	0.14

ND - Parameter not detected at the stated detection limit.

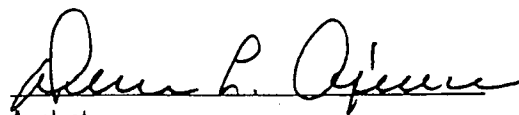
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

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: Chaco Plant. S. Contact Pond.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

ENVIROTEC 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:	08-31-99
Laboratory Number:	08-30-TCV	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-30-99
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

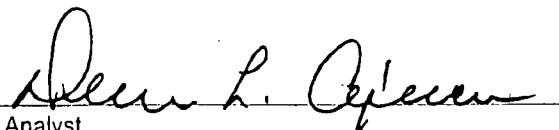
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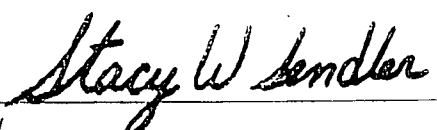
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	100%
	Bromofluorobenzene	100%

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 G010 - G012.


Analyst


Review

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-31-99
Laboratory Number:	08-27-TCV	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-30-99
Condition:	N/A	Date Extracted:	08-27-99
		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

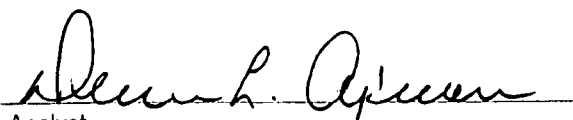
ND - Parameter not detected at the stated detection limit.


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 G010 - G012.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: G010
Sample Matrix: TCLP Extract
Analysis Requested: TCLP
Condition: N/A

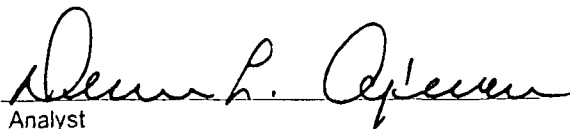
Project #: N/A
Date Reported: 08-31-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 08-30-99
Date Extracted: 08-27-99

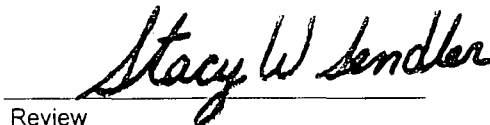
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.0225	0.0230	0.0001	2.1%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0275	0.0273	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 samples G010 - G012.


Analyst


Review

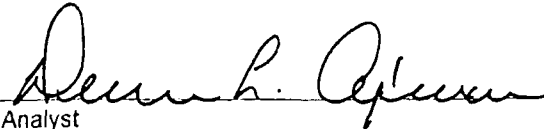
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-30-99
Condition:	N/A	Date Extracted:	N/A

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)	0.0225	0.050	0.0720	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	0.0275	0.050	0.0773	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 G010 - G012.


Analyst


Review

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-31-99
Laboratory Number:	08-31-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-31-99
Condition:	N/A	Analysis Requested:	TCLP

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

ND - Parameter not detected at the stated detection limit.

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

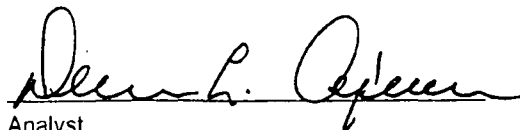
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 G010 - G012.


Analyst


Review

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-31-99
Laboratory Number:	08-27-TCA	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	08-27-99
Condition:	Cool & Intact	Date Analyzed:	08-31-99
		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%

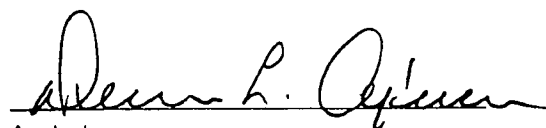
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

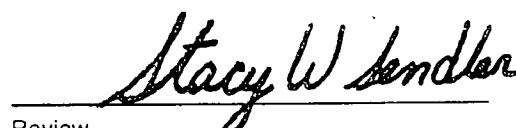
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 G010 - G012.


Analyst


Review

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-31-99
Laboratory Number:	G012	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	08-31-99
		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	0.064	0.062	0.040	2.0%
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%

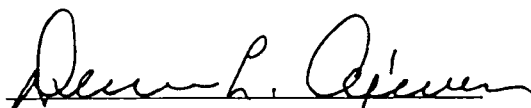
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.


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 G010 - G012.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Laboratory Blank
Laboratory Number: 08-30-TBN
Sample Matrix: Hexane
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 08-31-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 08-30-99
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

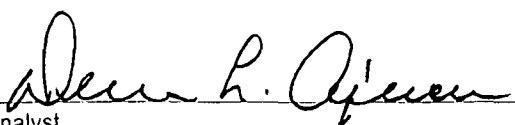
ND - Parameter not detected at the stated detection limit.


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 G010 - G012.


Analyst


Review

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:	08-31-99
Laboratory Number:	08-27-TBN	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	08-27-99
Condition:	Cool and Intact	Date Analyzed:	08-30-99
		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

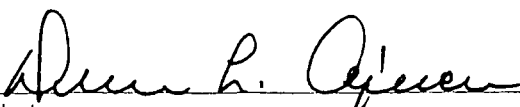
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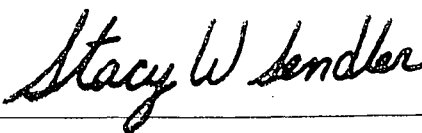
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	97%

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: QA/QC for samples G010 - G012.


Analyst


Review

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:	08-31-99
Laboratory Number:	G012	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-30-99
		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	0.056	0.054	3.0%	0.020
HexachloroBenzene	ND	ND	0.0%	0.020

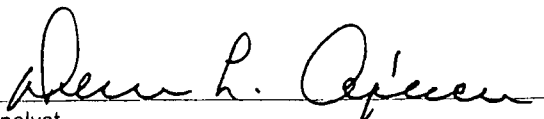
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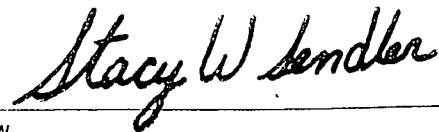
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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 G010 - G012.


Analyst


Review

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

Client:	QA/QC	Project #:	N/A
Sample ID:	08-30-TCM QA/QC	Date Reported:	08-31-99
Laboratory Number:	G010	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	08-30-99
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	1.86	1.85	0.5%	0% - 30%
Cadmium	ND	ND	0.001	0.021	0.021	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	0.099	99.0%	80% - 120%
Barium	1.00	1.86	2.85	99.7%	80% - 120%
Cadmium	0.500	0.021	0.520	99.8%	80% - 120%
Chromium	0.50	0.01	0.51	100.0%	80% - 120%
Lead	2.00	ND	2.01	100.5%	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%

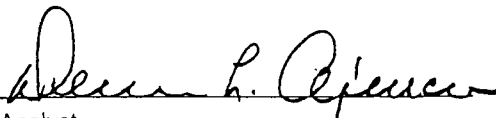
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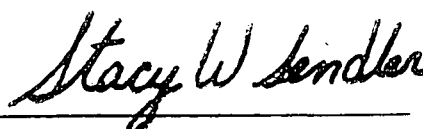
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

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 G010 - G012.


Analyst


Review

6082

Client / Project Name EL PASO FIELD SERVICES JOHN LAMBDIN			Project Location CHACO PLANT		ANALYSIS / PARAMETERS							
Sampler: DENNIS BIRD			Client No. 99039-01		No. of Containers	TCLP Metals	TCLP Organics (Heab + Hg)	Ignitability	Reactivity	Corrosivity	Remarks	
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix								
990377	8-26-99	1325	G010	SOLID	1	X	X	X	X	X	N. CONTACT POND	
990378	8-26-99	1347	G011	WATER	4	X	X	X	X	X	N. CONTACT POND	
990379	8-26-99	1412	G012	WATER	5	X	X	X	X	X	S. CONTACT POND	
Relinquished by: (Signature) <i>Dennis Bird</i>	Date 8-27-99	Time 0728	Received by: (Signature) <i>Dennis L. Cline</i>			Date 8-27-99	Time 0728					
Relinquished by: (Signature)			Received by: (Signature)									
Relinquished by: (Signature)			Received by: (Signature)									
ENVIROTECH INC.						Sample Receipt						
5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615							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
Rio Brazos Road
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

RECEIVED

SEP 07 1999

Submit Original
Plus 1 Copy
to appropriate
District Office

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>WFS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>MILAGEO PLANT</u>
2. Management Facility Destination <u>KEY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>CR 3500 #345 AZTEC NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>192 CR 4400 Blainfield NM</u>	
9. <u>Circle One</u> : 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 WATER FROM EVAPORATION POND AT the
NATURAL GAS Breechment Plant

RECEIVED
SEP. 10 1999

OIL CON. DIV.
DIST. 3

CONTINUANCE

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

Estimated Volume 2500 + bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovick TITLE: MAA DATE: 9-1-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICK TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Feunt TITLE: Geologist DATE: 9/3/99
APPROVED BY: Martyn J. Kuhl TITLE: Environmental Geologist DATE: 9/7/99

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
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 8/8/9

Submit Originals
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>WFS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>MILAGEO PLANT</u>
2. Management Facility Destination <u>KEY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>CR 3500 #345 AZTEC NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>192 CR 4900 Bloomfield NM</u>	
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. <u>B.</u> 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 WATER FROM EVAPORATION POND AT the
NATURAL GAS Breechment Plant

RECEIVED
SEP 1 - 1999

OIL CON. DIV.
DIST. 3

CONTINUANCE

Estimated Volume 2500 + bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MAE DATE: 9-1-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Dennis G. Fent TITLE: Geologist DATE: 9/3/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: WILLIAMS FIELD SERVICES 192 CR 4900 Bloomfield NM 87413	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): MILAGRO PLANT 192 CR 4900 Bloomfield NM 87413 <small>Attach list of originating sites as appropriate</small>	Location of the Waste (Street address &/or ULSTR):
4. Source and Description of Waste Waste water PONDOS	

I, NELSON M SLAY representative for: WILLIAMS FIELD SERVICES
(Print Name)
do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): Nelson M. Slay
Title: Lead MECHANIC
Date: 8/19/99

LABS

November 17, 1998

Mr. Mike Talovich
Sunco, Inc.
P.O. Box 900
Farmington, New Mexico 87499

(505) 327-0416

Project No.: 98065-02

Dear Mr. Talovich,

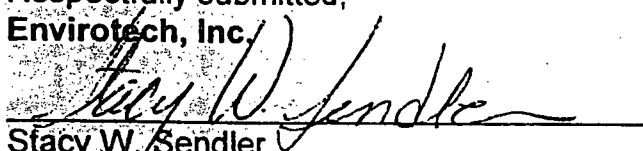
Enclosed are the analytical results for the sample collected from the location designated as "WFS Milagro Plant". One water sample identified as "Plant" was collected from the designated location by Sunco personnel on 10/29/98, and received by the Envirotech laboratory on 10/29/98 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 6371 and assigned Laboratory No. E120 for tracking purposes.

The sample was analyzed on 10/29/98 through 11/16/98 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. Sandler
Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.lb1/wpd

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Sunco Disposal	Project #:	98065-02
Sample ID:	Plant	Date Reported:	10-30-98
Lab ID#:	E120	Date Sampled:	10-29-98
Sample Matrix:	Soil	Date Received:	10-29-98
Preservative:	Cool	Date Analyzed:	10-29-98
Condition:	Cool and Intact	Chain of Custody:	6371

Parameter	Result
-----------	--------

IGNITABILITY: Negative

CORROSIVITY: Negative pH = 9.64

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: WFS Millagro Plant.


Analyst


Review

Client:	Sunco Disposal	Project #:	98065-02
Sample ID:	Plant	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Chain of Custody:	6371	Date Received:	10-29-98
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	11-11-98
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)	0.059	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0006	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	0.003	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: WFS Milagro Plant.


Analyst


Review

Client:	Sunco Disposal	Project #	98065-02
Sample ID:	Plant	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Chain of Custody:	6371	Date Received:	10-29-98
Sample Matrix:	Water	Date Extracted:	11-09-98
Preservative:	Cool	Date Analyzed:	11-12-98
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	100%
	2,4,6-Tribromophenol	100%

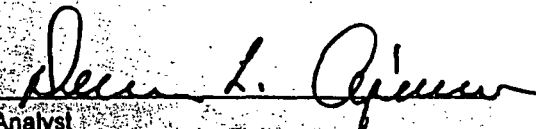
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.


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: WFS Milagro Plant.


Analyst


Review

Client:	Sunco Disposal	Project #:	98065-02
Sample ID:	Plant	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Chain of Custody:	6371	Date Received:	10-29-98
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	11-12-98
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	0.081	0.020	5.0
Hexachloroethane	0.190	0.020	3.0
Nitrobenzene	0.766	0.020	2.0
Hexachlorobutadiene	0.033	0.020	0.5
2,4-Dinitrotoluene	0.088	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: WFS Milagro Plant.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Sunco Disposal	Project #:	98065-02
Sample ID:	Plant	Date Reported:	11-13-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Chain of Custody:	6371	Date Received:	10-29-98
Sample Matrix:	Water	Date Analyzed:	11-12-98
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	ND	0.0001	5.0
Barium	0.546	0.001	21
Cadmium	0.0017	0.0001	0.11
Chromium	ND	0.0001	0.60
Lead	0.0086	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: WFS Milagro Plant.


Analyst


Review

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

E POTECH 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:	11-12-98
Laboratory Number:	11-11-TCV-BLANK	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-11-98
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 E120 and E147.

Review

Stacy W. Bender

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

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-12-98
Laboratory Number:	11-04-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-11-98
Condition:	N/A	Date Extracted:	11-04-98
		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

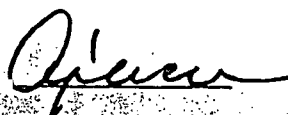
ND - Parameter not detected at the stated detection limit.

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 E120 and E147.



Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

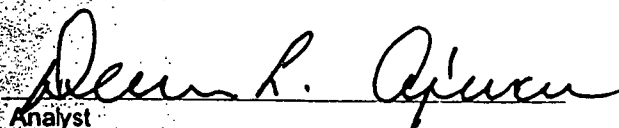
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	11-11-98
Condition:	N/A	Date Extracted:	N/A

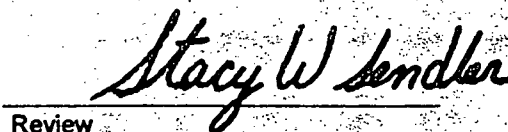
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.059	0.059	0.0001	0.0%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0006	0.0006	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	0.003	0.003	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 E120 and E147.


Analyst


Review

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

Client: QA/QC
Sample ID: Matrix Spike
Laboratory Number: E120
Sample Matrix: TCLP Extract
Analysis Requested: TCLP
Condition: N/A

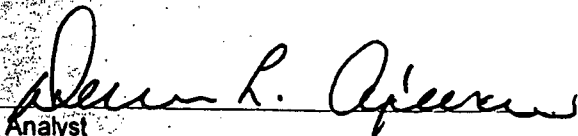
Project #: N/A
Date Reported: 11-12-98
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 11-11-98
Date Extracted: N/A

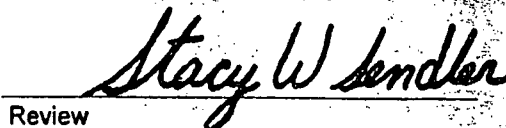
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	0.059	0.050	0.1084	0.0001	100%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0006	0.050	0.0504	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	0.0498	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	0.003	0.050	0.0524	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 E120 and E147.


Analyst


Review

E VIROTECH 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:	11-12-98
Laboratory Number:	11-12-TCA-BLANK	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-12-98
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results		Detection	Regulatory
Parameter	Concentration (mg/L)	Limit (mg/L)	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	99 %
	2,4,6-tribromophenol	97 %


References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples E120 and E147 - E148.


Analyst


Review

EPA METHOD 8040 PHENOLS Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-12-98
Laboratory Number:	11-04-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-04-98
Condition:	Cool & Intact	Date Analyzed:	11-12-98
		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	101%
	2,4,6-Tribromophenol	100%

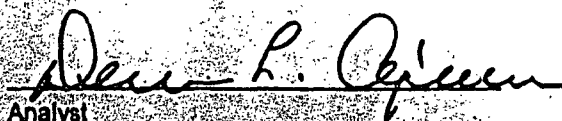
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 E120 and E147 - E148.


Analyst

Rev

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:	11-12-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-04-98
Condition:	Cool & Intact	Date Analyzed:	11-12-98
		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
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8040 Compounds

30.0%

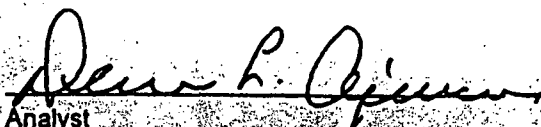
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Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 E120 and E147 - E148.


Analyst

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Laboratory Blank
Laboratory Number: 11-12-TBN-Blank
Sample Matrix: Hexane
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 11-12-98
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 11-12-98
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 E120 and E147.

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Method Blank
Laboratory Number: 11-04-BN-MB
Sample Matrix: TCLP Extract
Preservative: Cool
Condition: Cool and Intact

Project #: N/A
Date Reported: 11-12-98
Date Sampled: N/A
Date Received: N/A
Date Extracted: 11-04-98
Date Analyzed: 11-12-98
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 E120 and E147.

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
Sample ID: Matrix Duplicate
Laboratory Number: E120
Sample Matrix: TCLP Extract
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 11-12-98
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 11-12-98
Analysis Requested: TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	0.081	0.081	0.0%	0.020
Hexachloroethane	0.190	0.188	1.0%	0.020
Nitrobenzene	0.766	0.759	0.9%	0.020
Hexachlorobutadiene	0.033	0.032	1.1%	0.020
2,4-Dinitrotoluene	0.088	0.085	3.0%	0.020
HexachloroBenzene	ND	ND	0.0%	0.020

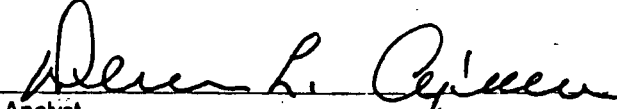
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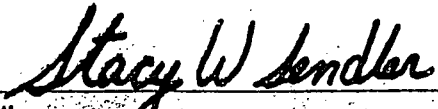
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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 E120 and E147.


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:	11-12-TCM QA/QC	Date Reported:	11-13-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	11-12-98
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	0.546	0.544	0.4%	0% - 30%
Cadmium	ND	ND	0.0001	0.0017	0.0016	5.9%	0% - 30%
Chromium	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.0001	0.0086	0.0087	1.2%	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	0.0998	99.8%	80% - 120%
Barium	1.000	0.546	1.55	100.3%	80% - 120%
Cadmium	0.0500	0.0017	0.0515	99.6%	80% - 120%
Chromium	0.0500	ND	0.0499	99.8%	80% - 120%
Lead	0.1000	0.0086	0.109	99.9%	80% - 120%
Mercury	0.0250	ND	0.0248	99.2%	80% - 120%
Selenium	0.1000	ND	0.0997	99.7%	80% - 120%
Silver	0.0500	ND	0.0498	99.6%	80% - 120%

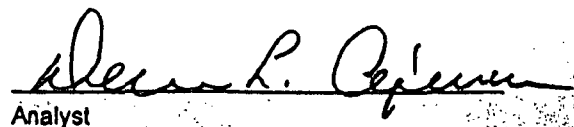
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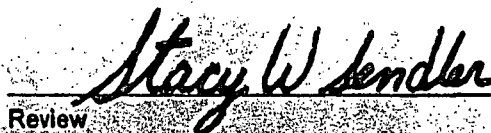
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

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 E120 and E147.


Analyst


Review

CHAIN OF CUSTODY RECORD

6371

Client / Project Name

NCO DISPOSAL

Project Location

WFS MLLABO PLANT

Sampler:

MIKETA LOVIN

Client No.

98065-02

ANALYSIS / PARAMETERS

Remarks

Sample No./
Identification

Sample
Date

Sample
Time

Lab Number

Sample
Matrix

No. of
Containers

TCLP
2011

+

2299 1030

120

Water

10

Relinquished S

Date Time Rece by: (Signature)

10

1115

act

Relinquished by: (Signature)

Received by: (Signature)

Date Time

102910

11:15

Relinquished by: (Signature)

Received by: (Signature)

ENVIROTECH INC.

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

Sample Receipt

Y

N/A

Received Intact

Cool - Ice/Blue Ice

11/15

D. E. 61
bbs. M 48241-1980
District II - (505) 748-1283
S. First
Ala, NM 88210
District III - (505) 334-6178
Rio Brazos Road
Ala, NM 87410
District IV - (505) 827-7131

Energy M. als and atural Resources De, nment
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

SEP 07 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>CHEMICAL DIST. INC AS FARMINGTON CHEMICAL DIST.</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>FCD Plant FARMINGTON NM</u>
2. Management Facility Destination <u>KEY ENERGY SERVICES/DISPOSAL</u>	6. Transporter <u>KEY OR FCD</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>3911 MONROE Rd FARMINGTON, NM</u>	
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. <u>B.</u> 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:

Small amounts of Bisulfite, Thio-sulfate and CAUSTIC mixed with city water

RECEIVED
SEP 10 1999
OIL CON. DIV.
DIST. 3

RECEIVED
AUG 31 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 120 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: mgr DATE: 8-31-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: <u>Dennis G. Kant</u>	TITLE: <u>Geologist</u>	DATE: <u>9/1/99</u>
APPROVED BY: <u>Monty J. Kelly</u>	TITLE: <u>Environmental Geologist</u>	DATE: <u>9/2/99</u>

Office I - (505) 393-6161
D. Box 8980
665, NM 88241-1980
Office II - (505) 748-1283
S. First
665, NM 88210
Office III - (505) 334-6178
Rio Brazos Road
665, NM 87410
Office IV - (505) 827-7131

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

Form C-138
Originated 8/8/95
Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>CHEMICAL DIST. INC. AS FARMINGTON CHEMICAL DIST.</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>FCD Plant FARMINGTON NM</u>
2. Management Facility Destination <u>KEY ENERGY SERVICES/DISPOSAL</u>	6. Transporter <u>Key or FCD</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>3961 MONROE Rd FARMINGTON, NM</u>	
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Small amounts of Bisulfite, Thio-Sulfate and CAUSTIC MIXED with city water

RECEIVED
AUG 31 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 120 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Michael Talovich TITLE: mgr DATE: 8-31-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Jent TITLE: Geologist DATE: 9/1/99
APPROVED BY: _____ TITLE: _____ DATE: _____

RECEIVED
AUG 31 1999

OIL CON. DIV.
DIST. 3

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: <u>Chem. Dist Inc / Farmington Chem Dist</u>	2. Destination Name: <u>KEY ENERGY SERVICES / DISPOSAL</u>
3. Originating Site (name): <u>F.C.D. - Plant</u> <u>Farmington N.M.</u> <small>Attach list of originating sites as appropriate</small>	Location of the Waste (Street address &/or ULSTR): <u>3911 MONROE Rd</u> <u>Farmington N.M. 87401</u>
4. Source and Description of Waste <u>Bisulfite - Rain water</u> <u>Thio-sulfate.</u> <u>SMALL AMOUNT of caustic</u> <u>MIX with city water</u>	

I, Jerry Hughes representative for:
(Print Name)

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

☐ EXEMPT oilfield waste

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

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

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

☐ MSDS Information

☐ Other (description):

☒ RCRA Hazardous Waste Analysis

☒ Chain of Custody

Name (Original Signature):

Title:

Date:

Jerry Hughes
Operations Manager
8-31-99

August 16, 1999

Mr. Jerry Hughes
Farmington Chemical Distributors
3911 Monroe Rd.
Farmington, New Mexico 87401

(505) 327-0274

Project No.: 98081
Job No.: 808101

Dear Mr. Hughes,

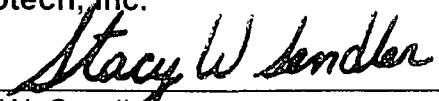
Enclosed are the analytical results for the sample collected from the location designated as "3911 Monroe Rd - FCD". One water sample was collected from the designated location by Farmington Chemical designated personnel on 08/04/99, and received by the Envirotech laboratory on 08/04/99 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 7259 and assigned Laboratory No. F814 for tracking purposes.

The sample was analyzed 08/06/99 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. Sandler
Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98081lb2.wpd

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Farmington Chemical	Project #:	808101
Sample ID:	FCD	Date Reported:	08-06-99
Lab ID#:	F814	Date Sampled:	08-04-99
Sample Matrix:	Water	Date Received:	08-04-99
Preservative:	Cool	Date Analyzed:	08-06-99
Condition:	Cool and Intact	Chain of Custody:	7259

Parameter	Result
-----------	--------

IGNITABILITY: Negative

CORROSIVITY: Negative pH = 3.37

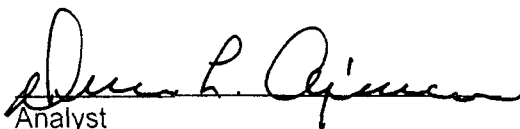
REACTIVITY: Negative

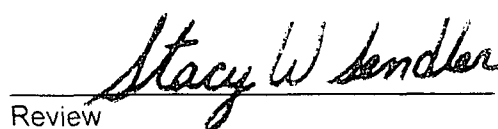
RCRA Hazardous Waste Criteria

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: 3911 Monroe Rd.


Analyst


Review

Client:	Farmington Chemical	Project #:	808101
Sample ID:	FCD	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	08-04-99
Chain of Custody:	7259	Date Received:	08-04-99
Sample Matrix:	Water	Date Extracted:	N/A
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	0.0060	0.0001	0.7
2-Butanone (MEK)	ND	0.0001	200
Chloroform	0.0002	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0042	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

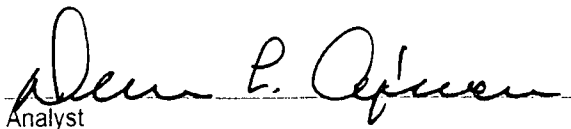
ND - Parameter not detected at the stated detection limit.

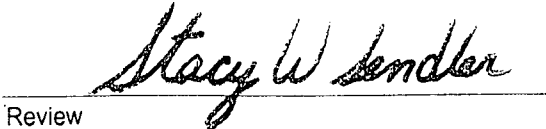
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

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: 3911 Monroe Rd.


Analyst


Review

Client:	Farmington Chemical	Project #:	808101
Sample ID:	FCD	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	08-04-99
Chain of Custody:	7259	Date Received:	08-04-99
Sample Matrix:	Water	Date Extracted:	N/A
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

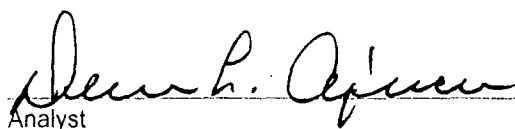
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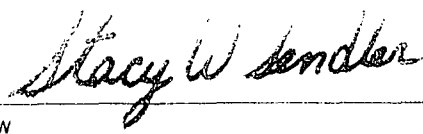
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	101%

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: 3911 Monroe Rd.


Analyst


Review

A METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Farmington Chemical	Project #:	808101
Sample ID:	FCD	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	08-04-99
Chain of Custody:	7259	Date Received:	08-04-99
Sample Matrix:	Water	Date Analyzed:	08-10-99
Preservative:	Cool	Date Extracted:	NA
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	0.22	0.01	21
Cadmium	0.024	0.001	0.11
Chromium	0.23	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.

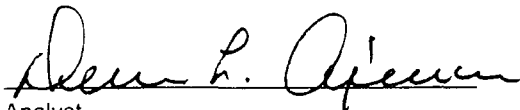
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

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: 3911 Monroe Rd.


Analyst


Review

**QUALITY ASSURANCE / QUALITY CONTROL
DOCUMENTATION**

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

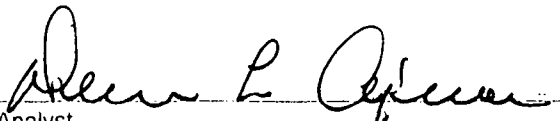
ND - Parameter not detected at the stated detection limit.

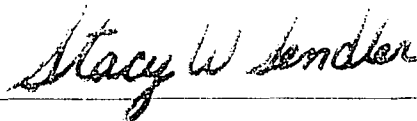
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	100%
	Bromofluorobenzene	100%

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.


Analyst


Review

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.

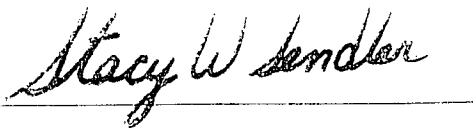
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	99%
	Bromofluorobenzene	98%

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.


Analyst


Review

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: F814
Sample Matrix: Water
Analysis Requested: TCLP
Condition: N/A

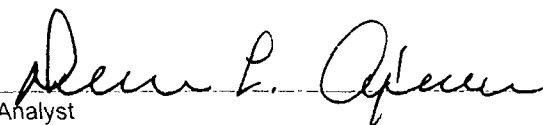
Project #: N/A
Date Reported: 08-10-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 08-10-99
Date Extracted: N/A

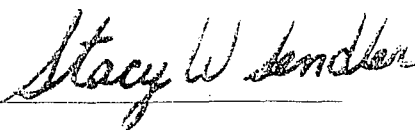
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	0.0060	0.0060	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	0.0002	0.0002	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	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.


Analyst


Review

Client: QA/QC
Sample ID: Matrix Spike
Laboratory Number: F814
Sample Matrix: Water
Analysis Requested: TCLP
Condition: N/A

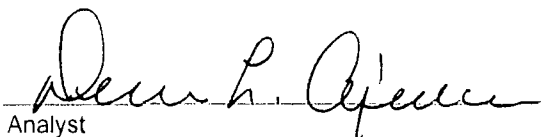
Project #: N/A
Date Reported: 08-10-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 08-10-99
Date Extracted: N/A

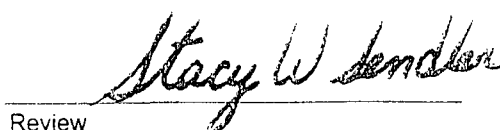
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	0.0060	0.050	0.0554	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	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.


Analyst


Review

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

ND - Parameter not detected at the stated detection limit.

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

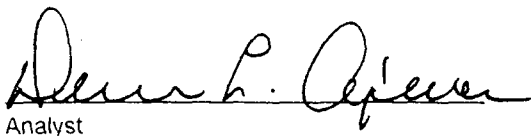
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

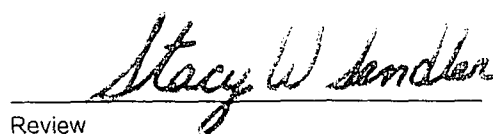
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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

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%

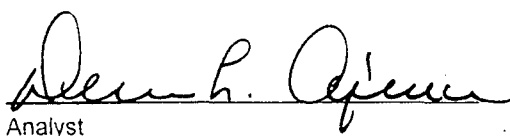
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

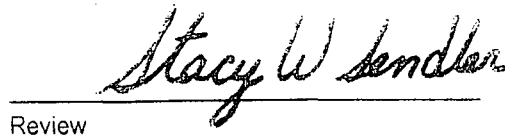
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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

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%

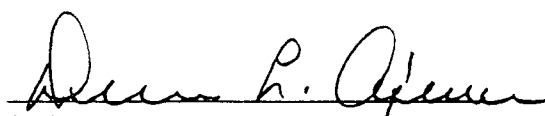
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

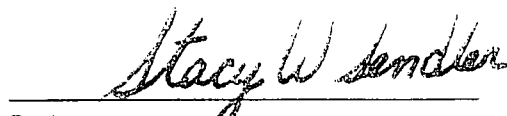
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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


Review

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

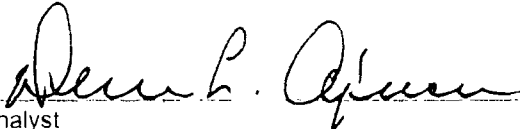
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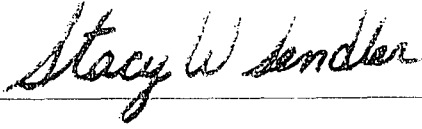
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	99%

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

**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

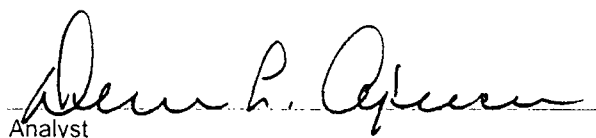
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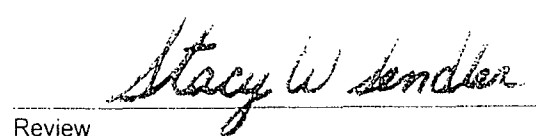
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	100%

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


Review

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

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: F814
Sample Matrix: Water
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 08-10-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: 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

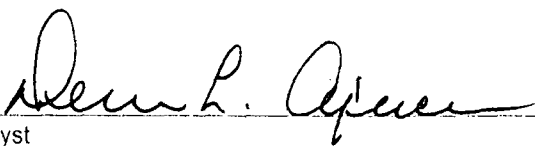
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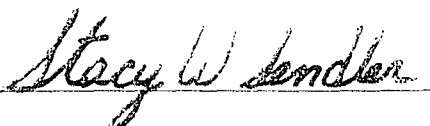
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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.


Analyst


Review

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%

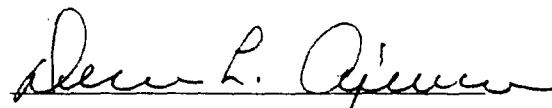
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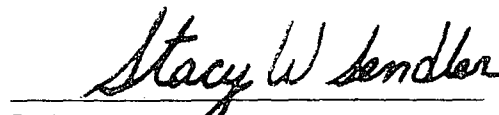
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

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


Review

7259

[illegible]

Unit I - (505) 393-6161
Box 8980
Albuquerque, NM 87241-1980
Unit II - (505) 748-1283
S. First
Albuquerque, NM 88210
Unit III - (505) 334-6178
Rio Brazos Road
Albuquerque, NM 87410
Unit IV - (505) 827-7131

New Mexico
Energy, Minerals and Natural Resources Department
RECEIVED
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131
AUG 2 1999
Environmental Bureau
Oil Conservation Division

Form C-138
Originated 8/8/95
RECEIVED
AUG 23 1999
Submit Original
Plus 1 Copy
to appropriate
District Office
OIL CON. DIV.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>EL Paso field Service</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>compressor site STATION</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>T30N, R10W, NW 1/4 of the NE 1/4 Sec 19</u>	
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Waste water created from the cleaning of Gas Dehydrator
ACIDIC cleaning Agents used

RECEIVED
AUG 26 1999
OIL CON. DIV.
DIST. 3

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

SIGNATURE: Michael Talovich TITLE: mgr DATE: 8-20-99
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Keat TITLE: Geologist DATE: 8/23/99
APPROVED BY: Monty J. Kelly TITLE: Environmental Geologist DATE: 8/24/99

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>EL Paso Field Service</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>compressor site STATION</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>T 30N, R 10W, NW 1/4 OF the NE 1/4 Sec 19</u>	
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. <u>B.</u> 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 water created from the cleaning of Gas Dehydrator
Acidic cleaning Agents used

RECEIVED
AUG 23 1999
OIL CON. DIV.
DIST. 3

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

SIGNATURE: [Signature] TITLE: mgr DATE: 8-20-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALEWICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 8/23/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: El Paso Field Services Co. 614 Reilly Avenue Farmington, NM 87401	2. Destination Name: Key Energy Services P. O: Box 900 Farmington, New Mexico 87499
3. Originating Site (name): Potter Canyon Compressor Station	Location of Waste(Street address &/or ULSTR): San Juan County, New Mexico T30N, R10W, NW/4 of the NE/4, Section 19
Attach list of originating sites as appropriate	
4. Source and Description of Waste Spent acid and soda ash from gas dehydrator cleaning	

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

Name (Original Signature): David Bays

Title: Principal Environmental Scientist

Date: August 18, 1999

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

July 31, 1999

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



Job No.: 903901

Dear John,

Enclosed are the analytical results for the sample collected from the EPFS location designated as "Potter Canyon-Sunco 100 BBL Tank". One water sample was collected by EPFS personnel on 07/15/99, and received by the Envirotech laboratory on 07/15/99 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. 7169 and assigned Laboratory No. F698 (EPFS No. 990320) for tracking purposes. The sample was analyzed 07/15/97 through 07/31/97 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

Reviewed & Accepted
J. Sanchez
8/11/99

99039-01.lb1/wpd

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990320	Date Reported:	07-19-99
Lab ID#:	F698	Date Sampled:	07-15-99
Sample Matrix:	Water	Date Received:	07-15-99
Preservative:	Cool	Date Analyzed:	07-19-99
Condition:	Cool and Intact	Chain of Custody:	7169

Parameter	Result
-----------	--------

IGNITABILITY: Negative

CORROSIVITY: Negative pH = 6.87

REACTIVITY: Negative

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
-----------	---------------------------

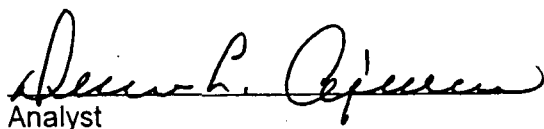
IGNITABILITY: Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21.
(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)

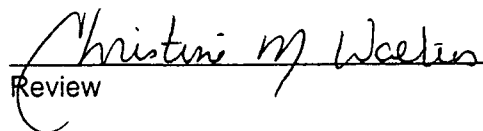
CORROSIVITY: Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22.
(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)

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: Potter Canyon, Sunco 100 BBL Tank.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990320	Date Reported:	07-23-99
Laboratory Number:	F698	Date Sampled:	07-15-99
Chain of Custody:	7169	Date Received:	07-15-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	07-23-99
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	0.0043	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

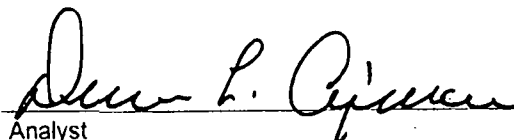
ND - Parameter not detected at the stated detection limit.


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: Potter Canyon, Sunco 100 BBL Tank.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990320	Date Reported:	07-20-99
Laboratory Number:	F698	Date Sampled:	07-15-99
Chain of Custody:	7169	Date Received:	07-15-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	07-19-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.032	0.020	200
p,m-Cresol	0.043	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%

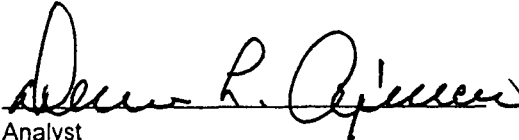
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

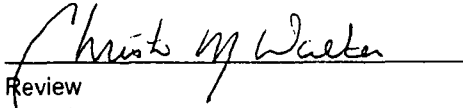
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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: Potter Canyon, Sunco 100 BBL Tank.


Analyst


Review

Client:	El Paso Field Services	Project #:	903901
Sample ID:	990320	Date Reported:	07-20-99
Laboratory Number:	F698	Date Sampled:	07-15-99
Chain of Custody:	7169	Date Received:	07-15-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	07-19-99
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

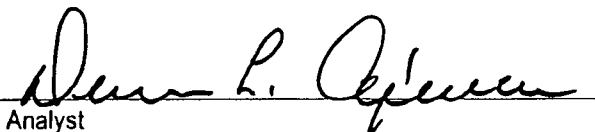
ND - Parameter not detected at the stated detection limit.

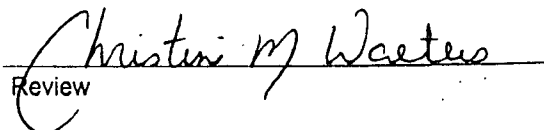
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	95%

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: Potter Canyon, Sunco 100 BBL Tank.


Analyst


Review

Received Aug-05-99 03:01pm

from 503 620 0393 - PINNACLE LABS

page 2

AUG 05 '99 02:03PM ELL PORTLAND

P. 2/4

Date: 05-Aug-99

Environmental Services Laboratory

CLIENT: Pinnacle Laboratories

Client Sample ID: 907056-01

Lab Order: 9907118

Tag Number:

Project: 907056/ENV/Lab Analysis

Collection Date: 7/15/99

Lab ID: 9907118-01A

Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed	Analyst
MERCURY		SW 7470 / EPA 245.					Analyst: btn
Mercury, TCLP	ND	0.002		mg/L	1	7/29/99	Analyst: btn
ICP METALS		SW 8010 / EPA 200.					
Antimony, TCLP	ND	0.05		mg/L	1		
Barium, TCLP	0.94	0.05		mg/L	1		
Cadmium, TCLP	ND	0.05		mg/L	1		
Chromium, TCLP	ND	0.05		mg/L	1		
Lead, TCLP	0.059	0.05		mg/L	1		
Selenium, TCLP	ND	0.05		mg/L	1		
Silver, TCLP	ND	0.05		mg/L	1		

990320 / F698

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- r - Value exceeds Maximum Contaminant Level

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

1 of 3

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	07-23-99
Laboratory Number:	07-23-TV-Blank	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-23-99
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

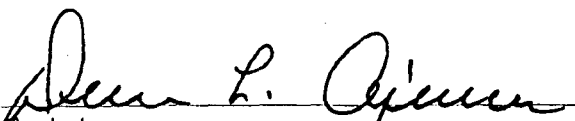
ND - Parameter not detected at the stated detection limit.

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 F657 and F698.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

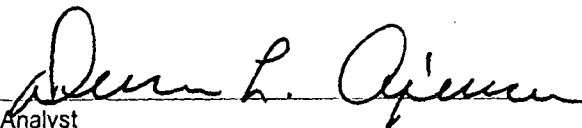
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	07-23-99
Laboratory Number:	F657	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	07-23-99
Condition:	N/A	Date Extracted:	N/A

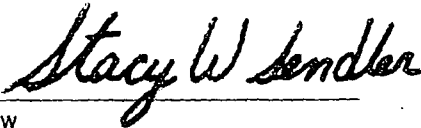
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	0.0487	0.0487	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0069	0.0069	0.0001	0.0%
1,2-Dichloroethane	ND	ND	0.0001	0.0%
Trichloroethene	0.0007	0.0007	0.0003	0.0%
Tetrachloroethene	0.0022	0.0022	0.0005	0.0%
Chlorobenzene	0.0038	0.0038	0.0003	0.0%
1,4-Dichlorobenzene	0.0042	0.0042	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 F657 and F698.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

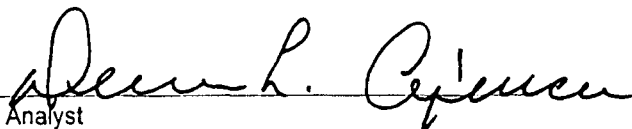
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	07-23-99
Laboratory Number:	F657	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	07-23-99
Condition:	N/A	Date Extracted:	N/A

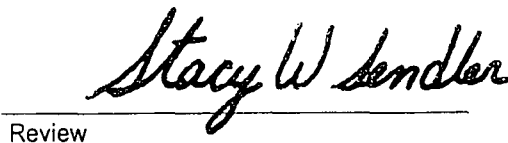
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	0.0487	0.050	0.0985	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0069	0.050	0.0567	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	0.0007	0.050	0.0501	0.0003	99%	35-146
Tetrachloroethene	0.0022	0.050	0.0516	0.0005	99%	26-162
Chlorobenzene	0.0038	0.050	0.0532	0.0003	99%	38-150
1,4-Dichlorobenzene	0.0042	0.050	0.0536	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 F657 and F698.


Analyst


Review

Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	07-20-99
Laboratory Number:	07-19-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-19-99
Condition:	N/A	Analysis Requested:	TCLP

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

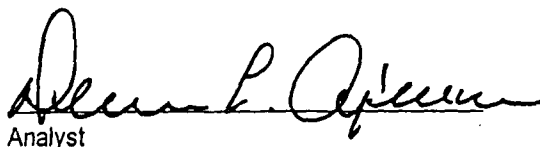
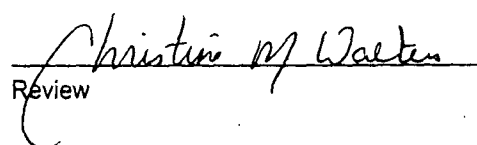
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 F657 and F698.


Analyst
Review

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	07-20-99
Laboratory Number:	07-15-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	07-15-99
Condition:	Cool & Intact	Date Analyzed:	07-19-99
		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%

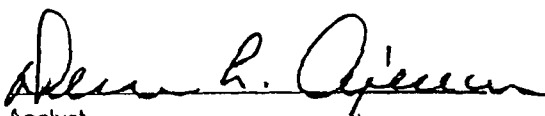
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

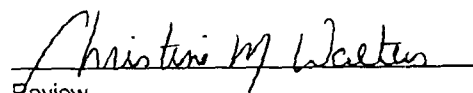
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 F657 and F698.


Analyst


Review

**EPA METHOD 8040
PHENOLS
Quality Assurance Report**

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	07-20-99
Laboratory Number:	F657	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	07-19-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	0.037	0.036	0.020	1.0%
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%

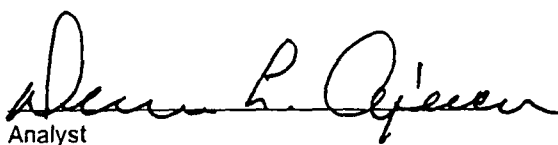
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

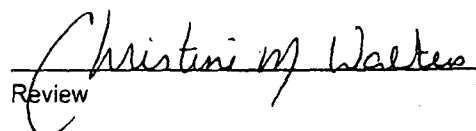
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 F657 and F698.


Analyst


Review

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

Client: QA/QC
Sample ID: Laboratory Blank
Laboratory Number: 07-19-TBN-Blank
Sample Matrix: Hexane
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 07-20-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 07-19-99
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

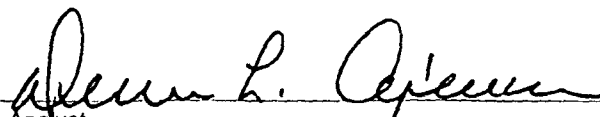
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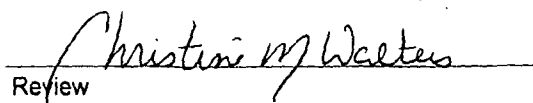
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	100%

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 F657 and F698.


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:	07-20-99
Laboratory Number:	07-15-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:	07-19-99
		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

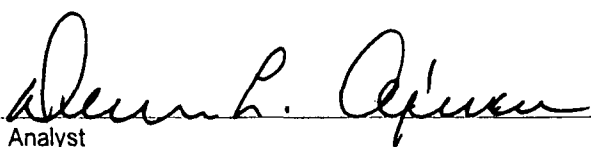
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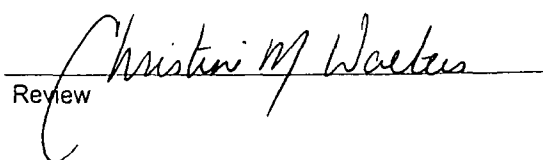
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	99%

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 F657 and F698.


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:	07-20-99
Laboratory Number:	F657	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	07-19-99
		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

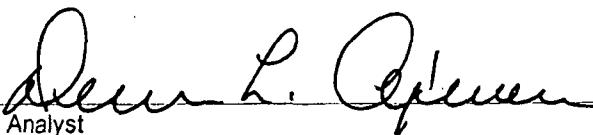
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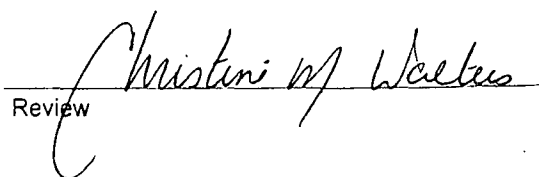
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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 F657 and F698.


Analyst


Review

7169

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	✓		

Office I - (505) 393-6161
P.O. Box 8880
S.B.S., NM 88241-1980
Office II - (505) 748-1283
1 S. First
Alamogordo, NM 88210
Office III - (505) 334-6178
Rio Brazos Road
Alamogordo, NM 87410
Office IV - (505) 827-7131

New Mexico
Energy, Minerals and Natural Resources Department

Form C-138
Originated 8/8/95

RECEIVED

Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

AUG 2 1999

RECEIVED
AUG 23 1999

Submit Original
Plus 1 Copy
to appropriate
District Office

Environmental Bureau
Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE OIL CON. DIV.

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>COASTAL CHEMICAL</u> DIST. 3
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>YARD</u>
2. Management Facility Destination <u>Key Energy Disposal</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#349 CR3500 AZtec, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>YARD #10 RD 5911 FARMINGTON NM</u>	
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Rainwater MIXED WITH SMALL AMOUNTS OF UNUSED CHEMICALS

LAST FILED
11-2-98

RECEIVED
AUG 26 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 200 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael E. Talovich TITLE: MGR DATE: 8-20-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: <u>Devin G. Fout</u>	TITLE: <u>Geologist</u>	DATE: <u>8/23/99</u>
APPROVED BY: <u>Martyn J. Fout</u>	TITLE: <u>Environmental Geologist</u>	DATE: <u>8/24/99</u>

Unit I - (505) 393-6161
Box 8930
NM 88241-1980
Unit II - (505) 748-1283
1st Floor
NM 88210
Unit III - (505) 334-6178
Rio Brazos Road
NM 87410
Unit 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 8/8/93

RECEIVED
AUG 23 1999
Submit Original
Plus 1 Copy
to Appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

OIL CON. DIV.
DIST. 3

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>COASTAL CHEMICAL</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>YARD</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#349 CR3500 AZtec, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>YARD #10 RD 5911</u> <u>FERMINA, NM</u>	
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Rainwater mixed with small amounts of unused chemicals

last Filed
11-2-98

Estimated Volume 20066 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael E. Talovich TITLE: MGR DATE: 8-20-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: [Signature]

DATE: 8/20/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: COASTAL CHEMICAL CO. INC. #10 RD 5911 FARMINGTON, NM 87401	2. Destination Name: KEY ENERGY SERVICES 345 RD 3500 AZTEC, NM 87410
3. Originating Site (name): Location of the Waste (Street address &/or ULSTR): COASTAL CHEMICAL CO. INC. #10 RD 5911 FARMINGTON, NM 87401	
Attach list of originating sites as appropriate	
4. Source and Description of Waste RINSE WATER FROM PUMP, HOSES AND TANKS USED TO DELIVER VIRGIN CHEMICALS. ALL CHEMICALS RINSED OUT ARE VIRGIN/UNUSED CHEMICALS. CHEMICALS MAY INCLUDE: ALKANOLAMINE, GLYCOL (TEG & EG) ANTIFREEZE.	

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

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

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

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

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

Name (Original Signature): 

Title: FACILITY MANAGER

Date: 8-20-99



Dow U.S.A.

Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

Page: 1

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

1. INGREDIENTS: (% w/w, unless otherwise noted)

Methyldiethanolamine

CAS# 000105-59-9 99%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 464-491F, 240-255C

VAP PRESS: <1 mmHg @ 20C

VAP DENSITY: 4

SOL. IN WATER: Complete

SP. GRAVITY: 1.04-1.06

APPEARANCE: Pale straw liquid.

ODOR: Amine odor.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 270F, 132C; 269F, 131C

METHOD USED: COC; Setaflash closed cup

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

EXTINGUISHING MEDIA: Water fog, carbon dioxide, dry chemical, foam. For large scale fires, alcohol resistant foams or protein foams may function, but much less effectively. Water may be used to flush spills away from fire exposures and to dilute spills to non-flammable mixtures. If possible, contain fire run off water. For large scale fires, direct water stream may cause violent frothing, but fine water spray may help control situation.

(Continued on page 2 , over)

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* An Operating Unit of The Dow Chemical Company



Printed on Recycled and Recyclable Paper

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

Page: 2

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE & EXPLOSION HAZARDS: Keep unnecessary people away; isolate hazard area and deny unnecessary entry. Highly toxic fumes are released in fire situation. Fire water run off may be toxic. When using water spray, boil over may occur when the product temperature reaches the boiling point of water (tank type scenarios, not spills).

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

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) No relevant data.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing material.

HAZARDOUS DECOMPOSITION PRODUCTS: Possible nitrogen oxides and carbon oxides.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS: Wash small amounts with water. Dike to avoid contamination of sewer system with large amounts. Keep out of sewers, storm drains, surface waters and soil.

DISPOSAL METHOD: ++DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER++. For unused or uncontaminated material, the preferred management options are to send to a licensed recycler, reclaimer, or incinerator. The same management options are recommended for used or contaminated material, although additional evaluation is required. (see, for example, 40 CFR Part 261, "Identification and Listing of Hazardous Waste"). Any disposal practice must be in compliance with federal, state, provincial, and local laws and regulations. Check with appropriate agencies for your location. For additional information, see Section 4 (REACTIVITY DATA) and "REGULATORY INFORMATION".

As a service to its customers, Dow can provide lists of

(Continued on page 3)

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Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

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Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

5. ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

companies which recycle, reprocess or manage chemicals and companies that recondition used drums. Telephone Dow's Customer Information Center at 800/258-CHEM (2436) for further details.

6. HEALTH HAZARD DATA:

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

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined or skin is abraded.

SKIN ABSORPTION: A single prolonged skin exposure is not likely to result in absorption of harmful amounts. The LD50 for skin absorption in rabbits is >2000 mg/kg.

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is likely between 2000-3980 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.

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

SYSTEMIC & OTHER EFFECTS: No relevant information found.

7. FIRST AID:

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

SKIN: Wash off in flowing water or shower. Remove contaminated clothing and wash before reuse.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

(Continued on page 4 , over)

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Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

Page: 4

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

7. FIRST AID: (CONTINUED)

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

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

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): None established.

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

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

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

EYE PROTECTION: Use chemical goggles. Eye wash fountain should be located in immediate work area.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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

MSDS STATUS: Revised sections 3, 5, 9, and Regulatory Information

For information regarding state/provincial and federal regulations see The Regulatory Information Section.

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Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

Page: R-1

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

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

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

U.S. REGULATIONS

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

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

An immediate health hazard

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

New Jersey
Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

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

CANADIAN REGULATIONS

(Continued on page R-2 , over)

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Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520

Page: R-2

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93

MSDS:000913

REGULATORY INFORMATION (CONTINUED)

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

D2B

CANADIAN TDG INFORMATION: For guidance, the Transportation of Dangerous Goods Classification for this product is:

Not regulated

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.

* An Operating Unit of The Dow Chemical Company

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2 MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL

1 HM18 HEALTH
1 HM18 FLAMMABILITY
0 HM18 REACTIVITY
B HM18 PERSONAL PROTECTION

SECTION I - IDENTIFICATION

DISTRIBUTED BY..... COASTAL CHEMICAL COMPANY, INC
P.O. BOX 820
ABBEVILLE, LA 70511-0820
(318) 893-3862
EMERGENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300
EFFECTIVE DATE..... 02/26/90
MANUFACTURER'S NAME..... UNION CARBIDE
DOW CHEMICAL
TEXACO
OXY-PETROCHEMICAL

TRADE NAME..... TRIETHYLENE GLYCOL
CHEMICAL FAMILY..... POLYETHYLENE GLYCOL
CAS NUMBER..... 112-27-6
CHEMICAL FORMULA..... C6H14O4

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	%	TLV (Units)	PROD. CAS #
TRIETHYLENE GLYCOL	99	None Established	112-27-6

SECTION III - PHYSICAL DATA

FREEZING POINT (F)..... -7 Deg. C., 19 Deg. F.
VAPOR PRESSURE (mm Hg)... (1 mm
VAPOR DENSITY (AIR=1).... 3.2, AIR = 1
SOLUBILITY IN H2O..... Completely soluble in all proportions
APPEARANCE/ODOR..... Clear, colorless, viscous liquid with slight odor.
SPECIFIC GRAVITY (H2O=1). 1.1 @ 77 Deg. F., 25/25 Deg. C
PH..... N/D

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... 350 Deg. F.
LOWER FLAME LIMIT..... 0.9
HIGHER FLAME LIMIT..... 9.2
EXTINGUISH MEDIA..... Use water fog or spray, Alcohol Foam, Dry Powder, Carbon Dioxide (CO2).
UNUSUAL FIRE HAZARD..... Containers may explode from internal pressure if confined to fire. Cool with water. Keep unnecessary people away. Approach fire from upwind side. Avoid breathing smoke, fumes, mist or vapors on the downwind side.

MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE.... Recommended 5 MG/M3 based on oil mist.

ROUTE OF ENTRY.	INHALATION?	SKIN?	INGESTION?
	Irritant	Mild irritant	Irritant

HEALTH HAZARDS..... ACUTE: Vapors or liquid may be irritating to skin, eyes, or mucous membranes. Avoid inhalation or skin/eye contact.

CARCINOGENICITY	NTP?	IARC MONOGRAPHS?	OSHA REGULA
NO	NO	NO	NO

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact.

FIRST AID PROCEDURES..... In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If swallowed, do not induce vomiting, get immediate medical attention. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container.

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials.

DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide

HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID..... None

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor gas cartridge respirator is recommended.

VENTILATION..... Required in closed areas

MECHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

EYE PROTECTION..... Use chemical goggles or full face shield.

HAZARDAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL

OTHER PROTECTIVE

EQUIPMENT..... Chemical type apron recommended

SECTION IX - SPECIAL HANDLING

HANDLING AND STORAGE..... Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... Not Regulated
DOT SHIPPING NAME..... Triethylene Glycol
REPORTABLE QUANTITY (RQ). None
UN NUMBER..... None
NA #..... None
PACKAGING SIZE..... N/A

SECTION X - REGULATORY

PA ACUTE..... YES
PA CHRONIC..... NO
EPA IGNITABILITY..... NO
EPA REACTIVITY..... NO
EPA SUDDEN RELEASE OF
PRESSURE..... NO

CERCLA RQ VALUE..... None

SARA TPO..... None
SARA RL..... None
SECTION 313..... No

EPA HAZARD WASTE #..... None
CLEAN AIR..... Yes Section III
CLEAN WATER..... No

FOOT NOTES N/A - not applicable N/D - no data available
(- means less than) - means greater than
App. - approximate Est. - estimated

PREPARED BY..... Glen White, B.I.B., 817-560-4631

**MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL**

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMER IN ACHIEVING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.

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MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL REPROCESSED

1 HMIS HEALTH
1 HMIS FLAMMABILITY
0 HMIS REACTIVITY
B HMIS PERSONAL PROTECT

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SECTION I - IDENTIFICATION

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DISTRIBUTED BY..... COASTAL CHEMICAL COMPANY, INC
P.O. BOX 820
ABBEVILLE, LA 70511-0820
(318) 893-3862
EMERGENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300
EFFECTIVE DATE..... 02/26/90
MANUFACTURER'S NAME.....
TRADE NAME..... TRIETHYLENE GLYCOL REPROCESSED
CHEMICAL FAMILY..... POLYETHYLENE GLYCOL
CAS NUMBER..... 112-27-6
CHEMICAL FORMULA..... C6H14O4

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SECTION II - HAZARDOUS INGREDIENTS

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HAZARDOUS COMPONENTS	%	TLV (Units)	PROD. CAS #
TRIETHYLENE GLYCOL	98	None Established	112-27-6

=====

SECTION III - PHYSICAL DATA

=====

FREEZING POINT (F)..... -7 Deg. C., 19 Deg. F.
VAPOR PRESSURE (mm Hg)... (1 mm
VAPOR DENSITY (Air=1).... 5.2, air = 1
SOLUBILITY IN H2O..... Completely soluble in all proportions
APPEARANCE/ODOR..... Light amber color, viscous liquid with slight odor
SPECIFIC GRAVITY (H2O=1). 1.1 @ 77 Deg. F., 25/25 Deg. C
PH..... N/D

=====

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

=====

FLASH POINT..... 350 Deg. F.
LOWER FLAME LIMIT..... 0.9
HIGHER FLAME LIMIT..... 9.2
EXTINGUISH MEDIA..... Use water fog or spray, Alcohol Foam, Dry Powder, Carbon Dioxide (CO2).
UNUSUAL FIRE HAZARD..... Containers may explode from internal pressure if confined to fire. Cool with water. Keep unnecessary people away. Approach fire from upwind side. Avoid breathing smoke, fumes, mist or vapors on the downwind side.

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SECTION V - HEALTH HAZARD DATA

=====

THRESHOLD LIMIT VALUE.... Recommended 5 MG/M3 based on oil mist.

MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL REPROCESSED

ROUTES OF ENTRY	INHALATION? Irritant	SKIN? Mild irritant	INGESTION? Irritant
-----------------	-------------------------	------------------------	------------------------

HEALTH HAZARDS..... ACUTE: Vapors or liquid may be irritating to skin, eyes, or mucous membranes. Avoid inhalation or skin/eye contact.

CARCINOGENICITY NO	NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED NO
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OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact.

FIRST AID PROCEDURES..... In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If swallowed, do not induce vomiting, get immediate medical attention. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

=====

SECTION VI - REACTIVITY DATA

=====

CHEMICAL STABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container.

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials.

DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide.

HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID..... None

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SECTION VII - SPILL OR LEAK PROCEDURE

=====

FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations

WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws.

=====

SECTION VIII - SPECIAL PROTECTION

=====

RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor gas cartridge respirator is recommended.

VENTILATION..... Required in closed areas

MECHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

EYE PROTECTION..... Use chemical goggles or full face shield.

OTHER PROTECTIVE

EQUIPMENT..... Chemical type apron recommended

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SECTION IX - SPECIAL HANDLING

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MATERIAL SAFETY DATA SHEET
TRIETHYLENE GLYCOL REPROCESSED

=====

HANDLING AND STORAGE..... Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... NON HAZARDOUS

DOT SHIPPING NAME..... CHEMICALS, NOS

REPORTABLE QUANTITY (RQ). None

UN NUMBER..... None

NA #..... None

PACKAGING SIZE..... N/A

=====

=====

SECTION X - REGULATORY

=====

EPA ACUTE..... YES

EPA CHRONIC..... NO

EPA IGNITABILITY..... NO

EPA REACTIVITY..... NO

EPA SUDDEN RELEASE OF
PRESSURE..... NO

CERCLA RQ VALUE..... None

SARA TPQ..... None

SARA RQ..... None

SECTION 313..... No

EPA HAZARD WASTE #..... None

CLEANAIR..... Yes Section 111

CLEAN WATER..... No

FOOT NOTES N/A - not applicable N/D - no data available
(- means less than) - means greater than
App. - approximate Est. - estimated

PREPARED BY:..... Glen White, S.I.S., 817-560-4631

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMER IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE

Product Code: 29451

Effective Date: 06/30/94 Date Printed: 07/25/95 MSD: 002850

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS#	AMOUNT (%w/w)
Proprietary alkylamine		90 to 100%
Water	CAS# 007732-18-5	Max. 4%

3. HAZARDS IDENTIFICATION

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

SKIN CONTACT: Short single exposure may cause skin burns. Prolonged exposure may cause severe skin burns. DOT classification: corrosive.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is low. Amounts ingested incidental to industrial handling are not likely to cause injury; however ingestion of larger amounts may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.

INHALATION: At room temperature, exposures to vapors are unlikely due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

SYSTEMIC AND OTHER EFFECTS: Repeated excessive exposures may cause liver and kidney effects. Birth defects are unlikely. Exposures having no adverse effects on the mother should have

(Continued on page 2 , over)

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MATERIAL SAFETY DATA SHEET

PAGE: 2

Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE
Product Code: 29451

Effective Date: 06/30/94

Date Printed: 07/25/95

MSD: 002850

no effect on the fetus.

4. FIRST AID

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

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

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

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

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

5. FIRE FIGHTING MEASURES

FLASH POINT: 160F, 71C
METHOD USED: PMCC

FLAMMABLE LIMITS

LFL: 1.6%
UFL: 19.6%

AUTOIGNITION TEMPERATURE: 350C; 662F

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

FIRE AND EXPLOSION HAZARDS: Keep unnecessary people away; isolate

(Continued on page 3)

(R) Indicates a Trademark of The Dow Chemical Company

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE: 3

Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE
Product Code: 29451

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Date Printed: 07/25/95

MSD: 002850

hazard area and deny unnecessary entry. Highly toxic fumes are released in fire situations. Fire water run-off may be toxic. See environmental section of this MSDS. When using water spray, boil-over may occur when the product temperature reaches the boiling point of water (tank-type scenarios, not spills). See also 'STORAGE AND HANDLING' section of this MSDS.

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

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

ACTION TO TAKE FOR SPILLS: Wash with small amounts of water. Dike to avoid contamination of sewer with large amounts, soak up with absorbent material, scoop into drums.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers. Will produce flammable vapors above the flash point.

STORAGE:

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINE(S): None established.

VENTILATION: Good general ventilation should be sufficient for most conditions.

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

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Wear a face-shield which allows use of chemical goggles, or wear a full-face respirator, to protect face and eyes when there is any likelihood of splashes. Remove contaminated clothing

(Continued on page 4 , over)

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MATERIAL SAFETY DATA SHEET

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immediately, wash skin area with soap and water, and launder clothing before reuse.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	: 306-324F, 152-162C
VAPOR PRESSURE	: <2.5 mmHg @ 20C
VAPOR DENSITY	: 2.6
SOLUBILITY IN WATER	: Complete
SPECIFIC GRAVITY	: 0.93-0.94 @ 20/20C
FREEZING POINT	: -4.5C, 24F
APPEARANCE	: Colorless liquid
ODOR	: Amine

10. STABILITY AND REACTIVITY

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

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

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

HAZARDOUS POLYMERIZATION: Will not occur.

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

ACUTE SKIN: The dermal LD50 has not been determined.

ACUTE INGESTION: The oral LD50 for rats is between 1000 and 2340 mg/kg.

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

(Continued on page 5)

(R) Indicates a Trademark of The Dow Chemical Company

M A T E R I A L S A F E T Y D A T A S H E E T

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Effective Date: 06/30/94

Date Printed: 07/25/95

MSD: 002850

No data available at MSDS effective date.

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

DISPOSAL METHOD: Dispose by incineration in accordance with all local, state, and federal requirements.

14. TRANSPORT INFORMATION

CANADIAN TDG INFORMATION:

For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

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

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

U.S. REGULATIONS

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

An immediate health hazard
A delayed health hazard
A fire hazard

CANADIAN REGULATIONS

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

(Continued on page 6 , over)

(R) Indicates a Trademark of The Dow Chemical Company

MATERIAL SAFETY DATA SHEET

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Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE
Product Code: 29451

Effective Date: 06/30/94

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MSD: 002850

REGULATORY INFORMATION (CONTINUED)

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:

Proprietary alkylamine

CAS #

AMOUNT (%w/w)

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

Claim Registry Number: 3499

Filing Date: June 29, 1994

16. OTHER INFORMATION

PRODUCT USE: Gas conditioning solvent.

REVISION INDICATOR: Revised section 15

(R) Indicates a Trademark of The Dow Chemical Company
The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.



Material Safety Data Sheet

The Dow Chemical Company
Midland, MI 48674

1. CHEMICAL, PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 06/30/94 * Date Printed: 01/10/95 MSD: 003430

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Methyldiethanolamine
Proprietary Alkylamine
Water

CAS# 000105-59-9 60-70%

CAS# 007732-18-5 2.0% MAX

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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

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

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

SKIN: Short single exposure may cause severe skin burns. Classified as corrosive according to DOT. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The dermal LD50 has not been determined.

INGESTION: Single dose oral toxicity considered to be low. The oral LD50 for rats is >1000 mg/kg. Small amounts swallowed incidental to normal handling are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion

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MATERIAL SAFETY DATA SHEET

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may cause burns of mouth and throat. Observations in animals include liver and kidney effects.

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

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

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

CANCER INFORMATION:
No relevant information found.

REPRODUCTIVE EFFECTS:
No relevant information found.

4. FIRST AID

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

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

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

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

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

5. FIRE FIGHTING MEASURES

(Continued on page 3)

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MATERIAL SAFETY DATA SHEET

PAGE: 3

Product: GAS/SPEC (R) CS-PLUS SOLVENT
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Effective Date: 06/30/94

Date Printed: 01/10/95

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

FLAMMABLE LIMITS

LFL: Not established

UFL: Not established

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

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

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

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

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

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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

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M A T E R I A L S A F E T Y D A T A S H E E T

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point.

STORAGE:

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINE(S): None established.

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

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

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

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

10. STABILITY AND REACTIVITY

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

(Continued on page 5)

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MATERIAL SAFETY DATA SHEET

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Product: GAS/SPEC (R) CS-PLUS SOLVENT

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

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

HAZARDOUS POLYMERIZATION: Will not occur.

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

MUTAGENICITY

No relevant information found.

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

No data available at MSDS effective date.

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

DISPOSAL METHOD: Do not dump into any sewers, on the ground, or into any body of water. For unused or uncontaminated material, the preferred waste management options are to send to a licensed recycler, reclaimer, or incinerator. The same waste management options are recommended for used or contaminated material, although additional evaluation is required (in the U.S. see for example, 40 CFR, Part 261, "Identification and Listing of Hazardous Waste").

Any disposal practice must be in compliance with federal, state/provincial, and local laws and regulations. State/provincial and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete or otherwise inappropriate. As a service to its customers, Dow can provide lists of companies which recycle, reprocess or manage chemicals. In the U.S. telephone Dow's Customer Information Center at 800/258-2436 for further details.

14. TRANSPORT INFORMATION

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M A T E R I A L S A F E T Y D A T A S H E E T

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Product Code: 13693

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CANADIAN TDG INFORMATION:

For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

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

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

U.S. REGULATIONS

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

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

An immediate health hazard
A fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

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

STATE RIGHT-TO-KNOW: The following product components are cited on

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M A T E R I A L S A F E T Y D A T A S H E E T

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REGULATORY INFORMATION (CONTINUED)

certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
PROPRIETARY INGREDIENT	PROPRIETARY	PA1

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

OSHA HAZARD COMMUNICATION STANDARD:

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

CANADIAN REGULATIONS

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

- B3 - combustible liquid with a flash point between 37.8C and 93.3C
- E - corrosive to metal or skin

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

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

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

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

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

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(R) Indicates a Trademark of The Dow Chemical Company

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE: 8

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Product Code: 13693

Effective Date: 06/30/94

Date Printed: 01/10/95

MSD: 003430

REGULATORY INFORMATION (CONTINUED)

Claim Number: 3500

Filing Date: June 29, 1994

16. OTHER INFORMATION

MSDS STATUS: Revised section 15

PRODUCT USE: Gas conditioning solvent.

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.

MATERIAL SAFETY DATA SHEET

ETHYLENE GLYCOL

1 HMIS HEALTH
1 HMIS FLAMMABILITY
0 HMIS REACTIVITY
B HMIS PERSONAL PROTECTION

SECTION I - IDENTIFICATION

DISTRIBUTED BY..... COASTAL CHEMICAL COMPANY, INC.
(318) 893-3862
EMERGENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300
EFFECTIVE DATE..... 2/06/1996
MANUFACTURER'S NAME..... UNION CARBIDE
DOW CHEMICAL
TEXACO
OXY-PETROCHEMICAL

TRADE NAME..... ETHYLENE GLYCOL
CHEMICAL FAMILY..... GLYCOL
CAS NUMBER..... 107-21-1
CHEMICAL FORMULA..... HOCH₂CH₂OH

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	%	TLV (Units)	PROD. CAS #
ETHYLENE GLYCOL	100%	ACGIH CEILING 50ppm	107-21-1

SECTION III - PHYSICAL DATA

FREEZING POINT (F)..... 9 DEG F
VAPOR PRESSURE (mm Hg)... 0.12 MMHG @ 25 C
VAPOR DENSITY (Air=1).... 2.14
SOLUBILITY IN H₂O..... COMPLETELY MISCIBLE
APPEARANCE/ODOR..... COLORLESS LIQUID; PRACTICALLY ODORLESS
SPECIFIC GRAVITY (H₂O=1). 1.1155 @ 20/20 C
PH..... N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... 247 DEG F
LOWER FLAME LIMIT..... N/D
HIGHER FLAME LIMIT..... N/D
EXTINGUISH MEDIA..... Water fog or spray, Foam, Dry Powder, Carbon Dioxide (CO₂).
UNUSUAL FIRE HAZARD..... NONE KNOWN Approach fire from upwind side. Avoid breathing smoke, fumes, mist or vapors on the downwind side.

MATERIAL SAFETY DATA SHEET

ETHYLENE GLYCOL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE.... 50 PPM BASED ON ETHYLENE GLYCOL

ROUTES OF ENTRY	INHALATION? IRRITANT, POSSIBLY NARCOTIC	SKIN? Not expected to cause significant health hazard	INGESTION? Ingestion of very large amounts could cause serious injury, or even death.
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HEALTH HAZARDS..... ACUTE: Vapors may be irritating to eyes, or mucous membranes. Avoid inhalation or eye contact. CHRONIC: Kidney and liver damage possible. May cause reproductive disorders.

CARCINOGENICITY NO	NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED NO
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OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact. Symptoms of overexposure: headache, fatigue, nausea, irritation of respiratory tract, dizziness, staggering gait, confusion, unconsciousness.

FIRST AID PROCEDURES..... In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container.

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials. Alkaline Materials.

DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide

HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID..... None

MATERIAL SAFETY DATA SHEET

ETHYLENE GLYCOL

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations

WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor/acid gas cartridge respirator is recommended.

VENTILATION..... Required in closed areas

MECHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

EYE PROTECTION..... Use chemical goggles or full face shield.

OTHER PROTECTIVE EQUIPMENT..... Chemical type apron recommended

SECTION IX - SPECIAL HANDLING

HANDLING AND STORAGE..... Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... Drums - NOT REGULATED
Bulk - Class 9

DOT SHIPPING NAME..... Drum - Ethylene Glycol
Bulk - Other regulated substances, liquid, n.o.s. (ethylene glycol)

REPORTABLE QUANTITY (RQ). 5,000 pounds

UN NUMBER..... None

NA #..... Drums - None; Bulk - NA3082

PACKAGING SIZE..... N/A

SECTION X - REGULATORY

MATERIAL SAFETY DATA SHEET

ETHYLENE GLYCOL

EPA ACUTE..... YES
EPA CHRONIC..... YES
EPA IGNITABILITY..... NO
EPA REACTIVITY..... NO
EPA SUDDEN RELEASE OF
PRESSURE..... NO

CERCLA RQ VALUE..... 5,000 pounds

SARA TPQ..... None

SARA RQ..... None

SECTION 313..... YES, ETHYLENE GLYCOL 107-21-1 100%

EPA HAZARD WASTE #..... None

CLEANAIR..... Yes, Section 111 and 1990 Amendments

CLEAN WATER..... No

FOOT NOTES N/A - not applicable N/D - no data available

< - means less than > - means greater than

App. - approximate Est. - estimated

PREPARED BY:..... Joe Hudman, Coastal Chemical Co., Inc. 713-477-6675

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMER IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.

MATERIAL SAFETY DATA SHEET

COASTALGUARD 100 ANTIFREEZE/COOLANT

1 HMIS
1 HMIS
0 HMIS
B HMIS

SECTION I - IDENTIFICATION

DISTRIBUTED BY..... COASTAL CHEMICAL CO., INC.
(318)893-3862
EMERGENCY PHONE NUMBER... CHEMTREC (800)424-9300
EFFECTIVE DATE..... 2/06/1996
MANUFACTURER'S NAME..... COASTAL CHEMICAL CO., INC.
TRADE NAME..... COASTALGUARD 100 ANTIFREEZE/COOLANT
CHEMICAL FAMILY..... INHIBITED ETHYLENE GLYCOL SOLUTION
CAS NUMBER..... Blended Product
CHEMICAL FORMULA..... Blended Product

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	%	TLV (Units)
ETHYLENE GLYCOL	95 %	ACGIH CEILING 50ppm

SECTION III - PHYSICAL DATA

FREEZING POINT (F)..... APPROX. 22 DEG F
VAPOR PRESSURE (mm Hg)... 0.12 MMHG @ 25 C
VAPOR DENSITY (Air=1).... 2.14
SOLUBILITY IN H2O..... COMPLETELY MISCIBLE
APPEARANCE/ODOR..... YELLOW/GREEN LIQUID; PRACTICALLY O
SPECIFIC GRAVITY (H2O=1). 1.11 typical
PH..... 10.5 - 11.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... APPROX. 247 DEG F
LOWER FLAME LIMIT..... N/D
HIGHER FLAME LIMIT..... N/D
EXTINGUISH MEDIA..... Water fog or spray, Foam, Dry Powde
(CO2).
UNUSUAL FIRE HAZARD..... NONE KNOWN Approach fire from upw
breathing smoke ,fumes, mist or vap
downwind side.

SECTION V - HEALTH HAZARD DATA

MATERIAL SAFETY DATA SHEET

COASTALGUARD 100 ANTIFREEZE/COOLANT

THRESHOLD LIMIT VALUE.... 50 PPM BASED ON ETHYLENE GLYCOL

ROUTES OF ENTRY	INHALATION? IRRITANT, POSSIBLY NARCOTIC	SKIN? Not expected to cause significant health hazard	INGESTION? Ingestion of very large amounts could cause serious injury, or even death.
-----------------	---	--	---

HEALTH HAZARDS..... ACUTE: Vapors may be irritating to eyes, or mucous membranes. Avoid inhalation or eye contact. CHRONIC: Kidney and liver damage possible. May cause reproductive disorders.

CARCINOGENICITY NO	NTP? NO	IARC MONOGRAPHS? NO	OSHA REGULATED NO
-----------------------	------------	------------------------	----------------------

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact. Symptoms of overexposure: headache, fatigue, nausea, irritation of respiratory tract, dizziness, staggering gait, confusion, unconsciousness.

FIRST AID PROCEDURES..... In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Product is stable
CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container.
INCOMPATIBLE MATERIALS... OXIDIZING MATERIALS & OXIDIZERS
DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide
HAZARDOUS POLYMERIZATION. Will not occur
POLYMERIZATION AVOID..... None

SECTION VII - SPILL OR LEAK PROCEDURE

MATERIAL SAFETY DATA SHEET

COASTALGUARD 100 ANTIFREEZE/COOLANT

FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor/acid gas cartridge respirator is recommended.

VENTILATION..... Required in closed areas

MECHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

EYE PROTECTION..... Use chemical goggles or full face shield.

OTHER PROTECTIVE EQUIPMENT..... Chemical type apron recommended

SECTION IX - SPECIAL HANDLING

HANDLING AND STORAGE..... Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... Drums - Not Regulated
Bulk - Class 9

DOT SHIPPING NAME..... Drums - COASTALGUARD 100
Bulk - Other regulated substances, liquid, n.o.s. (ethylene glycol)

REPORTABLE QUANTITY (RQ). 5000 pounds

UN NUMBER..... None

NA #..... Drums - None; Bulk - NA3082

PACKAGING SIZE..... N/A

SECTION X - REGULATORY

EPA ACUTE..... YES

EPA CHRONIC..... YES

EPA IGNITABILITY..... NO

EPA REACTIVITY..... NO

MATERIAL SAFETY DATA SHEET

COASTALGUARD 100 ANTIFREEZE/COOLANT

EPA SUDDEN RELEASE OF
PRESSURE..... NO

CERCLA RQ VALUE..... 5000 pound for ethylene glycol

SARA TPQ..... None

SARA RQ..... None

SECTION 313..... YES, ETHYLENE GLYCOL 107-21-1 95% (1/1/87)

EPA HAZARD WASTE #..... None

CLEANAIR..... Yes, Section 111 Volatile Organic Compounds & Section
112 Statutory Air Pollutants (1990 Amendments)

CLEAN WATER..... No

FOOT NOTES N/A - not applicable N/D - no data available

< - means less than > - means greater than

App. - approximate Est. - estimated

PREPARED BY:..... David Trahan, C.F.T. - 318-898-0001

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96

Date Printed: 04/27/96

MSD: 000904

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Diethanolamine
Water

CAS# 000111-42-2
CAS# 007732-18-5

85%
15%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* Colorless liquid. Slight ammonia odor. Causes eye burns. *
* *
* *

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

EYE: May cause severe irritation with corneal injury.

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

INGESTION: Single dose oral toxicity is low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Observations in animals include liver and kidney effects following single oral doses. Ingestion may cause gastrointestinal irritation or ulceration.

(Continued on page 2 , over)

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MATERIAL SAFETY DATA SHEET

PAGE: 2

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 01/01/96

Date Printed: 04/27/96

MSD: 000904

INHALATION: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause irritation and other effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Results from repeated exposure tests on diethanolamine in laboratory animals include anemia (rats) and effects on kidney (rats and mice) and liver (mice). Heart and nervous system effects were also observed in these animals given exaggerated doses. Changes in other organs, causes of which are nonspecific, were judged secondary to the poor health of the animals due to the extremely high doses of diethanolamine given.

TERATOLOGY (BIRTH DEFECTS): Contains component(s) which did not cause birth defects; other fetal effects occurred only at doses toxic to the mother.

4. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

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

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

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: * None

METHOD USED: Setaflash

AUTOIGNITION TEMPERATURE:

* No flash point observed up to the boiling point. Flash point of

(Continued on page 3)

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MATERIAL SAFETY DATA SHEET

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Product: DIETHANOLAMINE LOW FREEZING GRADE
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diethanolamine is 325F, 163C by Setaflash.

FLAMMABILITY LIMITS

LFL: Not determined.

UFL: Not determined.

HAZARDOUS COMBUSTION PRODUCTS:

EXTINGUISHING MEDIA: Water fog, alcohol foam, CO2, dry chemical.

FIRE FIGHTING INSTRUCTIONS: Not available.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear self-contained, positive-pressure breathing apparatus.

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

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

PROTECT THE ENVIRONMENT: Do not allow into sewers, on the ground, or into any body of water.

CLEANUP: Use a noncombustible absorbent such as sand and shovel into suitable containers. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill.

7. HANDLING AND STORAGE

HANDLING: Prevent eye and skin contact. Avoid breathing vapors. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperature possibly resulting in spontaneous combustion.

STORAGE: Do not store in common area with halogenated materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

(Continued on page 4, over)

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Product: DIETHANOLAMINE LOW FREEZING GRADE
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EYE/FACE PROTECTION: Use chemical goggles.

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

RESPIRATORY PROTECTION: For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

EXPOSURE GUIDELINE(S): Diethanolamine: ACGIH TLV is 2 mg/m³, skin; OSHA PEL is 3 ppm. PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless liquid.
ODOR: Slight ammoniacal odor.
VAPOR PRESSURE: Low.
VAPOR DENSITY: Not determined.
BOILING POINT: 244F, 118C
SOLUBILITY IN WATER: Completely miscible.
SPECIFIC GRAVITY: 1.08 @ 25/4C
FREEZING POINT: 28F, -2C

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: This product should not be heated above 60C in the presence of aluminum due to excessive corrosion and potential chemical reaction releasing flammable hydrogen gas.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers, strong acids. Product may potentially react with various halogenated organic solvents, resulting in temperature and/or pressure increases.

HAZARDOUS DECOMPOSITION PRODUCTS: Possible nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will not occur.

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

(Continued on page 5)

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Product: DIETHANOLAMINE LOW FREEZING GRADE

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SKIN: The LD50 for skin absorption in rabbits is greater than 8,200 mg/kg (for diethanolamine).

INGESTION: The oral LD50 for rats is greater than 680 mg/kg (for diethanolamine).

MUTAGENICITY: In vitro mutagenicity studies were negative. (for diethanolamine).

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

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Based largely or completely on data for major component(s). Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is -1.43. Henry's Law Constant (H) is 5.35×10^{-14} atm m³/mol.

DEGRADATION & TRANSFORMATION: Based largely or completely on data for major component(s). Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). 5-Day biochemical oxygen demand (BOD5) is 0.22 p/p. 10-Day biochemical oxygen demand (BOD10) is 0.74 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.20 p/p. Theoretical oxygen demand (ThOD) is calculated to be 2.13 p/p. Inhibitory concentration (IC50) in OECD "Activated Sludge, Respiration Inhibition Test" (Guideline #209) is > 1000 mg/L. Material is ultimately biodegradable. Reaches more than 70% mineralization in OECD test for inherent biodegradability: Zahn-Wellens; 94% DOC removal in 14 days.

ECOTOXICOLOGY: Based largely or completely on data for major component(s). Material is slightly toxic to aquatic organisms on an acute basis (LC50 between 10 and 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (Pimephales promelas) is 1460-1664 mg/L. Acute LC50 for bluegill (Lepomis macrochirus) is 1850-2100 mg/L. Acute LC50 for water flea (Daphnia magna) is 55-306 mg/L. Acute LC50 for the cladoceran Ceriodaphnia dubia is 30-160 mg/L. Acute LC50 for goldfish (Carassius auratus) is 800 to > 5000 mg/L at pH 9.7 and pH 7.0, respectively. Acute LC50 for mosquito fish (Gambusia affinis) is 1400-1800 mg/L.

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

(Continued on page 6, over)

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DISPOSAL: Any disposal practice must be in compliance with all federal, state/provincial, and local laws and regulations. State/provincial and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Regulations may also vary in different locations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material. None of these waste management options should be considered 'arranging for disposal'.

Do not allow into any sewers, on the ground, or into any body of water.

The preferred waste management option is to send to a properly properly licensed or permitted incinerator.

As a service to its customers, Dow can provide lists of companies which recycle, reprocess, or manage chemicals. In the U.S., telephone Dow's Customer Information Center at 517-832-1556 or 800-258-2436 (U.S.) for further details.

14. TRANSPORT INFORMATION

CANADIAN TDG INFORMATION:

For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

DEPARTMENT OF TRANSPORTATION (D.O.T.):

For DOT regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

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

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply

(Continued on page 7)

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with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
DIETHANOLAMINE	000111-42-2	86 %

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

An immediate health hazard
A delayed health hazard

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

CHEMICAL NAME	CAS NUMBER	LIST
DIETHANOLAMINE	000111-42-2	NJ3 PA1 PA3

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

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

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

(Continued on page 8, over)

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MATERIAL SAFETY DATA SHEET

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Product: DIETHANOLAMINE LOW FREEZING GRADE
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REGULATORY INFORMATION (CONTINUED)

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

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name	CAS#	RQ	% in Product
Diethanolamine	000111-42-2	100 lb	85%

CANADIAN REGULATIONS

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

D2B - eye or skin irritant

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

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

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT (%w/w)
Diethanolamine	000111-42-2	85%

16. OTHER INFORMATION

REVISION INDICATOR: Revised section 14.

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The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult The Dow Chemical Company For Further Information.

Office I - (505) 393-6161
P.O. Box 1990
Santa Fe, NM 87241-1980
Office II - (505) 748-1283
P.O. Box 1990
Santa Fe, NM 87241-1980
Office III - (505) 334-6178
P.O. Box 1990
Santa Fe, NM 87241-1980
Office IV - (505) 827-7131
P.O. Box 1990
Santa Fe, NM 87241-1980

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

Form C-138
Originated 8/5/95
Submit Original
Plus 1 Copy
to appropriate
District Office
RECEIVED
AUG 23 1999
OIL CON. DIV.
DIST. 2

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Generator <u>Key Energy Services</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	5. Originating Site <u>MAIN HAD</u>
3. Address of Facility Operator <u>#345 CR 3500 AZtec NM</u>	6. Transporter <u>Key</u>
7. Location of Material (Street Address or ULSTR) <u>5651 US Hwy 64 Farmington, NM</u>	8. State <u>NM</u>
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 WATER FROM WASHING OILFIELD SERVICE EQUIPMENT

CONTINUANCE

Estimated Volume 6000 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: Manager DATE: 8-18-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)
APPROVED BY: Henry G. Jant TITLE: Geologist DATE: 8/23/99
APPROVED BY: Monty J. Kelly TITLE: Environmental Geologist DATE: 8/24/99

Office I - (505) 393-6161
Box #91
NM 88241-1980
Office II - (505) 748-1283
S. First
NM 88210
Office III - (505) 334-6178
Rio Brazos Road
NM 87410
Office 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
RECEIVED
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OIL CON. DIV.
DIST. 2
Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>Key Energy Services</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>MAIN YARD</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 AZtec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>5651 US Hwy 64 Farmington, NM</u>	
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. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

WASTE WATER FROM WASHING oilfield service equipment

CONTINUANCE

Estimated Volume 6000 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE Michael Talovich TITLE: Manager DATE: 8-18-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State)

APPROVE BY _____ TITLE: Geologist DATE: 8/23/99

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: <i>Key Energy Service, Inc. Four Corners Division 5651 U.S. Hwy 64 Farmington, NM 87401</i>	2. Destination Name: <i>KEY ENERGY DISPOSAL</i>
3. Originating Site (name): <i>Farmington Rig & Truck Facility</i> <small>Attach list of originating sites as appropriate</small>	Location of the Waste (Street address &/or ULSTR): <i>5651 U.S. Hwy 64 Farmington, NM</i>
4. Source and Description of Waste <i>Waste water P/washing oil field equipment</i>	

I, Robert W. James representative for:
(Print Name)
Key Energy Service, Inc., Four Corners Division do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): *Robert W. James*
Title: *Farmington Shop Manager*
Date: *August 17, 1999*

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

March 8, 1999

Mr. Mike Talovich
Key Energy Services, Inc.
P.O. Box 900
Farmington, New Mexico 87499

(505) 327-0416

Project No.: 98065-02

Dear Mr. Talovich,

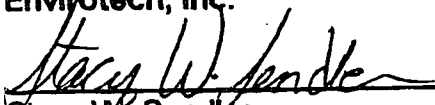
Enclosed are the analytical results for the sample collected from the location designated as "Shop". One water sample identified as "Shop" was collected from the designated location by Key Energy Services personnel on 03/01/99, and received by the Envirotech laboratory on 03/01/99 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 6726 and assigned Laboratory No. E755 for tracking purposes.

The sample was analyzed on 03/02/99 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.

Respectfully submitted,
Envirotech, Inc.


Stacy W. Sandler
Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.1b2/wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Key Energy	Project #:	806502
Sample ID:	Shop	Date Reported:	03-04-99
Lab ID#:	E755	Date Sampled:	03-01-99
Sample Matrix:	Water	Date Received:	03-01-99
Preservative:	Cool	Date Analyzed:	03-03-99
Condition:	Cool and Intact	Chain of Custody:	6726

Parameter	Result
-----------	--------

IGNITABILITY: Negative

CORROSIVITY: Negative pH = 8.05

REACTIVITY: Negative

RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
-----------	---------------------------

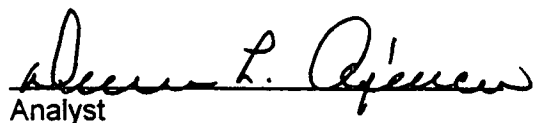
IGNITABILITY: Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21.
(i.e. Sample ignition upon direct contact with flame or flash point < 60° C.)

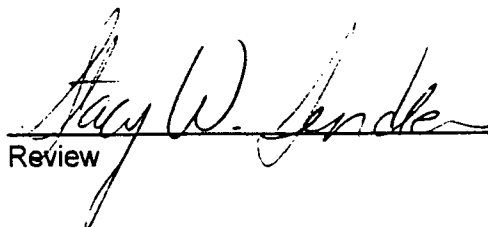
CORROSIVITY: Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22.
(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)

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: Shop.


Analyst


Review

Client:	Key Energy	Project #:	806502
Sample ID:	Shop	Date Reported:	03-02-99
Laboratory Number:	E755	Date Sampled:	03-01-99
Chain of Custody:	6726	Date Received:	03-01-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	03-02-99
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	0.0050	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	ND	0.0001	0.5
1,2-Dichloroethane	0.0007	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

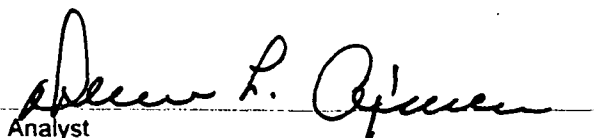
ND - Parameter not detected at the stated detection limit.

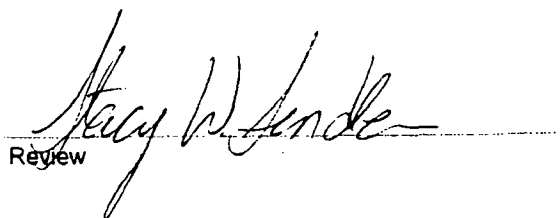
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

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: Shop.


Analyst


Review

Client:	Key Energy	Project #:	806502
Sample ID:	Shop	Date Reported:	03-05-99
Laboratory Number:	E755	Date Sampled:	03-01-99
Chain of Custody:	6726	Date Received:	03-01-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	03-05-99
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	0.467	0.020	200
p,m-Cresol	1.189	0.040	200
2,4,6-Trichlorophenol	0.276	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	0.493	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%

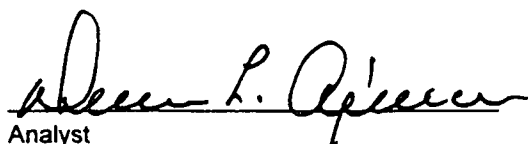
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

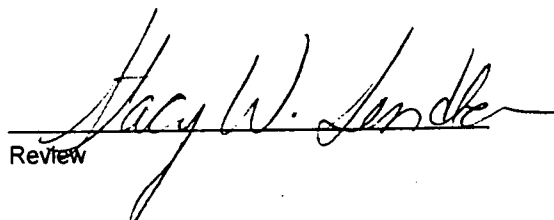
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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: Shop.


Analyst


Review

Client:	Key Energy	Project #:	806502
Sample ID:	Shop	Date Reported:	03-05-99
Laboratory Number:	E755	Date Sampled:	03-01-99
Chain of Custody:	6726	Date Received:	03-01-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	03-05-99
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	0.103	0.020	3.0
Nitrobenzene	1.03	0.020	2.0
Hexachlorobutadiene	0.315	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	0.048	0.020	0.13

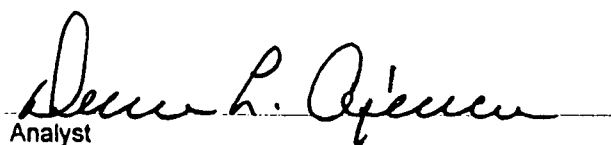
ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	101%

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: Shop.


Analyst


Review

EPA METHOD 1311
TOXICITY CHARACTERISTIC
LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Key Energy	Project #:	806502
Sample ID:	Shop	Date Reported:	03-03-99
Laboratory Number:	E755	Date Sampled:	03-01-99
Chain of Custody:	6726	Date Received:	03-01-99
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	0.0786	0.0001	5.0
Barium	0.464	0.001	21
Cadmium	0.0510	0.0001	0.11
Chromium	0.102	0.0001	0.60
Lead	0.213	0.0001	0.75
Mercury	ND	0.0001	0.025
Selenium	0.0329	0.0001	5.7
Silver	ND	0.0001	0.14

ND - Parameter not detected at the stated detection limit.

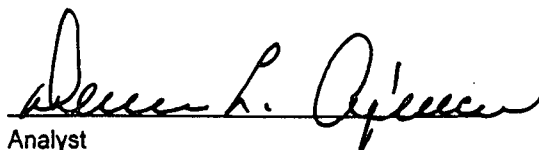
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

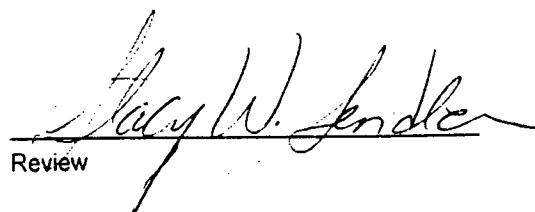
Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

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: Shop.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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:	03-02-99
Laboratory Number:	03-02-TCV-blank	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-02-99
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

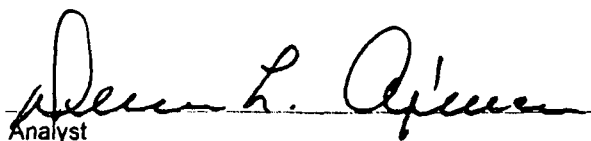
ND - Parameter not detected at the stated detection limit.

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 E755.


Analyst


Review

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

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: E755
Sample Matrix: Water
Analysis Requested: TCLP
Condition: N/A

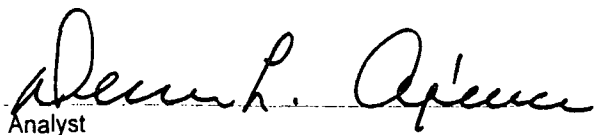
Project #: N/A
Date Reported: 03-02-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 03-02-99
Date Extracted: N/A

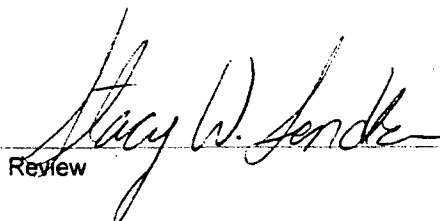
Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	0.0050	0.0050	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	ND	ND	0.0001	0.0%
1,2-Dichloroethane	0.0007	0.0007	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 E755.


Analyst


Review

ENVIRO TECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Matrix Spike
Laboratory Number: E755
Sample Matrix: Water
Analysis Requested: TCLP
Condition: N/A

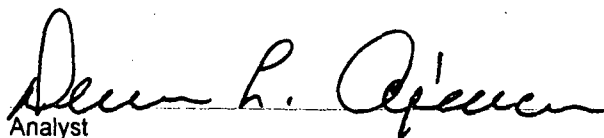
Project #: N/A
Date Reported: 03-02-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 03-02-99
Date Extracted: N/A

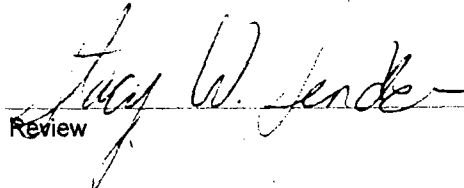
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	0.0050	0.050	0.0548	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	0.0007	0.050	0.0504	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 E755.


Analyst


Review

Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	03-05-99
Laboratory Number:	03-05-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-05-99
Condition:	N/A	Analysis Requested:	TCLP

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

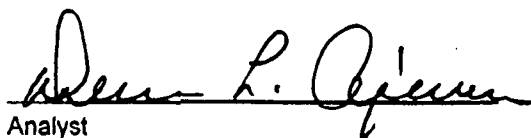
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

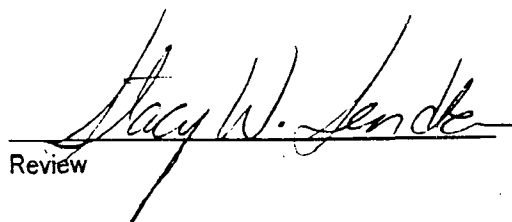
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 E755.


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:	03-05-99
Laboratory Number:	03-04-TCA-MB	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	• Cool & Intact	Date Analyzed:	03-05-99
		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%

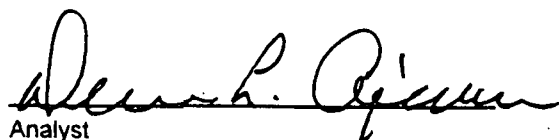
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

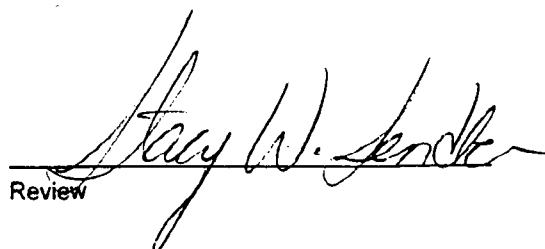
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 E755.


Analyst


Review

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-05-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	03-05-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	0.467	0.462	0.020	1.0%
p,m-Cresol	1.189	1.165	0.040	2.0%
2,4,6-Trichlorophenol	0.276	0.273	0.020	1.0%
2,4,5-Trichlorophenol	ND	ND	0.020	0.0%
Pentachlorophenol	0.493	0.489	0.020	0.8%

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8040 Compounds	30.0%

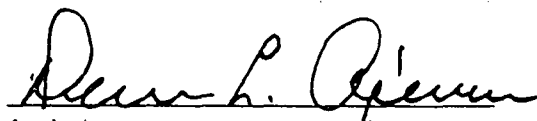
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

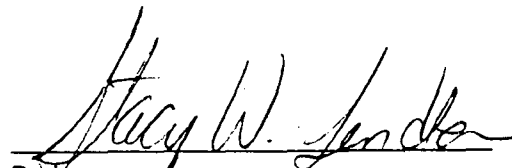
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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 sample E755.


Analyst


Review

**EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
Quality Assurance Report**

Client: QA/QC
Sample ID: Laboratory Blank
Laboratory Number: 03-05-TBN-Blank
Sample Matrix: Hexane
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 03-05-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 03-05-99
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

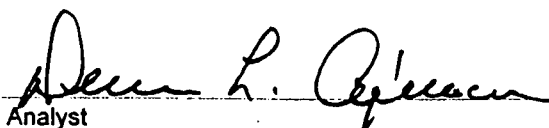
ND - Parameter not detected at the stated detection limit.


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 E755.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Method Blank
Laboratory Number: 03-04-TBN-MB
Sample Matrix: Water
Preservative: Cool
Condition: Cool and Intact

Project #: N/A
Date Reported: 03-05-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: N/A
Date Analyzed: 03-05-99
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

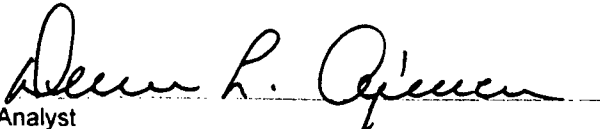
ND - Parameter not detected at the stated detection limit.

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 E755.


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:	03-05-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	03-05-99
		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	0.103	0.102	1.0%	0.020
Nitrobenzene	1.03	1.02	0.9%	0.020
Hexachlorobutadiene	0.315	0.312	1.1%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachloroBenzene	0.048	0.047	1.8%	0.020


ND - Parameter not detected at the stated detection limit.

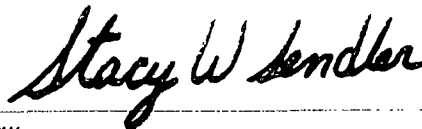
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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 E755.


Analyst


Review

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%

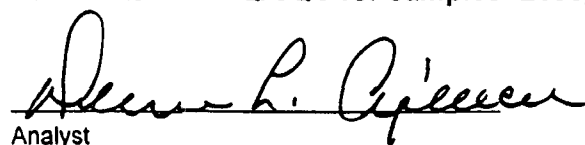
ND - Parameter not detected at the stated detection limit.

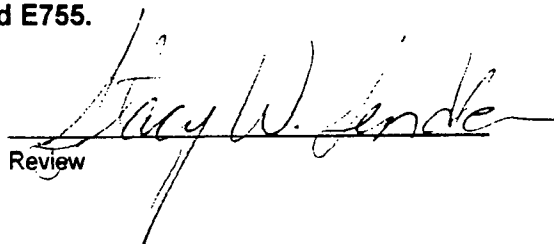
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

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

CHA N OF C JS' 'ODY RECORD

6726

Client / Project Name KEY ENERGY / SHOP			Project Location SHOP		ANALYSIS / PARAMETERS										
Sampler: MIKE TALOVICH			Client No. 806502		No. of Containers	KLPW/O H.P.							Remarks		
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix											
Shop	3-1-99	950	E755	Water	6	✓									
Relinquished by: (Signature) <i>Mike Talovich</i>			Date 3-1-99	Time 955	Received by: (Signature) <i>John L. Agnew</i>							Date 3-1-99	Time 955		
Relinquished by: (Signature)					Received by: (Signature)										
Relinquished by: (Signature)					Received by: (Signature)										
ENVIROTECH INC. <hr/> 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615										Sample Receipt					
											Y	N	N/A		
										Received Intact			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
										Cool - Ice/Blue Ice			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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
7 Rio Brazos Road
Albuquerque, NM 87410
District IV - (505) 827-7131

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>Burlington</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>VAL VERDE Plant</u>
2. Management Facility Destination <u>KEY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#45 CR 3500 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>VALVERDE Plant</u>	
9. Circle One: <u>Bloomfield NM</u> 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:

Amine Reclaimer Wash Rinse.

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OIL CON. DIV.
DIST. 3

RECEIVED
AUG 12 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 210 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGR DATE: 8-12-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: Michael Talovich TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny A. Furr TITLE: Geologist DATE: 8/12/99
APPROVED BY: Martyna J. Kelly TITLE: Environmental Geologist DATE: 8/13/99

District I - (505) 393-6161
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Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>VAL VERDE Plant</u>
2. Management Facility Destination <u>KEY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>VAL VERDE Plant</u>	
9. <u>Circle One:</u> <u>Bloomfield NM</u> 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:

Amine Reclaimer Wash Rinse.

RECEIVED
AUG 12 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 210 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MGR DATE: 8-12-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: Michael Talovich TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Funt TITLE: Geologist DATE: 8/12/99

APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Burlington Resources 3535 East 30 th Street Farminto NM 87401	2. Destination Name: Sunco Disposal
3. Originating Site (name): Val Verde Plant	Location of the Waste (Street address /or ULSTR): Val Verde Plant
4. Source and Description of Waste: Amine reclaimer wash rinse. This waste was generated from rinsing the reclaimer with 50% Sodium Hydroxide solution to remove scaling. The waste was analyzed for TCLP metals and benzene and exhibited no hazardous characteristics. The TCLP parameters were chosen through "generators knowledge". Solution has been nuetralized to a pH of 6 and does not have corrosive characteristics.	

I, Jeff Schoenbacher representative for:
Burlington Resources 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 the appropriate classi

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

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

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

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

Name (Original Signature): Jeff T. Schoenbacher

Title: Environmental Representative

Date: Wednesday, August 11, 1999

BDH -- VW3363, SODIUM HYDROXIDE 50% W-W, 10N, (SUPDAT)

MATERIAL SAFETY DATA SHEET

NSN: 681000N053897

Manufacturer's CAGE: 38445

Part No. Indicator: B

Part Number/Trade Name: VW3363, SODIUM HYDROXIDE 50% W/W, 10N, (SUPDAT)

=====

General Information

=====

Company's Name: BDH INC

Company's Street: 350 EVANS AVE

Company's City: TORONTO, ONTARIO, CANADA

Company's Zip Code: M8Z 1K5

Company's Emerg Ph #: 800-424-9300 (CHEMTREC)

Company's Info Ph #: 416-255-8521

Record No. For Safety Entry: 002

Tot Safety Entries This Stk#: 002

Status: SMJ

Date MSDS Prepared: 25AUG94

Safety Data Review Date: 19DEC96

MSDS Serial Number: CCWLM

Hazard Characteristic Code: NK

=====

Ingredients/Identity Information

=====

Proprietary: NO

Ingredient: SODIUM HYDROXIDE (CERCLA). LD50: (ORAL,RAT) 500 MG/KG

Ingredient Sequence Number: 01

Percent: 30-50

NIOSH (RTECS) Number: WB4900000

CAS Number: 1310-73-2

OSHA PEL: 2 MG/M3

ACGIH TLV: C 2 MG/M3

Proprietary: NO

Ingredient: WATER

Ingredient Sequence Number: 02

NIOSH (RTECS) Number: ZC0110000

CAS Number: 7732-18-5

OSHA PEL: N/K (FP N)

ACGIH TLV: N/K (FP N)

Proprietary: NO

Ingredient: EYE PROT:& FULL LENGTH FACESHIELD (FP N).

Ingredient Sequence Number: 03

NIOSH (RTECS) Number: 9999999ZZ

OSHA PEL: NOT APPLICABLE

ACGIH TLV: NOT APPLICABLE

=====

Physical/Chemical Characteristics

=====

Appearance And Odor: CLEAR, COLORLESS LIQUID. ODORLESS.

Evaporation Rate And Ref: NOT KNOWN

Solubility In Water: MISCIBLE

Percent Volatiles By Volume: 50-70

pH: 14

=====

Fire and Explosion Hazard Data

=====

Flash Point: N/A

Lower Explosive Limit: N/A

Upper Explosive Limit: N/A

Extinguishing Media: USE ANY SUITABLE FOR ADJACENT MATERIAL.

Special Fire Fighting Proc: USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).

Unusual Fire And Expl Hazrds: CAN REACT WITH CERTAIN METALS (ALUMINUM, ZINC, TIN) TO RELEASE HYDROGEN GAS.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): HEAT.

Materials To Avoid: ACIDS.

Hazardous Decomp Products: NONE INDICATED.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NOT RELEVANT.

Health Hazard Data

LD50-LC50 Mixture: SEE INGREDIENT 1

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: NO

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: ACUTE: CONTACT WITH THIS SOLUTION MAY RESULT IN SEVERE BURNS TO THE SKIN. THE VAPORS OF THIS SOLUTION ARE IRRITATING TO THE EYES AND RESPIRATORY PASSAGES.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: NOT RELEVANT.

Signs/Symptoms Of Overexp: SEE HEALTH HAZARDS.

Med Cond Aggravated By Exp: NONE IDENTIFIED.

Emergency/First Aid Proc: EYE:FLUSH W/PLENTY OF WATER FOR @ LST 15 MINS

WHILE HOLDING EYELIDS OPEN. HAVE EYES EXAMINED BY MED PERS. SKIN:IMMED FLUSH W/PLENTY OF WATER FOR @ LST 15 MINS WHILE REMOVING CONTAMD CLTHG & SHOES. INGEST:DO NOT INDUCE VOMIT. GIVE VICTIM A GLASS OF WATER/MILK. CALL PHYS IMMED. NEVER GIVE ANYTHING BY MOUTH TO UNCON PERSON. INHAL:REMOVE TO FRESH AIR. IF NOT BRTHG, TRAINED PERS SHOULD BEGIN (SUPDAT)

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: EVAC AREA OF ALL UNNEC PERS. WEAR SUITABLE PROT EQUIP LISTED IN EXPOS CONTROLS/PERSONAL PROT. CONTAIN RELEASE & ELIM ITS SOURCE, IF THIS CAN BE DONE W/OUT RISK. TAKE UP & CONTAINERIZE FOR PROPER DISP AS DESCRIBED UNDER DISP. COMPLY WITH (SUPDAT)

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Method: EPA WASTE NUMBER(S):D002. TREATMENT:NEUT TO PH 6-9. CONT LOCAL PERMITTED WASTE DISP SITE (TSD) FOR PERMISSIBLE TREATMENT SITES. ALWAYS CONT A PERMITTED WASTE DIPOSER (TSD) TO ASSURE COMPLIANCE W/ ALL CURRENT LOCAL, STATE AND FEDERAL REGS.

Precautions-Handling/Storing: STORE IN COOL, DRY AREA AWAY FROM ACIDS AND METALS. DO NOT BREATHE SOLUTION MIST.

Other Precautions: NONE SPECIFIED BY MANUFACTURER.

Control Measures

Respiratory Protection: NIOSH APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N).

Ventilation: ENGINEERING CONTROLS:ENGINEERING &/OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOS. MATERIAL (SUPDAT)

Protective Gloves: IMPERVIOUS GLOVES (FP N).

Eye Protection: ANSI APPRVD CHEM WORKERS GOGGS (ING 3)

Other Protective Equipment: IMPERVIOUS PROT CLTHG SHOULD BE WORN TO PVNT SKIN CONTACT. ANSI APPRVD EYE WASH & DELUGE SHOWER (FP N).

Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Suppl. Safety & Health Data: MFR TRADE NAME/PART NO:40% W/W, 33% W/W, 30 FED, STATE, & LOCAL REGS ON REPORTING RELEASE. REFER TO REGULATORY INFO FOR REPORTABLE QTY & OTHER REGULATORY DATA. VENT:SHOULD BE HANDLED/TRANSFERRED WITH ADEQUATE VENTILATION.

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 19DEC96
Label Date: 18DEC96
Label Status: G
Common Name: VW3363, SODIUM HYDROXIDE 50% W/W, 10N, (SUPDAT)
Chronic Hazard: NO
Signal Word: DANGER!
Acute Health Hazard-Severe: X
Contact Hazard-Severe: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: ACUTE: CONTACT WITH THIS SOLUTION MAY RESULT
IN SEVERE BURNS TO THE SKIN. THE VAPORS OF THIS SOLUTION ARE IRRITATING TO
THE EYES AND RESPIRATORY PASSAGES. CHRONIC:NONE LISTED BY MANUFACTURER.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: BDH INC
Label Street: 350 EVANS AVE
Label City: TORONTO, ONTARIO, CANADA
Label Zip Code: M8Z 1K5
Label Emergency Number: 800-424-9300 (CHEMTREC)



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

Jeff Schoenbacher
Burlington Resources
3535 E. 30th St.
Farmington, NM 87402

August 2, 1999

Dear Jeff:

Enclosed please find the reports for the sample received by our laboratory for rush analysis on July 27, 1999.

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

Thank you for using IML for your analytical needs!

Sincerely,

Sharon Williams
Organics Lab Supervisor

Enclosure

xc: File



Inter-Mountain Laboratories, Inc.

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

2506 West Main Street, Farmington, NM 87401

Client: **Burlington Resources**
Project: **Val Verde Plant**
Sample ID: **Rec. Waste #1**
Lab ID: **0399W03841**
Matrix: **Liquid**
Condition: **Warm**

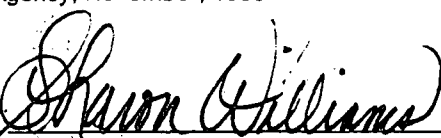
Date Reported: **08/02/99**
Date Sampled: **07/27/99**
Date Received: **07/27/99**

Date Analyzed: **07/30/99**

Parameter	Analytical Result	PQL	MCL	Units
TCLP METALS - EPA METHOD 1311				
Arsenic	<0.25	0.25	5.0	mg/L
Barium	1	0.5	100.0	mg/L
Cadmium	<0.2	0.2	1.0	mg/L
Chromium	<0.5	0.5	5.0	mg/L
Lead	<0.5	0.5	5.0	mg/L
Selenium	<0.25	0.25	1.0	mg/L
Silver	<0.5	0.5	5.0	mg/L
TCLP VOLATILES-ZHE - EPA METHOD 1311				
Benzene	<5	5	0.5	µg/L

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

Reviewed By



Sharon Williams, Organic Lab Supervisor

San Jose I - (505) 393-6161
O. Box 1980
Albuquerque, NM 88241-1980
San Jose II - (505) 748-1283
11 S. First
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Rio Brazos Road
Albuquerque, NM 87410
San Jose IV - (505) 827-7131

New Mexico

Energy Minerals and Natural Resources Department

Oil Conservation Division

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Santa Fe, New Mexico 87505

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AUG 10 1999

OIL CON. DIV.

Environmental Bureau

Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒

Verbal Approval Received: Yes ☐ No ☒

2. Management Facility Destination KEY ENERGY DISPOSAL

3. Address of Facility Operator #345, CR 3500 AZTEC NM

7. Location of Material (Street Address or ULSTR) COMPRESSOR SITES

4. Generator WFS

5. Originating Site COMPRESSOR SITES

6. Transporter Key

8. State 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:

NON-EXEMPT WASTEWATER OFF COMPRESSOR SITES

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OIL CON. DIV.
DIST. 3

CONTINUATION

Estimated Volume 1600 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MBR DATE: 8-5-99

Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-3346186

(This space for State Use)

APPROVED BY: Denny G. Fawcett TITLE: Geologist DATE: 8/6/99

APPROVED BY: Martyn G. Fawcett TITLE: Environmental Geologist DATE: 8-10-99

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1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/>	4. Generator <u>WFS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Compressor Sites</u>
2. Management Facility Destination <u>KEY ENERGY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345, CR 3500 AZtec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>COMPRESSOR SITES</u>	
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:

NON-EXEMPT WASTEWATER OFF Compressor sites

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AUG 05 1999
OIL CON. DIV.
DIST. 3

CONTINUATION

Estimated Volume 1600 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: MR DATE: 8-5-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-3346186

(This space for State Use)

APPROVED BY: Denny G. Kent TITLE: Geologist DATE: 8/6/99
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Williams Field Service	2. Destination Name: KEY ENERGY SERVICES Sunco Disposal Well P.O. Box 900, Farmington, NM 87499
3. Originating Site (name): Manzanares, Horse Canyon, Pump Mesa, Cedar Hill, PLA-9, 32-9, 32-8#2, 32-8#3, Navajo, 29-6#2, 29-6#4, 30-8, Sims Mesa, 29-7, Decker, Aztec, Middle Mesa, Carracas, 30-5, 31-6, 32-7, 20-6#3, Kernaghan, Trunk A,B,C,F,M,N,& T, Hart Mt., 31-6WPX, Laguna Seca, Martinez Draw, Quintana Mesa Attach list of originating sites as appropriate	
4. Source and Description of Waste Rain Water, wash water	

I, Buster Gaston, San Juan Business Unit Operations Coordinator representative for:
(Print Name)

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

☐ EXEMPT oilfield waste

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

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

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

☐ MSDS Information

☐ Other (description):

☐ RCRA Hazardous Waste Analysis

☐ Chain of Custody

Name (Original Signature):

Buster Gaston

Title: San Juan Business Unit Operations Coordinator

Date: 07-26-99

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. Gendler
Environmental Scientist/Laboratory Manager

enclosure

SWS\sws\97050-04.lb2\wpd

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Williams Field Service	Project #:	706004
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
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IGNITABILITY:	Negative
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CORROSIVITY:	Negative	pH = 6.87
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REACTIVITY:	Negative
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RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
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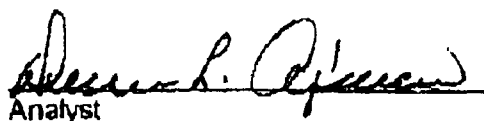
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. (i.e. Sample Ignition upon direct contact with flame or flash point < 60° C.)
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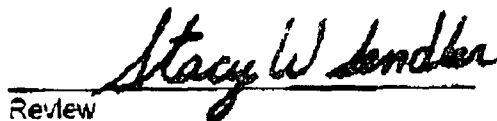
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. (i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)
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REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. (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)
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Reference:	40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.
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Comments:	Horse Canyon.
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Analyst


Review

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.

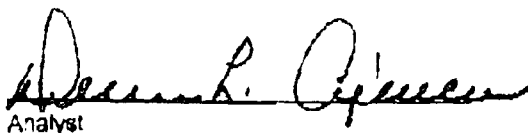
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

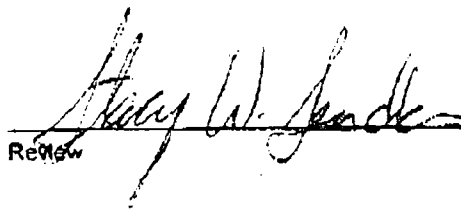
Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7080, 7090, 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, 1996.

Comments: Horse Canyon.


 Analyst


 Review

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:	E898	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	0.8
Benzene	0.303	0.0001	0.8
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	0.0035	0.0003	0.8
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.

Devin L. Apewee
Analyst

Steve W. Jendek
Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040 PHENOLS

Client: Williams field Service
Sample ID: Waste Water
Laboratory Number: E898
Chain of Custody: 6815
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 705004
Date Reported: 03-01-99
Date Sampled: 02-22-99
Date Received: 02-22-99
Date Extracted: N/A
Date Analyzed: 03-01-99
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.

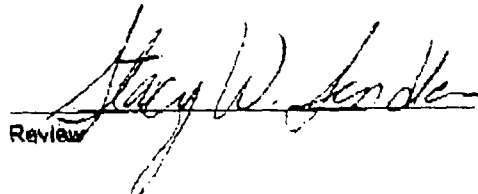
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1988.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: Horse Canyon.


Analyst


Review

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:	E896	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.

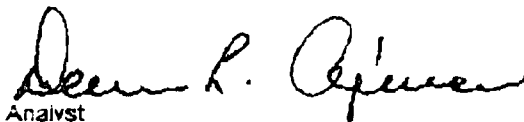
QA/QC Acceptance Criteria	Parameter	Percent Recovery
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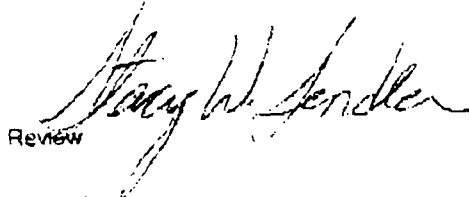
	2-fluorobiphenyl	100%
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References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1988.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: Horse Canyon.


Analyst


Review

CHAIN OF CUSTODY RECORD

6615

Client / Project Name Williams Field Service			Project Location Horse Canyon		ANALYSIS / PARAMETERS																			
Samples: Bill Beavers			Client No. 97050-04		No. of Containers 8	TCP w/o ✓						Remarks												
Sample No/ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix																				
Waste Water	2/22/99	1330	E696	Liquid																				
Relinquished by: (Signature) B. Beavers			Date 2/22/99	Time 1440	Received by: (Signature) William L. Apur...			Date 2.22.99	Time 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 <table border="1"> <tr> <td></td> <td>Y</td> <td>N</td> <td>N/A</td> </tr> <tr> <td>Received Intact</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Cool - Ice/Blue Ice</td> <td>✓</td> <td></td> <td></td> </tr> </table>				Y	N	N/A	Received Intact	✓			Cool - Ice/Blue Ice	✓		
	Y	N	N/A																					
Received Intact	✓																							
Cool - Ice/Blue Ice	✓																							

SENT BY: 3-4-99 : 7:13AM : WILLIAMS FIELD SVC- 1509 02/1000 4 207 26 1:20/20

3-89: 2:00PM YOUNG ENVIRONMENTAL : UGAM : WILLIAMS FIELD SVC-
1803 8321000 * 8/20

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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	0.6
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0006	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.

Deann L. O'Leary
Analyst

Harry W. Jender
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:	Method Blank	Date Reported:	03-01-99
Laboratory Number:	D2-22-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 E595 - E696.

James L. O'Brien
Analyst

Harry W. Jenkins
Review

ENVIROTECH LABS**PRACTICAL SOLUTIONS FOR A BETTER TOMORROW****EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT**

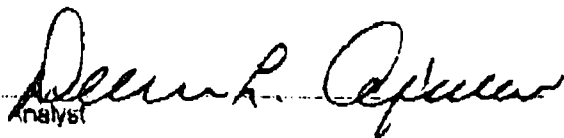
Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	02-26-99
Condition:	N/A	Date Extracted:	N/A

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-Dichloroethane	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%

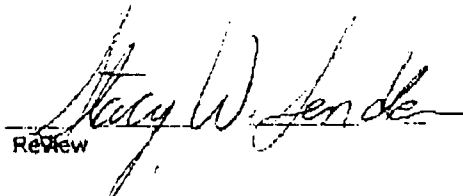
ND - Parameter not detected at the stated detection limit.

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Matrix Spike
Laboratory Number: E895
Sample Matrix: TCLP Extract
Analysis Requested: TCLP
Condition: N/A

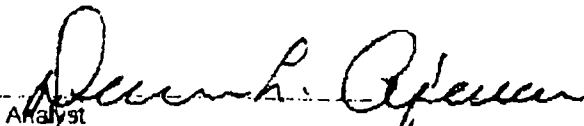
Project #: N/A
Date Reported: 03-01-99
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 02-26-99
Date Extracted: N/A

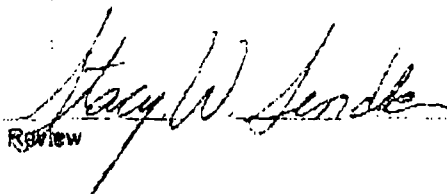
Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	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 6030, 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 E895 - E896.


Analyst


Reviewer

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 %

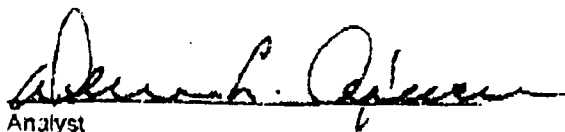
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste. SW-846, USEPA, July 1992.

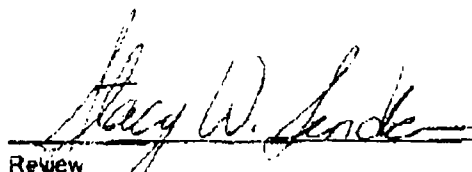
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste. SW-846, USEPA, July 1992.

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

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%

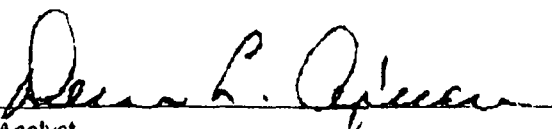
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

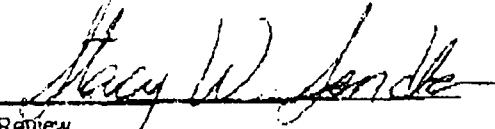
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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

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%

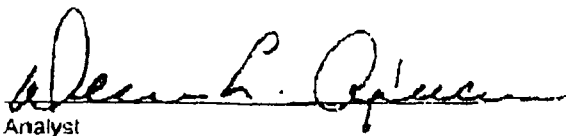
References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

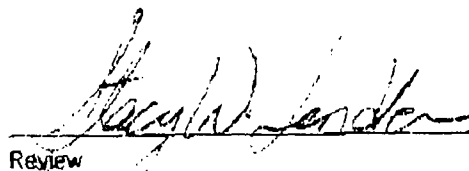
Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

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


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:	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. 1988.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: QA/QC for samples E695 - E696.

Debra L. Spencer
 Analyst

Harry W. Sander
 Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: QA/QC
Sample ID: Method Blank
Laboratory Number: 02-22-8N-MB
Sample Matrix: TCLP Extract
Preservative: Cool
Condition: Cool and Intact

Project #: N/A
Date Reported: 03-01-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: 02-22-99
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

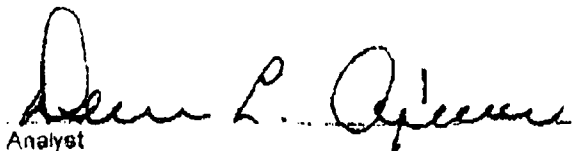
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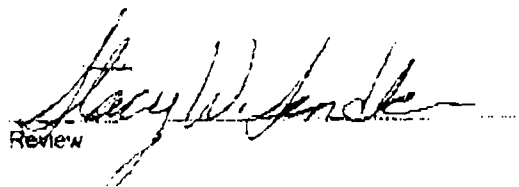
QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	98%

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. 1988.

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

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
Sample ID: Matrix Duplicate
Laboratory Number: E695
Sample Matrix: TCLP Extract
Preservative: N/A
Condition: N/A

Project #: N/A
Date Reported: 03-01-99
Date Sampled: N/A
Date Received: N/A
Date Extracted: 02-22-99
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	0.053	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

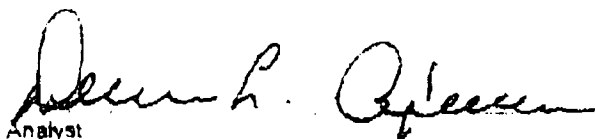
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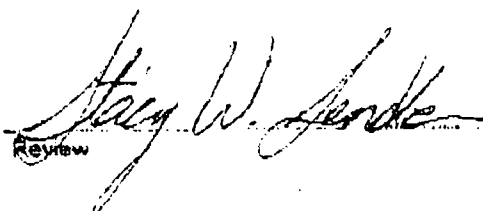
QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

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. 1995.

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


Reviewer

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	% DHT	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)	Spiked 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%

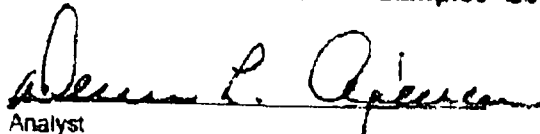
ND - Parameter not detected at the stated detection limit.

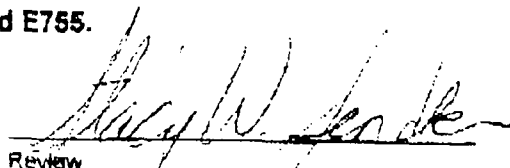
References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1988

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

District I - (505) 393-6161
P. O. Box 1080
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
Alamogordo, NM 87410
District IV - (505) 827-7131

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

Form C-138
Originated 8/8/95

Submit Original
Plus 1 Copy
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District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <u>Bowen Tools</u>
Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <u>Shop sump</u>
2. Management Facility Destination <u>Key DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#3500 #345 Aztec NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>#14 CR 5860 FARMINGTON NM</u>	
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:

Wash water from cleaning downhole oilfield tools

city H₂O USED

RECEIVED
JUL 22 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 280 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Michael Talovich TITLE: Mgr DATE: 7-22-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-3346186

(This space for State Use)

APPROVED BY: Denny G. Zent TITLE: Geologist DATE: 7/23/99
APPROVED BY: E. Bunch TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Bowen Tools / Division #14 CR5860 Farmington, N.M. 87401	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): Shop Sump (Tank)	Location of the Waste (Street address &/or ULSTR):
Attach list of originating sites as appropriate	
4. Source and Description of Waste City water used to clean tools, no other material is washed with this water or any other waste is put in Sump. Water goes thru separator first. This water is only used to clean oilfield tools	

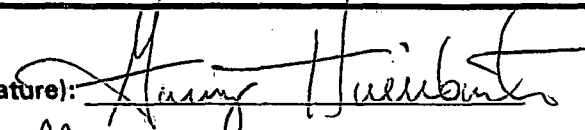
I, Gary Halliburton representative for:
(Print Name)
Bowen Tools / Division do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): 
Title: District Manager
Date: 7-22-99

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
Rio Brazos Road
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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Originated 8/8/95

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <i>WFS</i>
Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	5. Originating Site <i>EL CEDRO</i>
2. Management Facility Destination <i>Key DISPOSAL</i>	6. Transporter <i>Key</i>
3. Address of Facility Operator <i>CR 3500 #345 Aztec NM</i>	8. State <i>NM</i>
7. Location of Material (Street Address or ULSTR) <i>HWY 64 NM 100.5 Blanco NM 87412</i>	
9. Circle One: <input checked="" type="radio"/> All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input type="radio"/> 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:

AMINE TREATING FLUID

95% Amine

2.5% Amine

2.5% TREATING TEG

RECEIVED
JUL 22 1999
OIL CON. DIV.
DIST. 3

Estimated Volume *500 bbls* cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: *M. Talovich* TITLE: *MGR* DATE: *7-22-99*
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: *MICHAEL TALOVICH* TELEPHONE NO. *505-334-6186*

(This space for State Use)

APPROVED BY: *Dennis L. Furt* TITLE: *Geologist* DATE: *7/23/99*

APPROVED BY: *E. Birch* TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Williams Field Service ELCDDRS Complex Hwy 64 Mile Marker 100.5 BLAND N.M. 87412	2. Destination Name: SUNCO DISPOSAL
3. Originating Site (name): ELCDDRS Complex	Location of the Waste (Street address &/or ULSTR):
Attach list of originating sites as appropriate	
4. Source and Description of Waste	AMINE TREATING - 95% RAINWATER 2.5% AMINE 2.5% TREATING TEG

I, C. R. Lewis representative for:
(Print Name).

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
PLANT SIDE

☐ 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): C. R. James

Title: Cherax

Date: 7/21/99

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

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

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Originated 8/8/95

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator <u>BAKER OIL TOOLS</u>
Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/>	5. Originating Site <u>SERVICE YARD</u>
2. Management Facility Destination <u>KEY DISPOSAL</u>	6. Transporter <u>Key</u>
3. Address of Facility Operator <u>#345 CR 3500 AZTEC, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>2795 INLAND ST. FARMINGTON, NM</u>	
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:

WASH WATER from cleaning downhole Tools
STEAM ONLY USED

RECEIVED
JUL 19 1999
OIL CON. DIV.

Estimated Volume < 80 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: [Signature] TITLE: MGR DATE: 7-16-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICAL TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: [Signature] TITLE: Geologist DATE: 7/23/99
APPROVED BY: [Signature] TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: BAKER OIL TOOLS 2795 INLAND St. FARMINGTON NM 87401	2. Destination Name: KEY ENERGY DISPOSAL
3. Originating Site (name): YARD Sump, Recirculating System	Location of the Waste (Street address &/or ULSTR): Same as ABOVE
Attach list of originating sites as appropriate	
4. Source and Description of Waste Wash water from downhole fishing tools	

I, Doug Bowers representative for:
BAKER OIL TOOLS (Print Name)
do hereby certify that,
according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described waste is: (Check appropriate classification)

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

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

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

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

Name (Original Signature): R. Douglas Bowers
Title: District Manager
Date: 7-16-99

strict I - (505) 393-6161
D. Box 1980
bbs, NM 88241-1930
strict II - (505) 748-1283
I. S. First
esia, NM 88210
strict III - (505) 334-6178
Rio Brazos Road
ec, NM 87410
strict IV - (505) 827-7131

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

Form C-138
Originated 8/8/95

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to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	4. Generator <u>Halliburton</u> 5. Originating Site <u>former Weller facility</u>
2. Management Facility Destination <u>key disposal</u>	6. Transporter <u>ENVIROtech</u>
3. Address of Facility Operator <u>#345 CR 3500 Aztec, NM</u>	8. State <u>NM</u>
7. Location of Material (Street Address or ULSTR) <u>2600 Bloomfield Hwy Farmington N.M.</u>	
9. Circle One: <input checked="" type="radio"/> 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. <input type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Monitor well purge water

RECEIVED
JUL 14 1999
OIL CON. DIV.
DIST. 3

Estimated Volume 2 10661s cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Michael Talovich TITLE: Manager DATE: 7-14-99
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: MICHAEL TALOVICH TELEPHONE NO. 505-334-6186

(This space for State Use)

APPROVED BY: Denny G. Fount TITLE: Geologist DATE: 7/14/99
APPROVED BY: S. Basch TITLE: v DATE: v

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address: Halliburton 4100 Clinton Drive Houston, TX 77001-0023	<div style="border: 1px solid black; padding: 5px; text-align: center;"> KEY ENERGY DISPOSAL </div>
3. Originating Site (name): Former Wellex Facility	Location of the Waste (Street address &/or ULSTR): 2600 Bloomfield Highway Farmington, NM
<small>Attach list of originating sites as appropriate</small>	
4. Source and Description of Waste Monitor well purge water	

I, Marty Cox (Print Name) representative for: 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 ☐ **NON-EXEMPT** oilfield waste which is non-hazardous by characteristic analysis or by product identification

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

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

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

Name (Original Signature): Marty Cox agent for Halliburton
 Title: Geologist
 Date: July 6, 1999

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

June 30, 1999

Entact Inc.
Attn: Marty Cox
1616 Corporate Court, Ste #150
Irving, Texas 75038

Re: Sampling of four monitor wells at the Welex Site on East Bloomfield Highway,
Farmington, New Mexico.

Dear Marty:

On June 23, 1999 four monitor wells were sampled by Environmental Scientist Christine Walters and Kathleen Murphy at the Welex Site on east Bloomfield Highway, Farmington, New Mexico. Water levels and total depth were recorded prior to purging the wells and the results are attached in the field notes. All wells were purged until a minimum of three well casing volumes had been removed using a D.C. Pump. All four well were monitored in the field for pH, conductivity, and temperature. Samples were collected and analysis run in Envirotech Inc. Laboratory for BTEX per USEPA Method 8021 and TPH per USEPA Method 8015 protocol.

Sampling field notes, Laboratory Analysis, and Laboratory QA/QC certificates are attached.

If you have questions or comment regarding this sampling event please feel free to contact us at 505-632-0615.

Sincerely,
Envirotech Inc.



Harlan M. Brown
Staff Geologist / Hydrogeologist
New Mexico Certified Scientist #083

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Entact	Project #:	806103
Sample ID:	MW - 1	Date Reported:	06-24-99
Chain of Custody:	7149	Date Sampled:	06-23-99
Laboratory Number:	F589	Date Received:	06-23-99
Sample Matrix:	Water	Date Analyzed:	06-24-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		0

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	2.1	1	0.2
Toluene	6.9	1	0.2
Ethylbenzene	4.6	1	0.2
p,m-Xylene	62.2	1	0.2
o-Xylene	26.0	1	0.1

Total BTEX 102

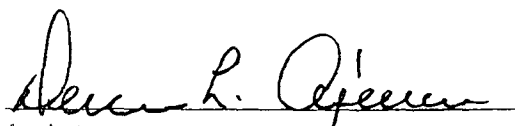
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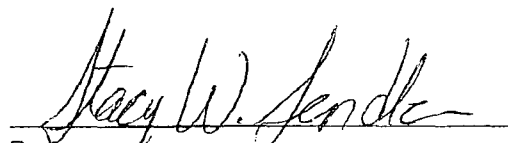
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Entact	Project #:	806103
Sample ID:	MW - 1 dupe	Date Reported:	06-24-99
Chain of Custody:	7149	Date Sampled:	06-23-99
Laboratory Number:	F590	Date Received:	06-23-99
Sample Matrix:	Water	Date Analyzed:	06-24-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		0

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	2.0	1	0.2
Toluene	6.8	1	0.2
Ethylbenzene	4.6	1	0.2
p,m-Xylene	62.1	1	0.2
o-Xylene	26.0	1	0.1

Total BTEX 102

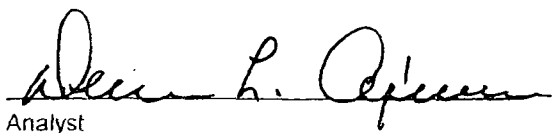
ND - Parameter not detected at the stated detection limit.

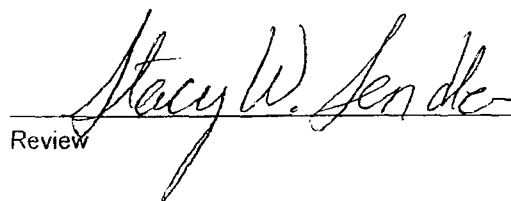
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	96 %
	Bromofluorobenzene	96 %

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Entact	Project #:	806103
Sample ID:	MW - 2	Date Reported:	06-24-99
Chain of Custody:	7149	Date Sampled:	06-23-99
Laboratory Number:	F591	Date Received:	06-23-99
Sample Matrix:	Water	Date Analyzed:	06-24-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		0

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	ND	1	0.2
Toluene	3.5	1	0.2
Ethylbenzene	0.5	1	0.2
p,m-Xylene	0.4	1	0.2
o-Xylene	1.6	1	0.1

Total BTEX 6.0

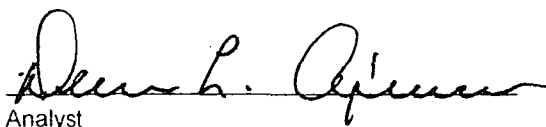
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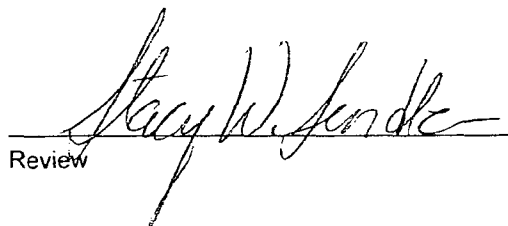
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Entact	Project #:	806103
Sample ID:	MW - 3	Date Reported:	06-24-99
Chain of Custody:	7149	Date Sampled:	06-23-99
Laboratory Number:	F592	Date Received:	06-23-99
Sample Matrix:	Water	Date Analyzed:	06-24-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		0

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	1.8	1	0.2
Toluene	3.8	1	0.2
Ethylbenzene	0.6	1	0.2
p,m-Xylene	4.6	1	0.2
o-Xylene	2.0	1	0.1

Total BTEX 12.8

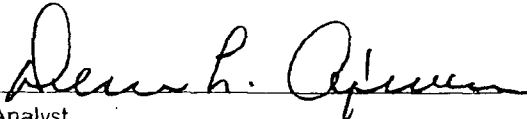
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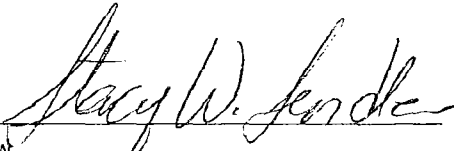
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	95 %
	Bromofluorobenzene	95 %

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Entact	Project #:	806103
Sample ID:	MW - 4	Date Reported:	06-24-99
Chain of Custody:	7149	Date Sampled:	06-23-99
Laboratory Number:	F593	Date Received:	06-23-99
Sample Matrix:	Water	Date Analyzed:	06-24-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		0

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	ND	1	0.2
Toluene	1.4	1	0.2
Ethylbenzene	0.4	1	0.2
p,m-Xylene	3.8	1	0.2
o-Xylene	1.7	1	0.1

Total BTEX 7.3

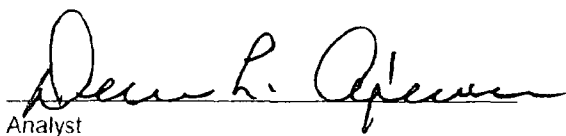
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	98 %

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	06-24-BTEX QA/QC	Date Reported:	06-24-99
Laboratory Number:	F586	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-24-99
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect Limit
		Accept Range 0 - 15%			
Benzene	5.1692E-003	5.1858E-003	0.32%	ND	0.2
Toluene	5.2087E-003	5.2097E-003	0.02%	ND	0.2
Ethylbenzene	3.4516E-003	3.4557E-003	0.12%	ND	0.2
p,m-Xylene	4.0509E-003	4.0517E-003	0.02%	ND	0.2
o-Xylene	3.9685E-003	3.9804E-003	0.30%	ND	0.1

Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff	Accept Limit
Benzene	14.4	14.4	0.0%	0 - 30%
Toluene	82.2	82.9	0.9%	0 - 30%
Ethylbenzene	58.2	58.7	0.9%	0 - 30%
p,m-Xylene	288	300	4.3%	0 - 30%
o-Xylene	113	114	0.7%	0 - 30%

Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	14.4	50.0	64.2	100%	39 - 150
Toluene	82.2	50.0	132	100%	46 - 148
Ethylbenzene	58.2	50.0	108	100%	32 - 160
p,m-Xylene	288	100.0	384	99%	46 - 148
o-Xylene	113	50.0	163	100%	46 - 148

ND - Parameter not detected at the stated detection limit.

* - Administrative Limits set at 80 - 120%.

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

Comments: QA/QC for samples F586 - F593.

Analyst

Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

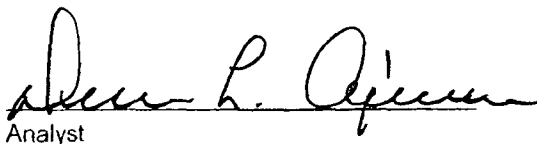
Client:	Entact	Project #:	806103
Sample ID:	MW - 1	Date Reported:	06-24-99
Laboratory Number:	F589	Date Sampled:	06-23-99
Chain of Custody No:	7149	Date Received:	06-23-99
Sample Matrix:	Water	Date Extracted:	06-24-99
Preservative:	Cool	Date Analyzed:	06-24-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

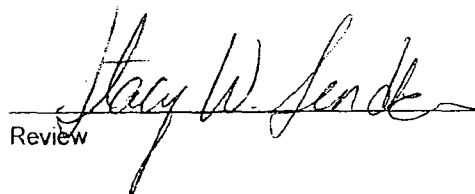
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	0.9	0.1
Total Petroleum Hydrocarbons	0.9	0.2

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: **Welex Site, Farmington.**


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

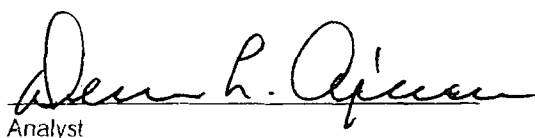
Client:	Entact	Project #:	806103
Sample ID:	MW - 1 dupe	Date Reported:	06-24-99
Laboratory Number:	F590	Date Sampled:	06-23-99
Chain of Custody No:	7149	Date Received:	06-23-99
Sample Matrix:	Water	Date Extracted:	06-24-99
Preservative:	Cool	Date Analyzed:	06-24-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

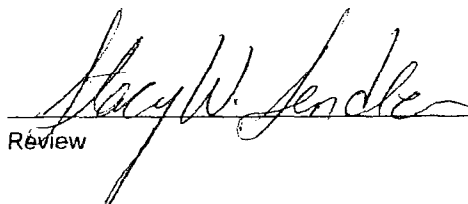
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	0.9	0.1
Total Petroleum Hydrocarbons	0.9	0.2

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: **Welex Site, Farmington.**


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

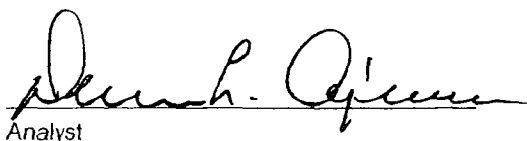
Client:	Entact	Project #:	806103
Sample ID:	MW - 2	Date Reported:	06-24-99
Laboratory Number:	F591	Date Sampled:	06-23-99
Chain of Custody No:	7149	Date Received:	06-23-99
Sample Matrix:	Water	Date Extracted:	06-24-99
Preservative:	Cool	Date Analyzed:	06-24-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

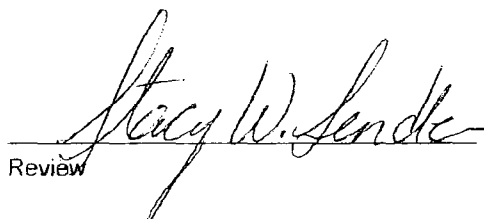
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	0.9	0.1
Total Petroleum Hydrocarbons	0.9	0.2

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

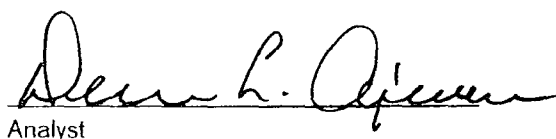
Client:	Entact	Project #:	806103
Sample ID:	MW - 3	Date Reported:	06-24-99
Laboratory Number:	F592	Date Sampled:	06-23-99
Chain of Custody No:	7149	Date Received:	06-23-99
Sample Matrix:	Water	Date Extracted:	06-24-99
Preservative:	Cool	Date Analyzed:	06-24-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

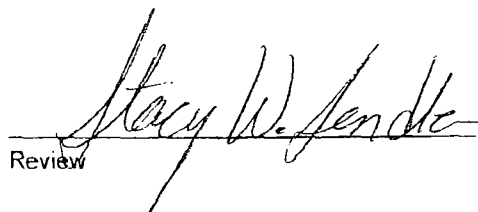
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	1.0	0.1
Total Petroleum Hydrocarbons	1.0	0.2

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: Welex Site, Farmington.


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

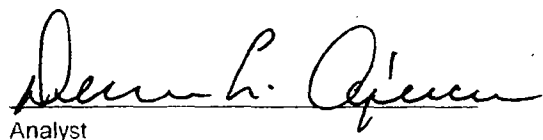
Client:	Entact	Project #:	806103
Sample ID:	MW - 4	Date Reported:	06-24-99
Laboratory Number:	F593	Date Sampled:	06-23-99
Chain of Custody No:	7149	Date Received:	06-23-99
Sample Matrix:	Water	Date Extracted:	06-24-99
Preservative:	Cool	Date Analyzed:	06-24-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

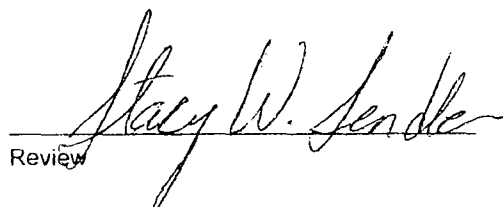
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	0.4	0.1
Total Petroleum Hydrocarbons	0.4	0.2

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: Welex Site, Farmington.


Analyst


Review

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	06-24-TPH QA/QC	Date Reported:	06-24-99
Laboratory Number:	F589	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-24-99
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	7.7804E-002	7.7664E-002	0.18%	0 - 15%
Diesel Range C10 - C28	06-17-99	9.8381E-002	9.8224E-002	0.16%	0 - 15%

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

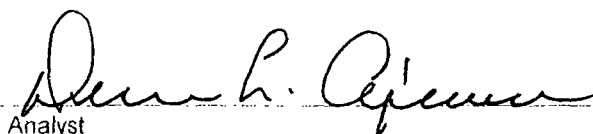
Duplicate Conc. (mg/L)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	0.9	0.9	0.0%	0 - 30%

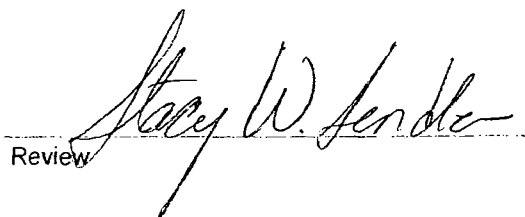
Spike Conc. (mg/L)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	25.0	25.0	100%	75 - 125%
Diesel Range C10 - C28	0.9	25.0	25.9	100%	75 - 125%

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 F589 - F593.


Analyst


Review

CHAIN OF CUSTODY RECORD

7149

Client / Project Name Entact			Project Location Wellex Site, Farmington		ANALYSIS / PARAMETERS								
Sampler: CW / km			Client No. 806103		No. of Containers	8015 TPH	8021 BTEX					Remarks	
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix									
MW-1	6/23/99	15:00	F589	Water	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
MW-1 dup.	I	15:00	F590	I	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
MW-2	I	13:30	F591	I	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
MW-3	I	14:45	F592	I	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
MW-4	I	15:15	F593	I	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
Relinquished by: (Signature) Christine Waeta			Date 6/23/99	Time 16:00	Received by: (Signature) Dean P. O'Brien			Date 6/23/99	Time 16:00				
Relinquished by: (Signature) 					Received by: (Signature) 								
Relinquished by: (Signature) 					Received by: (Signature) 								
<div style="text-align: center;"> ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615 </div>												<div style="text-align: center;"> Sample Receipt </div>	
										Y	N	N/A	
Received Intact										<input checked="" type="checkbox"/>			
Cool - Ice/Blue Ice										<input checked="" type="checkbox"/>			

