NM1-

**C-138** 

YEAR(S): 199-1998 District 1 - (505) 393-6161 P. O. Box 1960 Hobbs, NM-84241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210

'urice III - (505) 334-6178 7 Rio Brazos Road ~\_c, NM 87410 District IY - (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

OUL COUL DUAY

Form C-138 Originated 8/8/95

> Submit Original Plus 1 Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: X	4. Generator Buslington
Verbal Approval Received: Yes No 🔀	5. Originating Site Compressor 574.
2. Management Facility Destination KEY ENCEGY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #345 CR3500 Aztec NM	8. State NM
7. Location of Material (Street Address or ULSTR) SEE AHACHED LIST	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be acc Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be acc PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to on of origin. No waste classified hazardous by
All transporters must certify the wastes delivered are only those consigne	d for transport.
BRIEF DESCRIPTION OF MATERIAL:	
DRAIN WATER FROM NON-EXEMPT OIL TANK	RENEWAL - NEW ANAlysis
RECEIVED	
DEC 2 1 1999  Environmental Bureau Oil Conservation Division	
Estimated Volume > 1500 cy Known Volume (to be entered by the o	perator at the end of the haul) cy
SIGNATURE: Masse Management Facility Authorized Agent  TITLE: Misse	DATE: 12-20-99
	ELEPHONE NO. <del>205-334-6/86</del>
(This space for State Use)	
APPROVED BY: Semple town TITLE: GEO/E	5915T DATE: 12/12/99
APPROVED BY: Xogal TITLE Funt	Queen Chaf DATE: 12/21/99

# **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
Burlington Resources 3535 East 30 th Street Farmington NM 87401	Key Energy Services
3. Originating Site (name):	Location of the Waste (Street address /or
	ULSTR):
All Compressor Stations Unit:	See Attached. Section: Township: Range:
OM.	Section. Township. Range.
4. Source and Description of Waste:	
Drained water from oil tank.	
I, Ed Hasely	representative for:
	do hereby certify that,
Burlington Resources according to the Resource Conservation and Recovery Act (	
1988, regulatory determination, the above described waste	
1200, 100, 100, 100, 100, 100, 100, 100,	,
	oilfield waste which is non-hazardous by characteristic roduct identification.
and that nothing has been added to the exempt or non-exemp	t non-hazardous waste defined above.
For NON-EXEMPT waste only the following documentation	is attached (chech appropriate items):
MSDS Information	Other (description):
RCRA Hazardous Waste Analysis Chain of Custody	
(011 1	
Name (Original Signature):	
Name (Original Signature): 2 //ase/y Title: Env. Representative	_ _

## 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 <u>not</u> 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

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 hestitate to call me at your convenience.

Sincerely

Sharon Williams

Organics Lab Supervisor

**Enclosures** 

xc: file

2506 West Main Street, Farmington, NM 87401



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

#### **BURLINGTON RESOURCES**

#### **Case Narrative**

On November 23, 1999, samples were submitted to Inter-Mountain Laboratories for analyis. 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 conveneince.

Organic Analyst/Farmington



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

2506 West Main Street, Farmington, NM 87401

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

Doromotor	Analytical Result	PQL	MCL	Units
Parameter	Result	FQL	IVICL	Ullits
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:



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

## **Flash Point**

2506 West Main Street, Farmington, NM 87401

Client:

**Burlington Resources** 

Project:

Compressor Stations

Date Reported:

12/13/99

Sample ID:

Water From Used Oil Tank

Date Sampled:

11/23/99

Laboratory ID:

0399W05762

Date Received:

11/23/99

Sample Matrix:

Condition:

Liquid Intact 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 TOXICITY CHARACTERISTIC LEACHING PROCEDURE 2506 West Main Street, Farmington, NM 87401 **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: Sample Matrix: 0399W05762

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.

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

2506 West Main Street Farmington, NM 87401

## **QUALITY CONTROL / QUALITY ASSURANCE**



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

2506 West Main Street, Farmington, NM 87401

## **Quality Control / Quality Assurance**

# Spike Analysis / Blank Analysis TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

**Burlington Resources** 

Project:

Sample Matrix:

Compressor Stations

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
r ai ailietei	Result	EHHIL	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 *W* 



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

2506 West Main Street, Farmington, NM 87401

## **Quality Control / Quality Assurance**

#### **Known 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

**Known Analysis** 

	Found	Known	Percent	
Parameter	Result	Result	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:



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

#### **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

2506 West Main Street, Farmington, NM 87401

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
,2-Dichloroethane	ND	0.01	0.5	mg/L
,1-Dichloroethylene	ND	0.01	0.7	mg/L
Methyl Ethyl Ketone (2-Butanone)	ND	0.25	200	mg/L
etrachloroethylene	ND	0.01	0.7	mg/L
richloroethylene	ND	0.01	0.5	mg/L
inyl 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.



Phone (505) 326-4737 Fax (505) 325-4182 TOXICITY CHARACTERISTIC LEACHING PROCEDURE 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

	Analytical Result	Spike Added	Spike Results	Spike Recovery
Parameter	mg/L	mg/L	mg/L	%
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.

### Phone (505) 326-4737 Fax (505) 325-4182 TOXICITY CHARACTERISTIC LEACHING PROCEDURE 2506 West Main Street, Farmington, NM 87401 **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

	Analytical Result	Spike Added	Spike Results	Spike Recovery	Duplicate Results	Duplicate Recovery	Relative Difference
Parameter	mg/L	mg/L	mg/L	<u>%</u>	mg/L_	%%	%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.

	Spike	Duplicate	
Surrogate Recoveries	%		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.



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	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



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はかいます これは海南の大きなない

# CHAIN OF CUSTODY RECORD

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							1			Project Location	Proje				Client/Project Name
															Laboratorios,

District I = (505) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210

New Mexico

Energy Minerals and Natural Resources Department 2 1999

Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131 OIL CON. DIV.

Submit Original Plus 1 Copy to appropriate District Office

Originated 8/8/95

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: 🕥	4. Generator WFS
Verbal Approval Received: Yes 🔲 No 🔟	5. Originating Site MICA 610 Plant
2. Management Facility Destination KEY ENERGY 7150054	6. Transporter Key
3. Address of Facility Operator #345 CL3500 AZHECNM	8. State
7. Location of Material (Street Address or ULSTR) 192CR 4900  Bloomfield NM	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be acc Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be acc PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	ed for transport.
BRIEF DESCRIPTION OF MATERIAL: WASTO WATER FROM PONDS AT the NATO	11.46 643 Breech mout
Plant DEGETVED X NEW ANA	
OIL COM. DIV.	•
Estimated Volume 5000666 cy Known Volume (to be entered by the co	operator at the end of the haul) ————————————————————————————————————
SIGNATURE: Management Facility Authorized Agent  TITLE: MGE	
TYPE OR PRINT NAME: MICHAEC TALOUICH TI	ELEPHONE NO. 505.334-6186
(This space for State Use)	

my D. Feer TITLE: (-eo/og 15/

## **CERTIFICATE OF WASTE STATUS**

Generator Name and Address:	2. Destination Name:
WILLIAMS FIELD SERVICES	KEY ENERGY DISPOSAL
192 CR 4900	
Bloom FreD NM 87413  3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
MILATED PLANT	Location of the waste (Street address and OLSTR).
192 CR 4900	
Attach list of onglinating sites as appropriate	
4. Source and Description of Waste	
Waste Water HONDS	
,	
.,*	
1. Nelson M Sly III	representative for:
WILLIAMS TIELD SERV	do hereby certify that, according
	RCRA) and Environmental Protection Agency's July, 1998, regulatory
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (Che EXEMPT oilfield waste	RCRA) and Environmental Protection Agency's July, 1998, regulatory
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (Che EXEMPT oilfield waste	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  non-exempt non-hazardous waste defined above.
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN a and that nothing has been added to the exempt or	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  non-exempt non-hazardous waste defined above.
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN a and that nothing has been added to the exempt or For NON-EXEMPT waste only the following documents of the second of the exempt of the exempt of the exempt of the second of the exempt of the	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  r non-exempt non-hazardous waste defined above. Other (description):
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN and that nothing has been added to the exempt orMSDS Information	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  r non-exempt non-hazardous waste defined above. Other (description):
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN and that nothing has been added to the exempt orMSDS InformationMSDS InformationRCRA Hazardous Waste	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  r non-exempt non-hazardous waste defined above. Other (description):  Analysis
to the Resource Conservation and Recovery Act (I determination, the above-described waste is: (CheEXEMPT oilfield wasteN and that nothing has been added to the exempt orMSDS InformationMSDS Information	RCRA) and Environmental Protection Agency's July, 1998, regulatory eck appropriate classification)  ION-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification  r non-exempt non-hazardous waste defined above. Other (description):  Analysis



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 nonhazardous. 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) (l) (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

Sr. Environmental Specialist

CC:

Mr. Denny Foust



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,

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

Seulers

xc: Leigh E. Gooding, Williams Field Services



#### QWAL LABORATORIES, INC.

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

#### LABORATORY REPORT:

**REFERENCE #:** 9911595

DATE REPORTED: 12/08/99

DATE COLLECTED: 11/13/99

11/17/99

SENT WILLIAMS FIELD SERVICE

TO: 295 CHIPETA WAY

SALT LAKE CITY, UTAH 84158

MARK HARVEY

PROJECT: MILAGRO POND

Reference Fraction:9911595-01A

Sample ID: MIL-POND-CO1

Sample Date Collected: 11/13/9913:15:00

Sample Matrix: WATER

DATE RECEIVED:

Sample Date Collected:	11/13/9913:	15:00				
Test	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TCLP EXTRACTION	EPA 1311	DONE				JCC
SILVER, TCLP	SW 846 601	0 0.27	MG/L	0.01	11/30/99	MS2
ARSENIC, TCLP	SW 846 706	0 <0.001	MG/L	0.001	11/29/99	JMM
BARIUM, TCLP	SW 846 601	0.08	MG/L	0.005	11/30/99	MS2
CADMIUM, TCLP	SW 846 601	0.005	MG/L	0.005	11/30/99	MS2
CHROMIUM, TCLP	SW 846 601	0 19.9	MG/L	0.01	12/01/99	MS2
MERCURY, TCLP	SW 846 747	9 <del>&lt;0.000</del> 2	MG/L	0.0002	11/20/99	JMM
LEAD, TLCP	SW 846 601	0.05	MG/L	0.01	11/30/99	MS2
SELENIUM, TCLP	SW 846 774	0 <0.002	MG/L	0.002	12/02/99	JMM
TCLP SEMI-VOLATILES	SW 846 827	0				
O-CRESOL		0.123	MG/L	0.10	11/25/99	DN
P-CRESOL		0.119	MG/L	0.10		
M-CRESOL		ND	MG/L	0.10		
1,4-DICHLOROBENZENE		ND	MG/L	0.10		
2,4-DINITROTOLUENE		ND	MG/L	0.10		
HEXACHLOROBENZENE		ND	MG/L	0.10		
HEXACHLOROBUTADIENE		ND	MG/L	0.10		
HEXACHLOROETHANE		ND	MG/L	0.10		
NITROBENZENE		ND	MG/L	0.10		
PENTACHLOROPHENOL		ND	MG/L	0.50		
PYRIDINE		ND	MG/L	0.10		
2,4,5-TRICHLOROPHEN		ND	MG/L	0.10		
2,4,6-TRICHLOROPHEN		ND	MG/L	0.10	11/25/99	
TCLP VOLATILES	SW 846 826		,		,,	
BENZENE		ND	UG/L	5.0	11/25/99	JDH
CARBON TETRACHLORID		ND	UG/L	5.0	11/25/99	
CHLOROBENZENE		ND	UG/L	5.0	11/25/99	
CHLOROFORM		ND	UG/L	5.0	11/25/99	
1,2-DICHLOROETHANE		ND	UG/L	5.0	11/25/99	
1,1-DICHLOROETHYLEN		ND	UG/L	5.0	11/25/99	
METHYL ETHYL KETONE		ND	UG/L	5.0		
TETRACHLOROETHYLENE		ND	UG/L	5.0		
TRICHLOROETHYLENE		ND	UG/L	5.0		
VINYL CHLORIDE		ND	UG/L	5.0	11/25/99	
·		-140	55/1	3.0		2211



#### QWAL LABORATORIES, INC.

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

#### LABORATORY REPORT:

**REFERENCE #: 9911595** 

SENT WILLIAMS FIELD SERVICE

TO: 295 CHIPETA WAY

SALT LAKE CITY, UTAH 84158

MARK HARVEY

PROJECT: MILAGRO POND

DATE REPORTED: 12/08/99
DATE COLLECTED: 11/13/99

DATE RECEIVED: 11/17/99

Reference Fraction:9911595-01A

Sample ID: MIL-POND-CO1

Sample Date Collected: 11/13/9913:15:00

Sample Matrix: WATER

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TEST METHOD RESULT UNITS PQL ANALYZED BY

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY:

TERRY KOESTER LABORATORY DIRECTOR

12/08/99

#### QWAL LABORATORIES, INC.

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

LABORATORY REPORT:

**REFERENCE #:** 9911595

DATE COLLECTED: 11/13/99

DATE RECEIVED: 11/17/99

DATE REPORTED:

SENT WILLIAMS FIELD SERVICE

TO: 295 CHIPETA WAY

SALT LAKE CITY, UTAH 84158

MARK HARVEY

PROJECT: MILAGRO POND

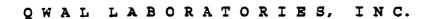
Reference Fraction:9911595-01B

Sample ID: MIL-POND-CO1 MS

Sample Date Collected: 11/13/9913:15:00

Sample Matrix: WATER

TEST	METHOD	result	UNITS	PQL	ANALYZED	BY
TCLP EXTRACTION	EPA 1311	DONE				JC
SILVER, TCLP	SW 846 601	90.0	% REC		11/30/99	MS2
ARSENIC, TCLP	SW 846 706	85.3	% REC		11/29/99	
BARIUM, TCLP	SW 846 601	104.9	% REC		11/30/99	MS2
CADMIUM, TCLP	SW 846 601	89.5	% REC		11/30/99	
CHROMIUM, TCLP	SW 846 601	90.3	% REC		11/30/99	MS2
MERCURY, TCLP	SW 846 747	100.6	% REC		11/20/99	JMP
LEAD, TLCP	SW 846 601	89.9	% REC		11/30/99	MS:
SELENIUM, TCLP	SW 846 774	79.8	% REC		12/02/99	$\mathbf{M}\mathbf{L}$
TCLP SEMI-VOLATILES	SW 846 827	)				
O-CRESOL		58	<b>%RECOV</b>	0.10	11/26/99	DN
P-CRÉSOL		92	%RECOV	0.10	11/26/99	DN
M-CRESOL		92	₹RECOV	0.10	11/26/99	DN
1,4-DICHLOROBENZENE		57	₹RECOV	0.10	11/26/99	DN
2,4-DINITROTOLUENE		79	<b>&amp;RECOV</b>	0.10	11/26/99	DN
HEXACHLOROBENZENE		76	%RECOV	0.10	11/26/99	DN
HEXACHLOROBUTADIENE		56	%RECOV	0.10	11/26/99	DN
HEXACHLOROETHANE		39	%RECOV	0.10	11/26/99	DN
NITROBENZENE		61	<b>%RECOV</b>	0.10	11/26/99	DN
PENTACHLOROPHENOL		34	%RECOV	0.50	11/26/99	DN
PYRIDINE		20	<b>%RECOV</b>	0.10	11/26/99	DN
2,4,5-TRICHLOROPHEN		67	#RECOV	0.10	11/26/99	DN
2,4,6-TRICHLOROPHEN		60	<b>%RECOV</b>	0.10	11/26/99	DN
TCLP VOLATILES	SW 846 826					
BENZENE		100	% REC	5.0		
CARBON TETRACHLORID		444	% REC	5.0		
CHLOROBENZENE		92.4	% REC	5.0		
CHLOROFORM		60,0	% REC	5.0		
1,2-DICHLOROETHANE		62.8	% REC	5.0		
1,1-DICHLOROETHYLEN		105	% REC	5.0		
METHYL ETHYL KETONE		21.5	% REC	5.0		
TETRACHLOROETHYLENE		89.6	% REC	5.0		
TRICHLOROETHYLENE		90.4	% REC	5.0		
VINYL CHLORIDE		<b>35.12</b>	% REC	5.0	11/25/99	JD:



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

RESULT

LABORATORY REPORT:

**REFERENCE #:** 9911595

DATE COLLECTED: 11/13/99

DATE REPORTED:

DATE RECEIVED:

SENT WILLIAMS FIELD SERVICE

TO: 295 CHIPETA WAY

SALT LAKE CITY, UTAH 84158

MARK HARVEY

PROJECT: MILAGRO POND

TEST

Reference Fraction:9911595-01B

Sample ID: MIL-POND-CO1 MS

Sample Date Collected: 11/13/9913:15:00

METHOD

Sample Matrix: WATER

PQL

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY:

UNITS

RRY'KOESTER

12/08/99

11/17/99

ABORATORY DIRECTOR

ANALYZED

BY

#### QWAL LABORATORIES, INC.

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

#### LABORATORY REPORT:

**REFERENCE #:** 9911595

DATE COLLECTED: 11/13/99

DATE REPORTED:

DATE RECEIVED:

SENT WILLIAMS FIELD SERVICE

TO: 295 CHIPETA WAY

SALT LAKE CITY, UTAH 84158

MARK HARVEY

PROJECT: MILAGRO POND

Reference Fraction: 9911595-02A

Sample ID: MIL POND-CO1

Sample Date Collected: 11/13/9913:15:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
FLASH CLOSED CUP PH REACTIVITY	1010 D56 EPA 150.1 SW 846	>220.0 9.6 SEE	DEG F SU ATTACHED		11/24/99 11/17/99 11/24/99	SLR

ND=NONE DETECTED PQL=PRACTICAL QUANTITAION LIMIT SU=STANDARD UNITS B=DETECTED IN METHOD BLANK

APPROVED BY:

12/08/99

11/17/99

BORATORY DIRECTOR

	Anns Fiero Schulces	quar prosecutor	A	MERIC	CAN WE		-	TO YE	Set #	
	295 CHIPETA WA!	AN A		CC	ABC.	T	/ <b>&gt;</b>	١.	to	
V	SACT LAKE CITY, UT 84108	463	33 Vest	360/2	auth, SbC	C Mah &	84115	TAT	=======================================	S
	la fe	<b>)</b>	(801) 28	288-8666	Factor	-ax-(604) 263-8882	<b>G&amp;</b> 2	LEVEL of QC	. I	III IV
/ Phone/	Phone/Fax 801-584-63'61 /584-7160	•	(JB)	147 3	_				LABORAT	LABORATORY USE ONLY
Confact	it MARK HARJEY	ected		المحوسان			•		SAMPLES WERE:	AMPLES WERE:
Project	Project Name MICAGAO	Colle	/	241 / S310			ŧ.	-	. Notes:	
Project	Project Number/P.O.#	əmîTv Xi	of Co	Pound Roog					2 Ambient Notes:	Ambient of Chilled Notes:
Lab ID No. (Lab Only)	Sample ID	este Cl	Number 15ch	TOT				COMMENTS	3 Temperature	Temperature Ropelved Broken/Leaking
	MIL-POMD - CO!	11-13- 13115 40	× 8	メイ		EJ.			Bdoudiui) I	(Improparty Saaled)
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				11	1				Packeye	Z
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PRINT NAME	_	-							o de de la companya d	
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PRINT NAME						,			Disorepancio	Discrepancies Balween Sem- ple Labele and COC Record?
Received By: Signature	r. Signatura	Date/Time		<u> </u>					Notes:	Z
CHIEF NAME	¥		ŀ	1				•	- ,	- : !
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District I - (505) 393-6161 P. O. Bog. 1980 — Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210

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

rice III - (505) 334-6178 Rio Brazos Road Lac., NM 87410 District IV - (505) 827-7131

APPROVED BY:

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt:	4. Generator WPS
Verbal Approval Received: Yes No V	5. Originating Site ELCEDEOCOMPLEY
2. Management Facility Destination KEY ENCLGY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #345 CR 3500	8. State
7. Location of Material (Street Address or ULSTR) Hwy 64 mm 100.5	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification or testing will be approved.	companied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigned	ed for transport.
BRIEF DESCRIPTION OF MATERIAL:	
WASTE WATER MIXED with D. I WATER, h	see MSDS
event wash water analysis Included	A har a market and a company of the second and the
, RECEIVED	DECEIVED DEC 1 6 1999
DEC 2 0 1999	
Environmental Bureau Oil Conservation Divisi	on OIIT COM 3
Estimated Volume 4 5006613 cy Known Volume (to be entered by the	operator at the end of the haul) ————————————————————————————————————
SIGNATURE: Maste Management Facility Authorized Agent  TITLE: MGR	
TYPE OR PRINT NAME: MICHAEL TALOVICH T	ELEPHONE NO. 505-334-6186
(This space for State Use)	

# **CERTIFICATE OF WASTE STATUS**

	2. Destination Name:
1. Generator Name and Address:	2. Destination Name:
WIVITMS	KEYDISPOSAC
tel cepto compute	KEI DISTOOM C
WILLIAMS EL CEDRO COMPLEX HWYGA MILEMARKER 100.5	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
TI ALLON ANIAD	<b>+</b> 1.
EL CAEDRO COMPO	ŁX
Attach list of originating sites as appropriate	<u> </u>
4. Source and Description of Waste	
CITGO PACEMANTER 840 WHE	
ETHTLENE GLYCOL/D.I. H20	50/50 MIX
EIHILENE GLYCOL/U.I. HZO	
1.11. Cdarti	· ·
INILL DMITH	representative for:
WILLIAMS FIRMS SEX	2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
WILLIAMS HELD SEX	do hereby certify that
according to the Resource Conservation and Recover	y Act (RCRA) and Environmental Protection Agency's July
1988, regulatory determination, the above described v	waste is: (Check appropriate classification)
* mademan *	
EXEMPT oilfield waste X NON-EXEM	PT oilfield waste which is non-hazardous by characteristic
EXEMPT oilfield waste NON-EXEN analysis or	IPT oilfield waste which is non-hazardous by characteristic by product identification
analysis or	by product identification
EXEMPT oilfield waste  NON-EXEM analysis or and that nothing has been added to the exempt or not	by product identification
analysis or and that nothing has been added to the exempt or not	by product identification  n-exempt non-hazardous waste defined above.
analysis or and that nothing has been added to the exempt or not For NON-EXEMPT waste only the following documents of the exempt of the following documents of the exempt of the exempt or not the following documents of the exempt of the exem	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or nor  For NON-EXEMPT waste only the following docum  MSDS Information	by product identification  n-exempt non-hazardous waste defined above.
analysis or and that nothing has been added to the exempt or not  For NON-EXEMPT waste only the following docum  MSDS Information  RCRA Hazardous Waste Analysis	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or nor For NON-EXEMPT waste only the following docum  MSDS Information	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or not  For NON-EXEMPT waste only the following docum  MSDS Information  RCRA Hazardous Waste Analysis	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or not  For NON-EXEMPT waste only the following docum  MSDS Information  RCRA Hazardous Waste Analysis	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or not  For NON-EXEMPT waste only the following docum  MSDS Information  RCRA Hazardous Waste Analysis	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or not for NON-EXEMPT waste only the following documous MSDS Information  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody  Name (Original Signature):	by product identification  n-exempt non-hazardous waste defined above.  n-exempt non-hazardous waste defined ab
analysis or and that nothing has been added to the exempt or not for NON-EXEMPT waste only the following documed MSDS Information  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	by product identification  n-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
analysis or and that nothing has been added to the exempt or not for NON-EXEMPT waste only the following documous MSDS Information  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody  Name (Original Signature):	by product identification  n-exempt non-hazardous waste defined above.  n-exempt non-hazardous waste defined ab

1

HMIS HEALTH

		O HMIS F B HMIS F	FLAMMABILITY REACTIVITY PERSONAL PROTECTION
======================================	SECTION I - IDENTIE	TCATTON	
=======================================			
DISTRIBUTED BY	COASTAL CHEMCICAL CO. (318)893-3862	, INC	
EMERGENCY PHONE NUMBER EFFECTIVE DATE		•	
MANUFACTURER'S NAME	COASTAL CHEMICAL CO.,		
TRADE NAME			
CAS NUMBER	Blended Product	,	
CHEMICAL FORMULA	Blended Product		
=======================================			
SECT	ION II — HAZARDOUS I		
HAZARDOUS COMPONENTS			PROD. CAS #
ETHYLENE GLYCOL	50 % ACGIH CEILING	50ppm	107-21-1
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	section III - PHYSICA		
REEZING POINT (F)			
/APOR PRESSURE (mm Hg) VAPOR DENSITY (Air=1)			
SOLUBILITY IN H20	COMPLETELY MISCIBLE		
APPEARANCE/ODOR SPECIFIC GRAVITY (H20=1).	•	PRACTICALLY O	ORLESS
PH			
	~~~~		 
SECTION	IV - FIRE AND EXPLOS		1
FLASH POINT	WATER BLEND, NO FLASH	AT BOILING P	DINT OF 212 DEG F.
LOUIS SLOWE LAWS	AFTER WATER EVAPORATE	S FLASH APPRO	x. 247 DEG F.
LOWER FLAME LIMIT			
EXTINGUISH MEDIA	Water fog or spray, F (CO2).	oam, Dry Powd	er, Carbon Dioxide
UNUSUAL FIRE HAZARD	NONE KNOWN Approach f breathing smoke fume		
	downwind side.	s, mist of va	por s on the
=======================================	: #2##8#################################		
SE ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	CTION V - HEALTH HA		
THRESHOLD LIMIT VALUE		•	
ROUTES OF ENTRY INHAL	ATION? SKIN?		INGESTION?

IRRITANT, POSSIBLY Not expected to NARCOTIC

cause significant health hazard

Ingestion of verv 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

\*OR SPITL..... 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

A 18 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. AZARD CLASS..... NON HAZARDOUS DOT SHIPPING NAME..... NOT REGULATED 'EPORTABLE QUANTITY (RQ). None N 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 LEANAIR..... Yes, Section 111 Volatile Organic Compounds & Section 112 Statutory Air Pollutants (1990 Amendments) TLEAN WATER..... No

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

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

IS 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.



#### 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-Sla

#### THIS GENERIC MSDS REPRESENTS THE FOLLOWING CITGO PRODUCTS:

	Trade Name	<b>Commodity Code No.:</b>	
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 Rating 1

Health: 0

Flammability: 1

Reactivity: 0

<sup>&</sup>lt;sup>1</sup>Hazard 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.

#### 1.0 GENERIC COMPOSITION / COMPONENTS

Components	CAS No.	%	Hazard Data	
Refinea Petroleum Oil(s)	Refer to Section 11	> 70	Oral LD <sub>50</sub> (rat): Dermal and Eye:	> 5 g/kg Mild irritant.
Anti-oxidant, Dispersant (May include zinc dialkyldithiop:osphate)	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)

 $< 1 \times 10^{-5}$  to  $\sim 4 \times 10^{5}$ 

Specific Gravity (60//60 °F) (H<sub>2</sub>O = 1):

 $\sim 0.87 - 0.89$ 

Vapor Density (Air = 1):

> 1

% Volatiles by Volume:

Negligible

Melting Point, °C (°F):

NA

Vapor Pressure, mm Hg (25°C):

Negligible

Solubility in Water:

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 Rating<sup>2</sup>:

Health: 0

Flammability: 1

Reactivity: 0

Upper: ND

Extinguishing Media:

Lower: ND

CO2, dry chemical, foam, water fog.

Special Fire Fighting Procedure:

None.

Unusual Fire or Explosion Hazard:

Flammable Limits (% by volume in air):

Water may cause frothing.

<sup>&</sup>lt;sup>2</sup>Hazard Rating: least-0; slight-1; moderate-2; high-3; extreme-4.

### 4.0 REACTIVITY DATA

Stability:

Stable.

Conditions Contributing to Instability:

Excessive heat.

Incompatibility:

Strong oxidants

Hazardous Decomposition Products

CO<sub>2</sub>, (CO with incomplete combustion) and

(thermal, unless otherwise specified):

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

NA-Not Applicable

ND-No Data

NE-Not Established

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

Page 3 of 7

### 6.0 HEALTH HAZARD DATA (continued)

### Carcinogen:

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

**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.

Products represented by this MSDS can cause mild to moderate eye irritation in some

individuals.

Eye:

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

Ingestion: 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.

person who is not runy conscious.

Injection:

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

Seek medical attention immediately.

NA-Not Applicable

ND-No Data

NE-Not Established

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

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### 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/M³)	ACGIH TLV STEL/ Ceiling (C) ppm (mg/M³)	ACGIH TLV Skin notation?	OSHA PEL TWA ppm (mg/ M³)	OSHA PEL STEL/ Ceiling (C) ppm (mg/M³)	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 Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder

**Equipment:** 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:

No

Delayed (Chronic) Health Hazard:

No

Reactive Hazard:

<u>No</u>

Fire Hazard:

Νo

### 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:

No

Reproductive Hazard:

No

### 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)

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### 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:

Chemical / Common Name	CAS No.
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 Milemarker 100.5 Blanco, NM 87412

> 505-632-4870 505-632-4875 Fax

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

Date: 11-23-99		1		-
TO:	COI	MPANY:		
INGRID DEL	LAU	WILLIAMS S	LL	
Fax Number:	Tele	phone Number:		· · · · · · · · · · · · · · · · · · ·
7.760		x6543		
FROM:	Tele	phone Number;		
WILLS		X1879		
REGARDING:			í	
ANNUAL	waste c	LATER SAM.	PLES	
PLEASE CALL	D	URGENT		
Please Pax information		IMPORTANT		
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Milemarker 100.5 Hwy 64 East, Blanco, NM 87412

### ONAL LABORATORISE, INC.

2911 ROTARY TERRACE, P.O. BOX 562/DITTSBURG, X8 66762/(316) 232-1970

LABORATORY REPORT:

REFERENCE #1

9910993

SENT WILLIAMS GAS PIPELINE

DATE REPORTED:

11/11/37

TO: PO BOX 215

ALCOMFIELD, NR 87413

DATH COLLECTED:

10/28/99

WILL SKITS

DATE RECEIVED:

10/30/99

P.O. #1

392-0795-W5

PROJECT FLANT AND RECIP WATER

Sample Matrix: WATER

SAMPLE ID: PLANT TANK (EXEMPT) Collection Date: 10/28/99

TEST	HETROD-CAS &	RESULT	DNITE	PGL	AMALYEED	extract81
TCLP EXTRACTION	EPA 1311	DCNE			DLB	11/01/95
SILVER, TCLP	SW 846 6010	<3.01	MG/I	0.01	11/04/99JMM	
argenic, TCLP	S# 846 706D	0.001	MG/L	0.001	11/04/99JMM	
BARIUM. TCLP	SW 846 6010	0.020	MG/L	0.005	11/04/99J704	
CADMIUM, TCLP	SW 846 6010	0.028	MG/L	C.005	11/04/99JMM	
CHRONTIM, TCLP	SW 846 6010	1.07	MG/L	0.01	11/04/99JMM	
Mercury, Talp	SW 846 7470	<0.0002	MG/L	0.0002	11/02/99JMM	
LEAD, TLCP	SW 846 6010	0.04	MG/L	0.01	11/04/99JM	
SELENIUM, TCLP	aw 846 7740	<0.002	Mg/l	0.002	11/05/99JMN	
TCLP VOLATILES	2W E46 8260				•	
Denzene	71-43-2	0.112	UG/L	5.0	11/03/99TK	
CARBON TETRACULORIDE	56-23-5	ND	U3/L	5.0	11/03/59TK	
Chlorobenzene	106-90-7	ND	U3/L	5.0	11/03/99TK	
CRIOROFORM	£7-66 <b>-3</b>	0.017	UG/L	5.0	11/03/99TK	
1, 2-Dichloroethane	107-06-2	NI	<b>U3/L</b>	5.0	11/03/99TK	
1,1-DICHLOROETHYLENE	75-35-4	מא	UG/L	5.0	11/03/99TK	
MRTHYL STRYL KRICHE	78-93-3	ND	ひ3/し	5.0	11/03/99TK	
TETRACHLOROSTMYLEMS	127-18-4	ND	UG/L	5.0	11/03/99TK	
TRICKLOROETHYLEND	79-01-6	ND	UQ/L	5.3	11/03/99TK	
VINYL CHLORIDE	75-01-4	ND	UG/L	5.0	11/03/99TK	
CLP SMI-VOLATINES	SW 846 8270				• •	
C-CRESOL	75-43-7	ND	MG/L	0.10	11/07/99DN	11/02/99
P-CRESOL	106-44-5	NTD.	MG/L	0.10	11/07/99DN	11/02/99
H-CRISOL	59-50-7	ND	MG/L	0,13	11/07/99IN	11/02/99
1,4-DICHLOROBENZEND	541 - 73 -1	מא	MG/L	0.13	11/07/99DN	11/03/59
2.4-DINITROTOLUENE	121-14-2	כנג	MG/L	0.13	11/07/99UN	11/02/09
KEXACHLOROBENZANE	116-74-1	ХD	MG/L	0.12	11/07/99DM	11/02/95
HEXACHLOROBUTADIENE	87 • 68 • 3	מא	MG/L	0.10	11/07/99DN	11/02/99
RETACHLORGETEANS	67-72-1	כא	MG/L	0.10	11/07/99DN	11/02/99
KITROBENZENE	98-95-3	CN CN	MG/L	0.10	11/07/9900	11/02/99
FENTACHLOROPHENOL	87-86-5	CTA CTA	MG/L	0,50	11/07/99DN	11/02/99
PYRIDINE	110-86-1	כא	MG/L	9,10	11/07/59EN	11/02/99
3.4.5-TRICHLOROPHENOL	95-95-4	בא	MG/L	0.10	11/07/99DN	11/02/99
2.4,6-TRICHLOROPHENOL	88-06-2	פוא	MG/L	0.10	11/07/99DX	11/02/99

REFERENCE #: 9910993 PAGE: 1

Sample ID: RECIP INTE NON-EXEMPT

Sample Matrix: NATER

Collection	Date	10/28/99
------------	------	----------

metrod-cas #	RESULT	UNITS	PGL	analyfed	ESTRACTE
37A 1311	DONE			פבת	11/61/95
SN 646 5010	<0,01	MG/L	0.01	11/04/99JM	1
EW 846 7060	<0.001	MG/L	0.001	11/04/29070	4
SW 846 5010	0.036	MG/L	400.0	_1/04/99 <b>JM</b>	<b>!</b>
SM 846 6010	<b>∠0 005</b>	MG/L	0.005	11/04/99JM	1
SW 846 6310	<0.01	MG/L	0,01	11/04/99JMD	i
SW 346 7470	<0.0002	MG/L	G.0002	11/02/995700	!
SW 846 6010	0.01	MG/L	0.01	11/04/9930	<b>!</b>
SW 846 7740	<0.003	MG/L	G.002	11/05/99570	1
#W 846 8260				•	
71-43-2	0.014	MC/L	0.050	11/03/99TX	
5623-5	СИ		0.050	11/03/99TK	
108-90-7	ND		0.050	11/03/99TK	
67-66 3	ND		0.050	11/03/99TK	
107-06-2	KID	•	9.950	11/03/99TK	
75-35-4	ND		0.050	11/03/99TK	
78-93-3	ND		0.050	11/03/99TK	
127-18-4	ND	MG/L	0.050	11/03/99TK	
79-01-6	ND	MG/L	0.050	11/03/99TK	
75-01-4	ND	MG/L	0.050	11/03/99TK	
SW 846 8270		•			
75-48-7	ND	MG/L	0.15	11/07/99DN	11/02/99
106-44-5	MD	MG/L	0.10	11/07/99DN	11/02/09
59-50-7		MC/L	0.10	11/07/99DN	11/02/39
		•	0.10		11/02/59
		, -		· •	11/02/39
					13/02/55
	=			•	11/02/99
					11/02/9
* ' '		•			11/02/93
•	· ·	•			11/02/93
• • • •				•	11/02/99
	_	•			11/02/09
					11/02/35
	37A 1311 SN 646 5010 SN 646 5010 SN 646 5010 SN 646 6010 SN 646 6010 SN 646 6010 SN 646 6010 SN 646 6010 SN 646 6010 SN 646 6010 T1-43-2 56-23-5 108-90-7 67-66 3 107-06-2 75-35-4 78-93-0 127-18-4 79-01-6 75-01-4 SN 646 6270	32A 1311 DOWE SN 646 5010 <0.01 SN 846 7060 <0.001 SN 846 5010 <0.036 SN 846 5010 <0.05 SN 846 6010 <0.01 SN 846 7470 <0.0002 SN 846 6010 0.01 SN 846 7740 <0.0002 W 846 8260 71-43-2 0.014 56-23-5 ND 107-06-2 ND 75-35-4 ND 78-93-3 ND 127-18-4 ND 79-01-6 ND 75-01-4 ND 79-01-6 ND 75-40-7 ND 5W 846 8270 75-40-7 ND 5W 846 8270 75-40-7 ND 121-14-2 ND 121-14-2 ND 121-14-2 ND 121-14-2 ND 121-14-2 ND 18-768-3 ND 67-72-1 ND 87-66-5 ND 67-86-5 ND 95-95-4 ND	37A 1311  SN 646 5010  SN 846 7060  SN 846 5010  SN 846 5010  SN 846 5010  SN 846 5010  SN 846 6010  SN 846 6010  SN 846 7740  SN 846 8260  71-43-2  DO14 MC/L  56-23-5  ND MG/L  108-90-7  ND MG/L  75-35-4  ND MG/L  78-93-3  ND MG/L  79-01-6  ND MG/L  79-01-6  ND MG/L  79-01-6  ND MG/L  79-50-7  ND MG/L   37A 1321 SN 646 5010 SN 846 7060 SN 846 5010 SN 846 6010 SN 846 7470 SN 846 6010 SN 846 740 SN 846 740 SN 846 740 SN 846 8260  71-43-2 SN 846 8260 71-43-2 SN 846 8260 SN 846 8270 SN 846	SPA 1311   DONE	

Sample ID: MATRIX SPIRE Collection Date: 10/28/99 Sample Matrix: WATER

TEST	METEOD-CAS #	RESULT	UNITS	PQL	ANALYSED EXTRACTED
TCLP SXTRACTION	EPA 1311	DOME		ł	DLB 8 11/01/99
SILVER, ICLP	SW 846 6010	97.9	* REC	1	11/04/99JMM
ARSENIC. ICLF	SW 846 7060	90.9	REC	T T	11/04/99JHM
BARIUM, TCLP	SW 646 6010	106.6	+ REC	Ŧ	11/04/995104
CADNIUM, TCLP	SW 846 6010	93.9	4 REC	•	11/04/99JM
CHRONIUN, TCLP	SW 846 6010	97.7	REC		11/04/99JMM
MERCURY, TCLP	8W 846 7470		REC		:1/02/99JMM

REFERENCE #: 9910933 PAGE: 2

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

Sample Matrix: WATER

						_
TEST	METHOD-CAR #	result	UNITS	PQL	ANALYZKO	EXTRACTED
LEAD, TLCP	SW 846 6010	95.7	₹ REC		11/04/99ЛМ	M
Sedenium, Tolp	946 7740	98 5	REC		11/05/99JM	M
TCLP SEMI-VOLATILES	EW 846 8270					
o-cresol	75-48-7	18	BRECOV	0.10	11/07/99DN	11/02/99
g-crysol	106-44-5	60	<b>TRECOV</b>	0.10	11/07/99DN	11/02/99
M-CRESOL	59-50-7	60	\$RECOV	0.10	11/07/99DN	11/02/99
1,4-DICHLOROBENZEME	541-73-1	46	*RECOV	0.10	11/07/99DN	11/02/99
2,4-binitrotoluene	121-14-2	15	*RECOV	0.10	11/07/99DN	11/07/99
HEXACHLOROBENZEME	118-74-1	67	FRECOV	0.10	11/07/99UN	11/02/99
HEXACHLOROBUTADIENE	87-68-3	49	<b>TRECOV</b>	0.10	11/07/99DN	11/02/99
<b>HEXACHLOROETHANE</b>	67-72-1	45	<b>tricov</b>	0.10	11/07/99DN	11/02/99
- NITACHENENE	98-95-3	35	<b>PRICOV</b>	0.10	11/07/9908	11/02/93
PENTACHLOROPHENOL	87-66-5	10	1RECOV	0.50	11/07/99DM	11/02/99
PYRICINE	110-86-1	:7	<b>treccy</b>	0.10	11/07/99DN	11/02/95
2,4,5-TRICHLOROPHENOL	95-95-4	38	*RECOV	0.10	11/07/99DN	11/02/99
2.4.6-TRICHLOROPHENOL	58-06-2	31	<b>₹</b> £ECO <b>∀</b>	0.10	11/07/99DN	11/02/99
TCLP VOLATILES	SW 846 8260				3	
BENZENE	71-43-2	90.6	+ REC	1.0	11/03/99TK	
CARBON TETRACHLORIDE	56-23-5	87.3	₹ REC	1.0	11/03/99TK	
CHLOROBEITZENE	108-90-7	103	* REC	1.0	11/03/99TK	
CHLOROFORM	67-66-3	79.0	* REC	1.0	11/03/99TK	
1,2-DICHLOROSTHANE	107-06-2	79.1	* REC	1.0	11/03/99TK	
). 1-PICHLUROSTHYLEMS	75-35-4	92.8	1 REC	1.0	11/03/99TK	
MRINYL ETHYL KETOME	79-93-3	79.0	* REC	1.0	11/03/99TK	
TETRACELOROETHYLENE	127-18-4	95.2	1 REC	1.0	11/03/99TK	
TRICHLOROETHYLENE	79-01-6	96.0	REC	1.0	11/03/99TK	
VINYL CHLORIDE	75-01-4	105	REC	1.0	11/03/99TK	

ND-NONE DETECTED
PQL=PRACTICAL QUANTITATION LIMIT
SU=STANDARD UNITS
\*BACKGROUND CONTAMINATION
SUR=SURROGATE
Q=OUTSIDE LIMITE
B=DETECTED IN METHOD BLANK

APPROVED BY :-

TERRY KONSTER LANGUATURY DIRECTOR

REFERENCE #: 9910933

FAGE: 3



# THE REPRODUCTION OF

THE

**FOLLOWING** 

**DOCUMENT (S)** 

**CANNOT BE IMPROVED** 

**DUE TO** 

THE CONDITION OF

THE ORIGINAL

District I (505) 393-6161 P<sup>2</sup>O. Box 1980 Hobbs, NM 88241-1980 District II (505) 748-1283 811 S. First Artesia, NM 88210

n' trict III - (505) 334-6178

APPROVED BY:

7 Rio Brazos Road

# 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

c., NM 87410 idet IV - (505) 827-7131		
REQUEST FOR	APPROVAL TO ACCE	PT SOLID WASTE
1. RCRA Exempt: Non-Exempt: 🕅		4. Generator EL PASO NATURAL GA
Verbal Approval Received: Yes	No 🔟	5. Originating Site Bluewater .
2. Management Facility Destination Key Eve	ely Disposal	6. Transporter Vey
3. Address of Facility Operator #345 C.R.3	500 Aztec N.M	8. State NM
7. Location of Material (Street Address or UL	STA) Twicestate 40, Exit	Thoreau, wm
9. Circle One:		
	and the Generator's certific	accompanied by necessary chemical analysis cation of origin. No waste classified hazardous
- The state of the		Suga in namborn
BRIEF DESCRIPTION OF MATERIAL:	,	
BRIEF DESCRIPTION OF MATERIAL:  WATER MIXED WITH ANTIFECTE  Gene oil 19 ALSO IN the MIXTUE.	From the engine e (2170 ofused a	engine oil 1999
WHER MIXED with ANTIFECEZE	RECEIVED	engine oil
WATER MIXED with ANTIFECTE Gome oil 19 ALSO IN the MIXTUE.	e (2170 ofused a	engine oil Jan Tall
WATER MIKED with ANTIFECTE Gome oil 19 ALSO IN the MIXTUE.	RECEIVED  RECEIVED  DEC 2 11 1999  Environmental Bureau Oil Conservation Division	engine oil
WATER MIKED with ANTIFECTE Gome oil 19 Also in the Mixtue.	RECEIVED  DEC 2 1 1999  Environmental Bureau bil Conservation Division  wn Volume (to be entered by the	DEC 1 3 1999  DEC 1 3 1999  The operator at the end of the haul)

# **CERTIFICATE OF WASTE STATUS**

	2. Destination Name:
El Paso Natural Gas Co.	KEY ENERGY DISPOSAL
Bluewater Station 3BOI Atrisco Blvd NW	RETERRATION COAL
Albuquerque, NM 87120	
Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
	. T
El Paso Natural Gas Compa	1/4-mile, south
Bluewater Station	· · · · · · · · · · · · · · · · · · ·
Attach list of originating sites as appropriate	Thoreau, NM
. Source and Description of Waste	·
Water mixed w/ antif system. Some oil is	reeze (2%5) from the engine cooling also in the Mixture. (<1% of used engine oil)
<i>;</i>	
Richard Duart	representative for:
El Paso Natural Go	do hereby certify that, according
o the Resource Conservation and Recove determination, the above-described waste	ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory
EXEMPT oilfield waste	NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification
	NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification cempt or non-exempt non-hazardous waste defined above.
and that nothing has been added to the ex	analysis or by product identification
and that nothing has been added to the ex	analysis or by product identification  kempt or non-exempt non-hazardous waste defined above.  ng documentation is attached (check appropriate items):
and that nothing has been added to the ex-	analysis or by product identification  kempt or non-exempt non-hazardous waste defined above.  ng documentation is attached (check appropriate items): Other (description):
and that nothing has been added to the ex-	analysis or by product identification  kempt or non-exempt non-hazardous waste defined above.  In description desc
For NON-EXEMPT waste only the followin MSDS Information RCRA Hazardous Chain of Custody	analysis or by product identification  kempt or non-exempt non-hazardous waste defined above.  Ing documentation is attached (check appropriate items):  InOther (description):  S Waste Analysis
For NON-EXEMPT waste only the followin MSDS Information RCRA Hazardous Chain of Custody	analysis or by product identification  kempt or non-exempt non-hazardous waste defined above.  Ing documentation is attached (check appropriate items):  InOther (description):  S Waste Analysis

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:

J1 - The batch MS and/or MSD were outside acceptance limits. The LCS was acceptable.

### Some QA results have been flagged as follows:

Jl - 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.

Ellen Interguser
Eileen M. Ferguson

Laboratory Manager

**CERTIFICATIONS:** 

Arizona

California

 Reno
 Las Vegas
 S. California

 AZ0520
 AZ0518
 AZ0605

 1707
 2002
 2264

US Army Corps Certified Certified of Engineers

IdahoRenoLas VegasS. CaliforniaIdahoCertifiedCertifiedMontanaCertifiedCertifiedNevadaNV033NV052CA084L.A.C.S.D.10228

8/27/99

1

CLIENT: •

El Paso Natural Gas Co.

PROJECT ID:

**Bluewater Station** 

PROJECT #:

NA

DATE SAMPLED: 8/11/99

CLIENT ID:

F990068

NEL SAMPLE ID: P9908051-01

TEST:

**Inorganic Non-Metals** 

MATRIX:

Aqueous

REPORTING

	WI OKILIO				
RESULT	LIMIT	<u>D. F.</u>	<b>METHOD</b>	UNITS	<b>ANALYZED</b>
ND	0.02	1	SW846 Chapter Seven	mg/L	8/19/99
>212	212	1	EPA 1010	Temp °F	8/19/99
5.22	2.	1	EPA 9040B	pH Units	8/16/99
10.5	1.	1	EPA 9040B	°C	8/16/99
0.35	0.15	5	SW846 Chapter Seven	mg/L	8/19/99
	ND >212 5.22 10.5	ND 0.02 >212 212 5.22 2. 10.5 1.	RESULT         LIMIT         D. F.           ND         0.02         1           >212         212         1           5.22         2.         1           10.5         1.         1	RESULT         LIMIT         D. F.         METHOD           ND         0.02         1         SW846 Chapter Seven           >212         212         1         EPA 1010           5.22         2.         1         EPA 9040B           10.5         1.         1         EPA 9040B	RESULT         LIMIT         D. F.         METHOD         UNITS           ND         0.02         1         SW846 Chapter Seven         mg/L           >212         212         1         EPA 1010         Temp °F           5.22         2.         1         EPA 9040B         pH Units           10.5         1.         1         EPA 9040B         °C

CLIENT: .

El Paso Natural Gas Co.

PROJECT ID:

TEST:

**Bluewater Station** 

Non-Metals

PROJECT #:

NA

CLIENT ID:

Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 990819CN-BLK

REPORTING

**PARAMETER** 

RESULT

**LIMIT** 

D. F.

**METHOD** 

UNITS

ANALYZED

Cyanide, Reactive

ND

0.02

SW846 Chapter Seven mg/L

8/19/99

D.F. - Dilution Factor

ND - Not Detected

CLIENT: ,

El Paso Natural Gas Co.

PROJECT ID:

Bluewater Station

Non-Metals

PROJECT #:

TEST:

NA

CLIENT ID:

Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 990819SULFREAC1-BLK

REPORTING

**PARAMETER** 

RESULT

LIMIT

D. F.

**METHOD** 

UNITS

ANALYZED

Sulfide, Reactive

ND

0.03

1

SW846 Chapter Seven

mg/L

8/19/99

D.F. - Dilution Factor

ND - Not Detected

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:

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		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

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: MATRIX: **TCLP Metals** TCLP Extract

		REPORTING			CLP/STLC		
<b>PARAMETER</b>	RESULT	LIMIT	<u>D. F.</u>	METHOD	DATE	DIGESTED	<b>ANALYZED</b>
Arsenic	ND	0.1 mg/L	1	EPA 6010	NA	8/19/99	8/19/99
Barium	ND	l 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

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: MATRIX:

Mercury

**TCLP Metals** 

**TCLP Extract** 

REPORTING

TCLP/ŞTLC EXTRACTION

**PARAMETER** RESULT

ND

LIMIT  $0.002\,\text{mg/L}$  **D. F.** 10

**METHOD EPA 7470A**  DATE NA

8/19/99

DIGESTED ANALYZED

8/19/99

D.F. - Dilution Factor

ND - Not Detected

CLIENT: •

El Paso Natural Gas Co.

PROJECT ID:

**Bluewater Station** 

CLIENT ID:

F990068

DATE SAMPLED: 8/11/99

PROJECT #:

NA

NEL SAMPLE ID: P9908051-01

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

TCLP EXTRACT DATE: NA

MATRIX:

8/18/99

Aqueous

**EXTRACTED** 

1

8/18/99

DILUTION:

ANALYZED:

	Result	Reporting
PARAMETER	mg/L	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

2		
Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	106	74 - 121
Dibromofluoromethane	96	80 - 120
Toluene-d8	100	81 - 117

CLIENT:

El Paso Natural Gas Co.

CLIENT ID:

F990068

PROJECT ID:

Bluewater Station

DATE SAMPLED: 8/11/99

PROJECT #:

NA

NEL SAMPLE ID: P9908051-01

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, December 1996

TEST: METHOD:

EPA 8270

TCLP EXTRACT DATE: NA

Aqueous

**EXTRACTED** 

8/17/99

MATRIX:

DILUTION: 10

ANALYZED:

8/17/99

	Result	Reporting
PARAMETER	mg/L	Limit
1,4-Dichlorobenzene (p-DCB)	ND	1. mg/L
2,4-Dinitrotoluene (DNT)	ND	/.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

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

CLIENT: .

El Paso Natural Gas Co.

CLIENT ID:

Method Blank

PROJECT ID: PROJECT #:

Bluewater Station

DATE SAMPLED: NA

TEST:

NA

NEL SAMPLE ID: 081799-E1 tclp-BLK

TCLP by EPA 1311, July 1992 & Semivolatile Organics by EPA Method 8270C, December 1996 TCLP EXTRACT DATE: NA

METHOD: MATRIX:

EPA 8270 **TCLP Extract** 

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	<b>4</b> 7	21 - 100
Nitrobenzene-d5	77	35 - 114
p-Terphenyl-d14	93	33 - 141
Phenol-d5	30	10 - 94
NO NADA A		

ND - Not Detected

CLIENT: .

El Paso Natural Gas Co.

CLIENT ID:

Method Blank

PROJECT ID:

**Bluewater Station** 

DATE SAMPLED: NA

PROJECT #:

NA

NEL SAMPLE ID: 081899-V1-TCLPB-BLK

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

TCLP EXTRACT DATE: NA

MATRIX:

EPA 8260B

**EXTRACTED** 

8/18/99

TCLP Extract

ANAI YZFD.

8/18/99

	ANALIZED.	
	Result	
RAMETER	mg/L	

	Result	Reporting
PARAMETER	mg/L	Limit
Benzene	ND 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

CLIENT: . El Paso Natural Gas Co.

PROJECT ID: Bluewater Station

PROJECT #: NA

TEST: TO

TCLP by EPA 1311, September 1992 & Semivolatile Organics by EPA Method 8270C, December 1996

MATRIX: Solid

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPD
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	<b>6</b> 3.6	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	<b>9</b> 3	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

CLIENT: El Paso Natural Gas Co.

PROJECT ID: Bluewater Station

PROJECT #:

TEST:

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

MATRIX: Aqueous

		Spike	Spike	Percent	Acceptable	
PARAMETER	NEL Sample ID	Amount	Result	Recovery	Range	RPD
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	

CLIENT: .

El Paso Natural Gas Co.

PROJECT ID:

Bluewater Station

PROJECT #:

NA

TEST:

Inorganic Non-Metals

MATRIX:

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

CLIENT: .

El Paso Natural Gas Co.

PROJECT ID:

**Bluewater Station** 

PROJECT #:

NA

TEST:

Inorganic Non-Metals

MATRIX:

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

CLIENT:

El Paso Natural Gas Co.

PROJECT ID:

**Bluewater Station** 

PROJECT #:

NA

TEST:

TCLP/STLC Metals

MATRIX:

		Spike	Spike	Percent	Acceptable	!
<u>PARAMETER</u>	<b>NEL Sample ID</b>	Amount	Result	Recovery	Range	<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 Jl	75 - 125	
Selenium	P9908051-01-MSD	0.5	0.848	148 Л	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.

CLIENT:,

El Paso Natural Gas Co.

PROJECT ID:

Bluewater Station

PROJECT #:

NA

TEST:

TCLP/STLC Metals

MATRIX:

D A D A METER		Spike	Spike	Percent	Acceptable	DDD
PARAMETER	NEL Sample ID	<u>Amount</u>	Result	Recovery	Range	<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

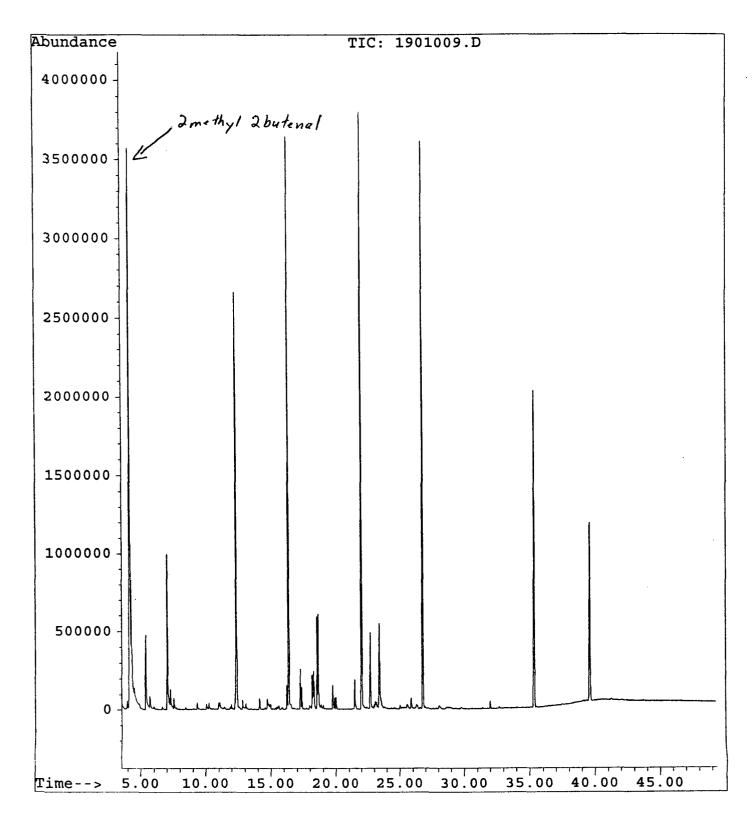
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Operator : Ruggiéri
Acquired : 17 Aug 99 10:20 pm using AcqMethod 8270KS

Instrument: 5971 - In

Sample Name: 1:100 P9908051-01 (8270)

Misc Info Vial Number: 19



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

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

D1 . G. .:

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:** 

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

RenoLas VegasS. CaliforniaIdahoCertifiedCertifiedMontanaCertifiedCertifiedNevadaNV033NV052CA084L.A.C.S.D.10228

CLIENT:

El Paso Natural Gas Company

CLIENT ID:

F990088

PROJECT ID: Bluewater Station DATE SAMPLED: 10/8/99

PROJECT #:

P9910032-01 NEL SAMPLE ID:

TEST:

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

METHOD:

EPA 8270

EXTRACTED:

10/18/99

MATRIX:

Aqueous ANALYZED:

10/18/99

DILUTION:

ANALYST:

MCR - Division

	Result	Reporting		Result	Reporting
PARAMETER	μg/L	Limit	PARAMETER	μg/L	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-Chloroanaline	ND	<b>20</b> . 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	<b>20</b> . 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	<b>2</b> 0. 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 %

CLIENT: PROJECT ID: PROJECT #:

El Paso Natural Gas Company

Bluewater Station

NA

CLIENT ID:

Method Blank

DATE SAMPLED: NA

NEL SAMPLE ID: 101899-8270-BLK

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

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	.0 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-Chloroanaline	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:

% Recovery	Acceptable Range		
106	10 - 123		
97	43 - 116		
92	21 - 100		
94	35 - 114		
102	33 - 141		
92	10 - 94		
	106 97 92 94 102		

ND - Not Detected

CLIENT:

El Paso Natural Gas Company

PROJECT ID:

Bluewater Station

PROJECT #:

NA

TEST:

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

MATRIX:

•		Spike	Spike	Percent	Acceptable	<u>!</u>
PARAMETER	<b>NEL Sample ID</b>	Amount	Result	Recovery	Range	<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	<b>79</b> .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

# CHAIN OF CUSTODY RECORD

		REQUESTED TURNAROUND TIME: SAMPLE RECEIPT REMARKS	RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)  DATE/TIME RECEIVED BY: (Signature)  OF THE STATE OF A STAT								 01 10-593 11:10 Patrice F990088	LABID DATE TIME MATRIX SAMPLE NUMBER	SAMPLERS: (Signature) DATE:	Blurwaty Sta	PROJECT NUMBER PROJECT NAME	
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		RESULTS & INVOICES TO:			_						-						
915-759-2229 FAX	LABORATORY SERVICES EL PASO NATURAL GAS COMPANY 8645 RAILROAD DRIVE EL PASO. TEXAS 79904	DICES TO:	DATE/TIME	DATE/TIME	Cro	214.46	 !		4						がらく	CONTRACT LABORATORY	
FAX: 915-759-2335	CES IAS COMPANY IE		RECEIVED OF LABORATORY BY: (Signature)	RECEIVED BY: (Signature)	~ Receipt 7-30	dor 21.							REMARKS				

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### **MEMORANDUM**

DEG 1 3 1999

To: Martyne J. Kieling, NMOCD

From: Richard Duarte505/831-7763

Date: December 10, 1999

Place: Albuquerque Division Office

#### Subject: Bluewater Station - Water/Antifreeze disposal

Martyne,

Per my voice my, enclosed please find the analytical for the subject aqueous solution. It is being provided to you in advance to hopefully shorten the approval/processing time. I will be working with Key Energy, from Farmington, to dispose of this solution in their injection well.

The paper work will soon follow from Key Energy Services (with the same analytical).

Call me at 505/831-7763, if you have any questions.

Thank you, Richard 831-7763 District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

# State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505

Form C-138 Revised March 17, 1999

Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR A	APPROVAL TO ACCEPT S	SOLID WASTE
1. RCRA Exempt: Non-Exempt: X		4. Generator El Paso Natural Gus Company
Verbal Approval Received: Yes	<b>7</b>	5. Originating Site Blue water Station
2. Management Facility Destination Key Ev	nergy Services	6. Transporter Key Energy Service
3. Address of Facility Operator		8. State NM
7. Location of Material (Street Address or ULS	TR) I-40, Exit 53, 14-mile south, Thorean, NM	
9. Circle One:		
A. All requests for approval to accept oilfield one certificate per job.  B. All requests for approval to accept non-ex material is not-hazardous and the Generate approved	empt wastes must be accompanied by nec	
All transporters must certify the wastes deliv	ered are only those consigned for transpo	ort.
BRIEF DESCRIPTION OF MATERIAL:		isly used in reciprocativ
Estimated Volume cy K		ator at the end of the haul)cy
SIGNATURE	TITLE:	DATE:
TYPE OR PRINT NAME:		PHONE NO.
(This space for State Use)		
APPROVED BY:	TITLE:	DATE:
APPROVED BY:	TITLE	DATE:

District I - (505) 393-6161
P. O. Box 980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
Pirtlet III - (505) 334-6178
Rio Brazos Road
...c., NM 87410
District IV - (505) 827-7131

# New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED

Submit Original Plus 1 Copy to appropriate District Office

Form C-138

Originated 8/8/95

DEC 17 1999

Environmental Bureau

REQUEST FOR A	APPROVAL TO	ACCEPT	SOLID WASTE
---------------	-------------	--------	-------------

1. RCRA Exempt: Non-Exempt: 👔	4. Generator OIL+GAS taupment
Verbal Approval Received: Yes 🔲 No 🔟	5. Originating Site yaco gump
2. Management Facility Destination KEY DISPOSAL	6. Transporter Key
3. Address of Facility Operator 4345 AZ+CL 3500 AZ+CL NM	8. State NM
7. Location of Material (Street Address or ULSTR) 4910 E - MAIN 87402	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accommon Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accompanied by the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigned	for transport.
BRIEF DESCRIPTION OF MATERIAL:	att of the same of
CLEANING Sump FOR production equipment see usos	and the second s
Cityanter MIKED Buith Cleaning Abends	DEC - 8 1999  OUL COME DUV
Estimated Volume 480665 cy Known Volume (to be entered by the op	erator at the end of the haul) ————————————————————————————————————
SIGNATURE: Management Facility Authorized Agent  TITLE: MGe	DATE: 12-8-99
	EPHONE NO. <u>506-334-6/86</u>
(This space for State Use)	
APPROVED BY: Deny Je Your TITLE: Geold	DATE: 12/9/99
APPROVED BY: Matyne 3 King TITLE: Environ	mente 1 Cadas 15 + DATE: 12/17/59

# **CERTIFICATE OF WASTE STATUS**

	2. Destination Name:				
Oil + GAS Equipment	KEY ENERGY DISPOSAL				
4910 E. MAIN					
Farmington, N. MEX. 87403					
3. Originating Site (name):	ocation of the Waste (Street address &/or ULSTR):				
SAME	SAME				
Attach list of originating sites as appropriate					
4. Source and Description of Waste					
Hot bath for cleaning G	Lycol Pumps + Values used on oilfield				
production Equipment.					
· .					
- 1					
1, Philip Cheney representative for:					
	do hereby certify that, according CRA) and Environmental Protection Agency's July, 1998, regulatory				
EXEMPT oilfield wasteNON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification					
	alysis or by product identification				
and	on-exempt non-hazardous waste defined above.				
and that nothing has been added to the exempt or n	on-exempt non-hazardous waste defined above.				
and that nothing has been added to the exempt or nothing.  For NON-EXEMPT waste only the following documents.	entation is attached (check appropriate items):  Other (description):				
and that nothing has been added to the exempt or not in the second of the second of the second of the exempt of the second of the exempt of the second of th	entation is attached (check appropriate items):				
and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not added to the exem	entation is attached (check appropriate items): Other (description):  nalysis  PH = 8				
and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not an added to the exempt or not an added to the exempt or not an added to the exempt or not	entation is attached (check appropriate items): Other (description):  nalysis  P. H. = 8				



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:

Vat Neutralizer 1465

**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 AND HOLIDAYS, PLEASE CALL YOUR

(770) 432-2873 (770) 455-8160

LOCAL POISON CONTROL

(770) 552-8836

(770) 424-2048

(770) 424-4789 TRANSPORTATION EMERGENCY:

(770) 922-0923

CHEMTRÉC: (800) 424-9300

**TOLL FREE - ALL CALLS RECORDED** 

DISTRICT OF COLUMBIA: (202) 483-7616

**ALL CALLS RECORDED** 

**SECTION II - HAZARDOUS INGREDIENTS** 

(PPM) 0.25

EFFECTS (SEE NOTICE) TOX COR

% IN PROD. 60-70

@ \*\* SULFURIC ACID \*\* oil of vitriol; CAS# 7664-93-9; RTECS#

WS5600000; OSHA PEL-1 mg/m3 (for mists only).

@ IDENTIFIES CHEMICALS LIŠTED 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:

DESIGNATIONS

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 limmediately.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting upper and llower 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

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): VAPOR DENSITY(AIR = 1):

N/A N/A

EVAPORATION RATE (= 1):

N/A < 1.0

SOLUBILITY IN WATER:

COMPLETE

pH(CONCENTRATE): pH(USE DILUTION OF 1% SOLUTION):

1.0

VOC CONTENT (CONCENTRATE): 0.0%

APPEARANCE AND ODOR: A COLORLESS LIQUID WITH NO ODOR:

LEP MANUFACTURING COMPANY MATERIAL SAFETY DATA SHEET

(N/A)

PAGE: 2

Product No:

1465

SECTION VI - FIRE AND EXPLOSION DATA (continued)

FLASH POINT(F) (METHOD USED): None

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

INCOMPATIBLILITY(AVOID): Strong alkalis, oxidizers, and active metals.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: HYDROGEN GAS FROM REACTION WITH STEEL OR ACTIVE METALS. SULFUR DIOXID

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



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 MEDICAL EMERGENCY:

(770) 439-4200

BETWEEN 8:00 AM - 5:00 PM (EST)

(770) 432-2873

NON OFFICE HOURS, WEEKENDS AND HOLIDAYS, PLEASE CALL YOUR LOCAL POISON CONTROL

(770) 455-8160

(770) 552-8836 (770) 424-2048

(770) 424-4789 TRANSPORTATION EMERGENCY: (770) 922-0923
CHEMTREC: (800) 424-9300 TOLL I

**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 =	N/D	IRR	20-30
15mg/m3 ** TRIETHANOLAMINE ** TEA; CAS# 102-71-6; RTECS# - KL9275000 **	N/D N/D	EIR COR	< 5 < 5
alpha-DODECYL-omega-HYDROXY-POLY(OXY-1,2-ETHANEDIYL)PHOSPHATE ** 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 limmediately.

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.

(Continued on Page: 2)

ZEP MANUFACTURING COMPANY MATERIAL SAFETY DATA SHEET PAGE: 2 Product No: SECTION V - PHYSICAL DATA 0627 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 INCOMPATIBLILITY(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-0-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 OOT 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#

\*\* 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 yapor) and can be dangerous. DO NOT pressurize, cut, weld, 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

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.

CAS: Control Naryous System depressant reduces the activity 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.

EIR; 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

CEILING: The concentration that should not be exceeded in CELLING: 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.

overall exposure.

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

enough vapor to ignite it 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

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) - primurily skin and eyes. N/A: Not Applicable - Category is not appropriate for this

product. N/D; Not Determined - Insufficient information for a

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

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 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. 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

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

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 HAZARDOUS DECOMPOSITION; Breakdown products expected 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 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 out 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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**1907-96-6** 

471-34-1 9 1403-87-7

.Zimc Molybeale

Not Established

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Mg/M3 as Resp. Mg/M3 as Bust Mg/M3 as Bust [Resp. Fraction]

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Therefum Dioxide

NFPA Code 308 Level

YOC as a percent by weight per BAAOMD Rule 49

HMISO Reflags (Health - Flammability - Reactivity)

345 & B-89-011.

\$7-84-1 \$ Acetone

<1000> <1000>

PPS PPM PPM

760.0

육

70.0

34

Not Established

2300>

엄 g

78-83-3 S Melhyl Ethyl Ketone

330-20-7

**BIMPKX** 

100 150>

<150>

PP¥

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**S**O

8.7 Ü

78-83-1

2-Methyl-1-Propanol

742-83-8

V. M. & P. Naphtha Propere (propellant)

900

PPK PPK

12.0

5

PPM (Skin)

**72.0** 

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N 9 74-98-6

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SECTION II

HAZARDOUS INGREDIENT (perord by weight)

STEL STEL

1000

780.0

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ACOH HODE

PE SK

Pressura (mm Hg) **Jupor** 

1346 2inc Reh

1367

Rust Inhibitive

PRIMER/KRI

1368

Arie 

Angles 1346

0.00 1346

Sundakte Filler Sunface Primar

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**106-88-3** 

KRYLON INDUSTRIAL 31500 SOLON ROAD SOLON, OH 44199

MATERIAL SAFETY

DATA SHEET

(218) 292-7400 INFORMATION TELEPHONE NO. EMERGENCY TELEPHONE NO. {800} 247-3266

> DATE OF PREPARATION 20 - Jul - 94

@1994. The Sherwin-Williams Co.

All Purpose

?·4-0 Fluckey. <u>ن</u> 4 8 27 7 Ç

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Ingradient subject to the reporting requirements of the Superfund Amendments and Resultionization Act (SARA) Section 313, 40 CFH 372.65 C

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2-4-0

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2-4-0

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NEWBILITY CLASSIFICATION

PRODUCT HEIGHT - H.A.

SPECIFIC CRAVITT - H.A.

BOILING BANGS - <0-389

SOLUBILITY IN MATER - H.A.

3

Section IV — FIRE AND EXPLOSION HAZARD DATA

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12,8

TIMESISHING MEDIA Carbon Diexido, Dry Chemical, Foam Excremaly. CLASSIFICATION FLASH POINT Flormable, Flash below 21 °P

PLACE PIRE AND EXPLASION HAZARDS

327

505

Isolate from heat, electrical equipment, aparke, and open flame. Closed conceinare may plode when exposed to extrome heat. Application to hot stridese requires special precautions. ring emorgoncy conditions overexposure to decomposition products may cause a health hexard. mytome may not be immediately apparent. Obtain medical attention.

\*\*\*PETAL FIRS PROTTING PROTEXERS\*\* Pull protective equipment including self-contained breathing apparatus should be used.

For epray may be ineffective. If water is used, for nouries are preferable. Water may

ed to cool elector containers to prevent pressure build-up and possible autoignition or

splonion when exposed to extreme heat.

Section V — HEALTH MAZARO DATA

CUTE Health Hazards

Exposure may be by INHALNTICM and/or SKIH or IXE contact, depending on conditions of use. whater each conditions for proper use, ventilation, and parsonal EX POSUBR reconsed nue

STRUCTS OF OVERLENDOURS

Irritation of eyes, skin and respiratory system. May cause nervous system depression strends overexposure may result in unconsciousness and possibly death. It is sometimes and possibly death.

) vapors of spray mists. Redress and itching of burning sensation may indicate gyp of excessive skin expossive Headache, distiness, navees, and loss of coordination are indications of excessive exposure

EDICAL CONDITIONS ACCIMINATED BY EXPOSURE

Home generally recognized.

IC INTACT: SKIN: If afforted, remove from exposition. Restore breathing.
Mash afforted area thoroughly with scap and water.
Remove constantinated clothing and Launder before re-use.
Flush eyet with large amounts of water for 15 minurae. Cat medical and quiet. artention.

!! in GYEG: rlush eyes with large
!! SMRLLOWED: Get medical actemation.
HRONIC Headin Hazards Hethyl Ethyl Ketone may increase the mervous system effects of other solvents. No ingredient in these products is an IARC, NTP or OSHA listed dareinogen.

eposere levels are not attainable in the workplace. Prolonged overexposedre to solvent ingredients in Section II may cause adverse effects to e liver, orinary, blood-forming, cardiovascular, and reproductive systems. Rats exposed to titanium dioxide dust at 350 mg./ml developed lung cannor, however, such

Reports have associated repeated and nervous system damage. prolonged overexposure to solvents with permanent brain

Section VI — REAGTIVITY DATA

HCCHENT I BITTITT TABELITY - Stable

21:41

Fore known.

NOV-30-1902

MIZARDORS POLYMENTEATION - MILL Not Decke NAMPONIS DECOMPOSITION PRODUCTS
By fits: Carbon Honolds, Oxides of Katala in Section

1 1 1 Factor than Bither Heavier than Air N.A.

BVAPORATION RATE VAPOR DENSITY TEUTIAN POINT

STREE TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition. Ventilate and remove a WASTE DISPOSAL METHOD Ventilate and remove with inert absorbent.

Section VII - SPILL OR LEAK PROCEDURES

PRIMER/KRI

Waste from this product may be barardous as defined under the Resource Commercation and Recovery Act. (RCRA) 40 CFR 261. Maste must be tested for ignitability to describe the applicable 3PA hazardous waste numbers. Maste from products containing Mathyl Ethyl Matona and/or Zinc may also require testing for extractability.

Do not incinerate. Depressurise container. Dispose of in accordance with Federal, State

and Local regulations regarding pollution. Depressuries container. Dispuss of in accordance with Federal, State

Section VIII — PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation. Avoided the partial of the property of the party of the Avoid breathing vapor and spray ] 197. Avoid contact

These coatings may contain materials classified as muisance particulates (listed 'ss Dust' in Section II) which may be present at hazardous levels only during saiding or abreding of the dried film. If no specific dusts set listed in Section II, the applicable lists for muissness dusts are ACGIN TLY 10 mg./ml (total dust), DSNA PEL 15 mg./ml (total dust), 5 mg./ml

local exhaust proferable. General exhaust acceptable if the exposure to materials in section II is maintained below applicable exposure limits. Refer to CSOA Standards (910.94, 1910 , 107 , . 1910.108.

(respirable fraction). VMMTTLATION

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If personal exposure cannot be controlled below applicable limits by ventitation, wast a properly fitted expanic vapor/particulate respirator approved by #105H/MSHA for protect RESPIRATORY PROTECTION for prubection

against materials in soction II. Minen sanding or abrading the dried film, wear a dust/mist respirator approved by MIOSH/MSIV. for protoction against mon-volatils materials in Section II. PROPERTY/V8 GLOVES

is expected. For long or keyested contact, Home required for normal application of serosol products where minimal skin contact west chemical resistant gloves.

AVE PROTECTION Hear safety spectacles with unperforated sideshields

Section IX -- PRECAUTIONS

DOL STOWNER CATEGORY - IA

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are EXTREMENT FLAMMENT. Keep away from heat, sparks, and open flame Vapors will accumulate readily and may ignite explosively.

During was and until all vegors are gone: Keep eres ventilated - Do not spoke -

Extendish all flames, plot lights, and beaters. Turn off stoves, electric Louis wid appliances, and any other douces of ignition.

Consult MFA Code. We approved bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or engage to temperature above 10 °F. Heat from sunlight, radiators, stoves, not water, and other heat cources covid container to breat. Do not take internally. Resp out of the reach of children.

Intentional misuse by deliberately concentrating and inhaling the contents con be harmful

Section X — OTHER REGULATORY INFORMATION

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

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

# **Material Safety Data Sheet**

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Common Name	Triethylene Glycol Reprocessed	Code	93101	
Supplier	COASTAL CHEMICAL CO. L.L.C.	MSDS#	Not available.	
ouppiter.	3520 Veterans Memorial Drive	Validation Date	8/8/96	
	ABBEVILLE, LA 70510 318-893-3862	Print Date	5/12/99	
Synonym	Not available.	In case of Tra	Call	
Trade name	Not available.	Emerkenn. CH	Insportation Emergency Call EMTREC 800-424-9300	
Muterial Uses	Not available.	Joe	ter Information Call 3 Hudman 3 477-6675	
Manufacturer	Various	<del></del>		

Section 2. Composition and Information on Ingredients					
Name	CAS#	% by Weight	TI.V/PEL	25 - 57 Carte Coll Da (2	
Diethylene dlycol	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	11227-6	95-100	The commence of the	Entry to the district of	

Section 3. Hazart				
Emergency Overview	CAUTION			er i Luci interna (j. 1914). 19 - Juli - Juli Lieu Lie
	MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN	I IRRITATION,	ىلىنىڭىيىن كىلى رى كىلىنىسىڭ ئىلى رى <mark>كىلىنى</mark> ئىلىنى	
Routes of Entry	Eye contact. Ingestion. Skin contact. Inhalation.			
Potential Acute Health Eff	ects Slightly dangerous to dangerous in case of skin contact of inhalation. This product may irritate eyes and skin u	t (imitant, permeator pon contact.	r), of eye contact	(irritant), of ingestion.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGE : Not available. The substance is toxic to blood, k system: Not available. Repeated or prolonged exposu	idneys, liver. Toxic	city of the produc	at to the reproductive

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 poritor 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 tolds, 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 medica 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.

Triethylene Glycol	Reprocessed	Page Number: 2
Hazardous ingestion	DO NOT induce vomiting. Examine the tips and mouth to ascertain whether the tissues a indication that the toxic material was ingested; the absence of such signs, however, is neight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, peresuscitation. Seek medical attention.	not conclusive. Loosen

Section 5. Fire and Ex	cplosion 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) (Diethylane glycol)							
Flammable Limits	The greatest known range is LOWER: 2% UPPER: 12.3% (Diethylene glycol)							
Products of Combustion	These products are carbon oxides (CO, CO2).							
Fire Huzords in Presence of Various Substances	Very slightly to slightly flammable in presence of open flames and sparks, of heat							
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 products risks of explosion in the presence of various materials.							
Fire Fighting Yiedia 3 000 3	SMALL FIRE: Use DRY chemicals, CO2, water spray or foam.  LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.							
Special Remarks on Silv.	When heated to decomposition, it emits acrid smoke and irritating fumes. (Diethylene glycol)							
Special Remarks on Explosion Hazards	No additional remark.							

Section	6. Accidenta	l Release Measures			4	The second second second	
Small Spill	The second secon	Dilute with water and mo container. Finish cleanin regional authority require	ig by spreading water on	inert DRY mate the contaminate	ial and p d surface	lace in an appropri and dispose of ac	ate waste disposa cording to local end
Large Spill	e e ga egada sering a	Combustible material. Keep away from heat. K water on the contaminate	eep away from sources o	of ignition. Stop I	eak if with	nout risk. Finish cle iry system.	aning by spreading

Section	n 7. Handling	and Storage
Handling		Not available.
Storage		Keep container dry, Keep in a cool place. Ground all equipment containing material. Keep container tightly dosed. 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 C	OHU QIŞ/FE	a Sonai Frotectio					
Yes.	Provide exha their respective station location	ve threshold limit value	er engeneering controls to ke e. Ensure that eyewash statio	ep the airborne ins and safety s	concentration howers are pr	ns of vapors oximal to th	s below e work-
Personal Protection	Safety glasse	s. Lab coal. Gloves (	impervious).		1 dt.		
Personal Protection in Case of a Splash goggles. Full suit. Boots: Gloves. Suggested protective clothing might not be sufficed to specialist BEFORE handling this product.							onsult a
Chemical Name or Product Nan	ne	CAS#	Exposure Limits				
2,2'-Oxydiethanol		111-46-6	No: avaliable.				

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.  Evaporation rate  Not available.  Viscosity  Water/Oii Dist, Coeff.  Not available.  Iunicity (in Water)  Not available.	mber: 3	Page Number			eprocessed	. Triethylene Glycol R	
Molecular Weight Not applicable.  PH (1% soluwater) Neutral.  Color Not available.  Boiling Puint The lowest known value is 245.8°C (474.4°F) (Diethylene glycol). Weighted average: 284.02°C (543.2°C)  Melting Point/Pour Point May start to solidify et -5°C (23°F) based on data for: Triethylene Glycol. Weighted average: -5.09°C (20°C)  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.  Evaporation rate Not available.  Viscosity Not available.	Section 9. Physical and Chemical Properties						
pH (1% soluwater) Neutral.  Culor Not available.  Boiling Point/Pour Point The lowest known value is 245.8°C (474.4°F) (Diethylene glycol). Weighted average: 284.02°C (543.2°L)  May start to solidify et -5°C (23°F) based on data for: Triethylene Glycol. Weighted average: -5.09°C (22°C) (22°C) (23°C) (2		Not available.	Odor		Liquid.	Physical state and appearance	
Boiling Puint The lowest known value is 245.8°C (474.4°F) (Diethylene glycol). Weighted average: 284.02°C (543.2° Melting Puint/Pour Puint May start to solidify et -5°C (23°F) based on data for: Triethylene Glycol. Weighted average: -5.09°C (22° 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.  Viscosity Not available.  Viscosity Not available.  Viscosity Not available.		Not available.	Taste i		Not applicable.	Molecular Weight	
May start to solidify et -5°C (23°F) based on data for; Triethylene Glycol. Weighted average: -5.09°C (22°F) control of the figure of the figure of the highest known value is 0.01 mm of Hg (@ 20°C) (Diethylene glycol).  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.  Oder Threshold Not available.  Evaporation rate Not available.  Viscosity Not available.  Viscosity Not available.  Not available.  Not available.  Not available.  Not available.  Not available.		Not available.	Culor I		Neutral.	pH (1% soluwater)	
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.  Evaporation rate  Not available.  Viscosity  Not available.	'F)	i). Weighted average: 284.02°C (543.2°F)	Boiling Point				
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.  Evaporation rate  Not available.  Viscosity  Not available.	2.8°F)						
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.  Evaporation rate  Not available.  Viscosity  Not available.		re Not available.					
Vapor Density  The highest known value is 6.7 (Air = 1) (Tetraethylene glycol). Weighted average: 6.7 (Air = 1)  Volatility  Not available.  Evaporation rate  Not available.  Viscosity  Vater/Oil Dist, Coeff.  Not available.  Iunicity (in Water)  Not available.  Not available.	Weighted average: 1.12 (Water = 1)					Specific Gravity	
Volatility Not available.  Odor Threshold Not available.  Evaporation rate Not available.  Viscosity Not available.  Vater/Oil Dist, Coeff. Not available.  Lunicity (in Water) Not available.		ne glycol).	Vapor Pressure				
Odor Threshold Not available.  Evaporation rate Not available.  Viscosity Not available.  Water/Oil Dist, Coeff. Not available.  Iunicity (in Water) Not available.		. Weighted average: 6.7 (Air = 1)	Vapor Density				
Evaporation rate  Not available.  Viscosity  Not available.  Water/Oil Dist, Coeff.  Not available.  Iunicity (in Water)  Not available.			Volatility				
Viscosity Not available. Water/Öil Dist, Cueff. Not available. Iunicity (in Water) Not available.					Not available.	Odor Threshold	
Water/Oil Dist, Coeff. Not available.  Iunicity (in Water) Not available.		عيمت بيد السب بالمعموليسين منت الخراطات بالدار والأال المدرات	meneders care a series of	A. m. 20	Not available.	Evaporation rate	
lunicity (in Water) Not available.		<u> </u>		a mar code \$11	Not available.	پو⊸س <sup>ت</sup> ، برندروسم پسررشد سطر في پستريس	
					Not available.	Water/Oil Dist, Coeff.	
Dispersion Properties See solubility in water, methanol, diethyl ether.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		er - mer 15 Tanamak almana a		Not available.	lunicity (in Water)	
	1	·		nol, diethyl ether.	See solubility in water, methano	Dispersion Properties	
Solubility: 10. 25. Easily soluble in cold water, hot water, methanol, dicthyl ether.		·	thyl ether.	not water, methanol, did	Easily soluble in cold water, hot	Solubility 10. 45, 85, 12	
Physical Chemical Comments Not available.					Not available.	Physical Chemical Comments	

Section 10. Stability		·	
Chemical Stability	The product is stable.	_ 35	
Conditions of Instability—	No additional remark.		
			1 10 1
	Very slightly to slightly reactive with oxidizing agents.		
Incompatibility with various substances  Hazardous Decomposition Products			

Taxicity to Animals	_Acute oral toxicity (LD5 Acute dermal toxicity (L	0); > 5000 mg .D50); > 5000	(kg (Hamster.) mg/kg (Hamste	(Calculated val r.) (Calculated	ue for the r value for the	nixture). ne mixture).			
Chronic F.ffects on Humans	The substance is toxic t	o blood, kidne	ys, liver. Toxici	ty of the produc	to the re	productivě sý	šlem; Nol	available	€.
Other Taxic Effects on Human	s Slightly dangerous to d	angerous in c	se of skin conf	act (irritant, pe	mealor), o	of eye contac	t (irritant),	of inges	ition
Special Remarks on Toxicity to Anintals	No additional remark.					- Paul			
Special Remarks on Chronic Effects on Humans	No additional remark								

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BOD5 and COD  Products of Biodegradation  Toxicity of the Products of Biodegradation  Special Remarks on the Products of Biodegradation	Not available.  Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  The product itself and its products of degradation are not toxic.  No additional remark.
Ecotoricity N BOD5 and COD N Products of Biodegradation F Tuxicity of the Products of Biodegradation Special Remarks on the Products of Biodegradation	Not available.  Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  The product itself and its products of degradation are not toxic.  No additional remark.
Products of Biodegradation Factority of the Products Tof Biodegradation  Special Remarks on the Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  The product itself and its products of degradation are not toxic.  No additional remark.
Toxicity of the Products 7 of Blodegradation  Special Remarks on the Products of Blodegradation	rise, The product itself and its products of degradation are not toxic. No additional remark.
of Blodegradation  Special Remarks on the N Products of Blodegradation	No additional remark.
Products of Bludegradation	
	onsiderations
Section 13. Disposal C	
Waste Disposal	
Section 14. Transport I	piormation
Proposer Shipping Name N	VONE
1.0 (34)	Not applicable (PIN and PG).
Packing Group	NONE USE STATE OF THE PROPERTY
Hazardous Substances Reportable Quantity (kg)	
	Not epplicable.
The second secon	
Section 15. Regulatory	Information
Regulations	The following product(s) is (are) listed by the State of Minnesota: Diethylene glycol
·	WHMIS (Canada) Not controlled under WHMIS (Canada).
n	DSCI. (EEC) Not controlled under DSCL (Europe).
Section 16. Other infor	mation digram and the second s
HMIS (U.S.A.)	Personal Protection  National Fire Protection  Fire Hazard  Association (U.S.A.)  Reactivity  O  Fersonal Protection  B
References Not ava	silable
Other Special No addi	itional 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	

NIV-27-1599 Ø9 **3**9

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<u>1963: 63:</u>

is the last of the sale of

183 1 27 5329

Triethylene Glycol Reprocessed

Notice to Reader

Page Number: 5

To the best of our homelage, the information contained thresh is accurate. However, neither the above ramed supplier age day of we would describe asymmets any liability whitnower for the accuracy of completeness of the information examinates the sale responsibility of the same All materials may presert an homel haze it and should be used with control. Although certain horseful are described needed, we cannot generate that

TOTAL P.06

Disories I - (\$05) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 P'-trict III - (505) 334-6178 Rio Brazos Road \_.c, NM 87410

District IV - (505) 827-7131

#### New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division/ 2040 South Pacheco Street Santa Fe, New Mexico 87505

(505) 827-7131

Form C-138 Originated 8/8/95

Submit Original Plus 1 Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE				
1. RCRA Exempt: Non-Exempt: W by D. foust 10 phone)	4. Generator Burlington				
Verbal Approval Received: Yes X No	5. Originating Site SEYMOUR #68				
2. Management Facility Destination KEY ENCRGY DISPOSAL	6. Transporter Key				
3. Address of Facility Operator #345 CL 3500 AZHC NM	8. State NM				
7. Location of Material (Street Address or ULSTR) 5W/14/31N/9W					
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.  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.					
Reserve Dit Fluid MIKED with Diesel Fuel					
• •	DECEIVED NOV 2 9 1650				
Verbal notification Martyne Kieling 11/23/99					
Estimated Volume 80 6615 cy Known Volume (to be entered by the operator at the end of the haul) cy					
SIGNATURE: Male DATE: 11-24-99  Waste Management Facility Authorized Agent  DATE: 11-24-99					
TYPE OR PRINT NAME: MICHAEL TALOUICH TELEPHONE NO. 505-334-6186					
(This space for State Use)  APPROVED BY: Demy By Tear TITLE: G-eo lo	09 15 T DATE: 11/30/99				
APPROVED BY: Marting & First TITLE: Environ	mental 6wlosus DATE: 12-3-99				

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:					
Burlington Resources 3535 East 30 th Street Farmington NM 87401	Sunco					
2 Out to the Site (annual)	Landing Cale Waste (Street address (as					
3. Originating Site (name):	Location of the Waste (Street address /or ULSTR):					
Seymour #6B	Seymour #6B					
Unit: S	W 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 (F	CRA) 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						
and that nothing has been added to the exempt or non-exempt to some some some some some some some som	non-hazardous waste defined above.					
For NON-EXEMPT waste only the following documentation is  MSDS Information	non-hazardous waste defined above.					
For NON-EXEMPT waste only the following documentation is	non-hazardous waste defined above. s attached (chech appropriate items):					
For NON-EXEMPT waste only the following documentation is  MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	non-hazardous waste defined above. s attached (chech appropriate items):					
For NON-EXEMPT waste only the following documentation is  MSDS Information  RCRA Hazardous Waste Analysis	non-hazardous waste defined above. s attached (chech appropriate items):					



#### 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:

**EMERGENCY TELEPHONE NUMBERS:** 

Sinclair Oil Corporation

P. O. Box 30825

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

Salt Lake City, UT 84130-0825

(801) 524-2700

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

	Typical wt.%	CAS Registry #
#1 Diesel	-,	
Toluene	1.1	108-88-3
Naphthalene	2.0	91-20-3
Petroleum Distillate-Gas Oil	97%	64741-44-2
#2 Diesel		
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:**

	OSHA	ACG	ilH		
COMPONENTS	TWA_S	TEL CEILING	TWA_	STEL	UNIT
Toluene	200	300			ppm
Naphthalene	10	*	- 10	15	ppm
Petroleum Distillates					
(Naphtha)	2		elija Burdi, også		mg/m³

#### 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.

P. 004

#### 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.

#### 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:

UEL - 6 LEL - 1.3

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, CO<sub>2</sub>, 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

11/24/99

#### 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

Freezing Point: 0° F

pH: N/A

Appearance: coloriess, red, blue or amber

Boiling Point: 550° F

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, blurted 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 Toluche are subject to SARA Title III, Sections 311 and 312, which require MSDS reporting and hazardous chemical inventory reporting.

11/24/99

#### 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 APPLICA-TIONS 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.

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

District IV - (505) 827-7131

(This space for State Use)

APPROVED BY:

#### New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division/

2040 South Pacheco Street

RECEIVED

Submit Original Plus 1 Čopy to appropriate District Office

Form C-138

Originated 8/8/95

Santa Fe, New Mexico 87505 (505) 827-7131

OCT 1 8 1999

Environmental Bureau

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE				
1. RCRA Exempt: Non-Exempt: 🔀	4. Generator VANILIATELS + Rosels				
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site VALD				
2. Management Facility Destination KEY ENERGY DISPOSAL	6. Transporter Uey				
3. Address of Facility Operator	8. State NM				
7. Location of Material (Street Address or ULSTR) #15 CR 5860					
9. Circle One:					
<ul> <li>All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.</li> <li>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.</li> </ul>					
All transporters must certify the wastes delivered are only those consigned for transport.					
BRIEF DESCRIPTION OF MATERIAL:					
PAIN WATER MIDER WITH TRACE AMOUNTS OF	- OLYCOL AND				
METHANOC	the property of the control of the c				
, R	ECEIVED OCI 1 5 1999				
Estimated Volume 2066/s cy Known Volume (to be entered by the open	IL COIL DIVL				
Cy Known volume (to be entered by the o	perator at the end of the naul) ————— cy				
SIGNATURE Waste Management Facility Authorized Agent	DATE: 10-15-99				
TYPE OR PRINT NAME: MICHAPL TALOVICH TE	ELEPHONE NO. 505-334-6181				

TITLE Gregormank / Gedag St



# **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:	
VAN WATERS & ROGERS INC	1/	
\$19500 COUNTY ROAD 5860	KEY ENERGY DISPOSAL	
FARMAGTON, NM 87401	, , , , ,	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):	
Char Me Apole	SAME AS ABOUT	
TANK FARM CONTAINMENT AR	SA	
MAK PARMI WINTER STATE		
And the second s		
Attach list of originating sites as appropriate		
4. Source and Description of Waste	· · · · · · · · · · · · · · · · · · ·	
RAINWATER W/TRACE INCLUDING GLYCO	CONTAMINATION	
INCLUDING GLYCO	LS AND METHANOL	
1		
BRANDANEY (Print Name) VAN WATTERS & RECERSING	representative for:	
(Print Name)		
VAN NATIONS & KOCERS'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)		
EVENDT silfield wares	ART cilified waste which is now become by about a distinction	
	MPT oilfield waste which is non-hazardous by characteristic by product identification	
analysis of	by product identification	
and that nothing has been added to the exempt or no	n-exempt non-hazardous waste defined above.	
For NON-EXEMPT waste only the following documents	nentation is attached (check appropriate items):	
<b>✓</b> MSDS Information	Other (description):	
RCRA Hazardous Waste Analysis	<del></del>	
Chain of Custody		
1 11 —	. •	
Name (Original Signature):		
	1	
_ ( )		
Title: AREA 12EGULATORY MOR		
Title: AREA 12EGULATORY MOR  Date: 18/11/99		

REPORT NUMBER: 971 VAN WATERS & ROGERS INC.
MSDS NO: DW24758 MATERIAL SAFETY DATA SHEET PAGE: 001 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 ----- 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) CAS# 000111-46-6 1% (MAX) DIETHYLENE GLYCOL 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. MSDS NO: DW24758 MATERIAL SAFETY DATA SHEET MATERIAL SAFETY DATA SHEET

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MAINFRAME UPLOAD DATE: 04/14/98

PAGE: 002

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 LCSQ 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 MSDS NO: DW24758

VAN WATERS & ROGERS INC.

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

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PAGE: 003

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

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FLAMMABLE PROPERIES

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

REPORT NUMBER: 971 VAN WATERS & ROGERS INC.
MSDS NO: DW24758 MATERIAL SAFETY DATA SHEET

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PAGE: 004

MAINFRAME UPLOAD DATE: 04/14/98

VERSION: 002

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 @ 200

VAPOR DENSITY: 5.18

BOILING POINT: 545.9F; 2860

SOLUBILITY IN WATER: COMPLETELY MISCIBLE

SPECIFIC GRAVITY: 1.1225 @ 25/250

FREEZE POINT: -7.20 (19F)

REPORT NUMBER: 971

VAN WATERS & ROGERS INC.

MSDS NO: DW24758

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

VERSION: 002

PAGE: 005

PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO: PROD NO :

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.

REPORT NUMBER: 971 MSDS NO: DW24758

VAN WATERS & ROGERS INC. MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 04/14/98

PAGE: 006

VERSION: 002

PROBUCT: TRIETHYLENE GLYCOL TECHNICAL - E

ORDER NO: PROD NO:

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%).

REPORT NUMBER: 971 MSDS NO: DW24758 PAGE: 007 VAN WATERS & ROGERS INC. MATERIAL SAFETY DATA SHEET VERSION: 002 MAINFRAME UPLOAD DATE: 04/14/98 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 HAZARO 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: AMOUNT(%W/W) TRIETHYLENE GLYCOL CAS# 112-27-4 98% 16. OTHER INFORMATION NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS: ' CATEGORY RATING HEALTH FLAMMABILITY 1

3

REACTIVITY

0

MSDS STATUS: REVISED SECTIONS 3, 7,, 11

	)	MSDS NO: DW24758 WATERIAL SAFETY DATA SHEET MAINFRAME UPLOAD DATE: 04/14/98 VERSION: 002		
	)	PRODUCT: TRIETHYLENE GLYCOL TECHNICAL - E		
	7	ORDER NO: PROD NO :		
ı	)	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		
	** VAN WATERS & ROGERS INC. ("VW&R"), A ROYAL PAKHOED COMPANY, EXPR			
٠	)	DISCLAIMS ALL EXPRESS OR IMPLIED WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR		
,	Ċ	A PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED		
i	)	HEREIN, AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR		
1	)	CONSEQUENTIAL DAMGAGES. **		
ï	)	ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE		
;	ر	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		
:	ز	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		
1	)	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 * * *		

PAGE: 001 REPORT NUMBER: 971 VAN WATERS & ROGERS INC. MSDS NO: HZ216830 MATERIAL SAFETY DATA SHEET VAN WATERS & ROGERS INC. VERSION: 001 MAINFRAME UPLOAD DATE: 01/08/99 PRODUCT: METHANOL 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: METHANOL MSDS #: HZ216830 1. CHEMICAL PRODUCT IDENTIFICATION PRODUCT NAME: METHANOL SYNONYMS: CARBINOL METHYL ALCOHOL METHYL HYDROXIDE MONOHYDROXYMETHANE 2. COMPOSITION / INFORMATION ON INGREDIENTS COMPONENT CAS NUMBER 67-56-1 99.5 -99.85% METHANOL \* \*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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MATERIAL SAFETY DATA SHEET

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PAGE: 002

VERSION: 001

PRODUCT: METHANOL

ORDER NO: PROD NO:

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, BRITTLENESS, CRACKING AND IRRITATION. PROLONGED AND REPEATED SKIN CONTACT 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, DIZZINESS, 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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PRODUCT: METHANOL

ORDER NO: PROD NO:

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 MILLI-LITERS, AND WHEN THERE IS EVIDENCE OF ACIDOSIS OR VISUAL ABNORMALITIES, A 10% SOLUTION OF ETHANOL IN 5% AQUEOUS DEXTROSE, ADMINISTERED INTRAVENEOUSLY, 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-

78.

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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 GOOR.

PHYSICAL STATE

: LIQUID

: 96.0 HG

VAPOR PRESSURE

(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

H20 = 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.

: 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.

REPORT NUMBER: 971 MSDS NO: HZ216830 VAN WATERS & ROGERS INC. PAGE: 007 MATERIAL SAFETY DATA SHEET VERSION: 001 MAINFRAME UPLOAD DATE: 01/08/99 PRODUCT: METHANOL ORDER NO: ٦ PROD NO : 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 BIO-LOGICAL TREATMENT IN FEDERAL/STATE APPROVED FACILITY. HAZARDOUS WASTE (40 CFR 261): YES; U154, D001. 14. TRANSPORT INFORMATION : METHANOL SHIPPING NAME : 3, FLAMMABLE LIQUID HAZARD CLASS SUBSIDIARY HAZARD : 6, POISONOUS MATERIALS UNITED NATIONS NO. : UN1230 : II PACKING GROUP 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, Rİ 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)

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ORDER NO: PROD NO :

SARA 304 : METHANOL 99.85% (67-56-1) SARA 311 : 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 HAZ-ARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFOR-MATION REQUIRED BY THE CPR. 16. OTHER INFORMATION

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REPORT NUMBER: 971 VAN WATERS & ROGERS INC. MSDS NO: HZ216830 MATERIAL SAFETY DATA SHEET PAGE: 009 VERSION: 001 MAINFRAME UPLOAD DATE: 01/08/99 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 MERCHANTIBILITY 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 DAMGAGES. \*\* ) 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, VWAR 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

\* \* \* 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
P'-trict III - (505) 334-6178
Rio Brazos Road

District IV - (505) 827-7131

# New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division/ RECEIVED

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

SEP 1 7 1999

Submit Original Plus 1 Copy to appropriate District Office

Form C-138

Originated 8/8/95

Environmental Bureau
Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

REQUEST FOR APPROVAL TO ACCEPT	OOLID WAGTE
1. RCRA Exempt: Non-Exempt: X	4. Generator ELPASO Field Seev.
Verbal Approval Received: Yes No 🔽	5. Originating Site Chaeo Plant
2. Management Facility Destination KEY Excesy Disposar	6. Transporter Key Andor others
3. Address of Facility Operator C23500 #345 AZEC , NM	8. State NM
7. Location of Material (Street Address or ULSTR) 与している。 S.J. Co Nm	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	d for transport.
	PORATION PONDS'  ECEIVED  SEP 1 4 1999  IL COM, DIV.
Estimated Volume 43,000 BBLS cy Known Volume (to be entered by the operations)	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Waste Management Facility Authorized Agent  TITLE: MER	DATE: 9-13-99
	ELEPHONE NO. <u>565-334-6186</u>
APPROVED BY: Martinu Mich TITLE: Encironme	

### **CERTIFICATE OF WASTE STATUS**

Generator Name and Address:	Destination Name:
El Paso Field Services Co.	Key Energy Services – Attn. Mike Tolvich
614 Reilly Avenue	P. O. Box 900
Farmington, NM 87401	Farmington, New Mexico 87499
3. Originating Site (name):	Location of Waste(Street address &/or ULSTR):
Chaco Plant	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 pon-	ds
ı, David Bays	representative for:
(Print Name)	
Fl Paso Field Services	Co. do hereby certify that,
	very Act (RCRA) and Environmental Protection Agency's July,
	N-EXEMPT oilfield waste which is non-hazardous by acteristic analysis or by product identification
and that nothing has been added to the exempt or r	non-hazardous waste defined above.
For NON-EXEMPT waste only, the following docum	nentation is attached (check appropriate items):
MSDS Information  X RCRA Hazardous Waste Ar  Chain of Custody	Other (description) nalysis
Name (Original Signature):	Baye
Title: Principal En	vironmental Scientist
Date: September	9, 1999

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 leviewed to proposed with you.

Respectfully submitted, Envirotech, Inc.

Stacy W. Sendler

Environmental Scientist/Laboratory Manager

tacy W Sendler

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### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client:

El Paso Field Services

Project #:

903901

Sample ID:

990377

Date Reported:

08-31-99

08-26-99

Lab ID#:

G010

Date Sampled:

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

**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.

#### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: El Paso Field Services

Project #:

903901 08-31-99

Sample ID: Lab ID#: 990378 G011 Date Reported: Date Sampled:

08-26-99

Sample Matrix: Preservative:

Water

Date Received:

08-27-99

Condition:

Cool and Intact

Date Analyzed: Chain of Custody: 08-27-99

6082

**Parameter** 

Result

**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

Reviev

### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sample ID: El Paso Field Services

Project #:

903901

Lab ID#:

990379 G012

Date Reported:

08-31-99

Sample Matrix:

Water

Date Sampled: Date Received: 08-26-99 08-27-99

Preservative:

Cool

Date Analyzed:

08-27-99

Condition:

Cool and Intact

Chain of Custody:

6082

**Parameter** 

Result

**IGNITABILITY:** 

Negative

**CORROSIVITY:** 

Negative

pH = 6.57

**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. S. Contact Pond.

### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### EPA 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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

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.

Allen L. Cyleun Analyst

### **EPA METHODS 8010/8020** AROMATIC / HALOGENATED **VOLATILE ORGANICS**

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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, SV	V-846, USEPA, July 1992.
	Method 5030, Purge-an	d-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.



### **EPA METHODS 8010/8020** AROMATIC / HALOGENATED **VOLATILE ORGANICS**

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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

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. S. Contact Pond.



### EPA METHOD 8040 PHENOLS

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 P. Ogjeccan



### **EPA METHOD 8040 PHENOLS**

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.



### EPA METHOD 8040 PHENOLS

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.

Stacy W Sendler

∖nalyst



### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

ND - Parameter not detected at the stated detection limit.

OA/OC Assentance Criteria	amatar I	Paraant Daggrans
QA/QC Acceptance Criteria Par	ameter i	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.

Dec P. Giesen



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

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

ND - Parameter not detected at the stated detection limit.

enyl 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 L. Oferen



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

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 Q'even

Stacy W Sendler
Review



### **EPA METHOD 1311 TOXICITY CHARACTERISTIC** LEACHING PROCEDURE TRACE METAL ANALYSIS

	•		
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

	Concentration	Det. Limit	Regulatory
Parameter	Concentration (mg/L)	(mg/L)	Level (mg/L)
		( 5 )	(,
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.

#### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

# 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

		Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(mg/L)
Arsenic	0.002	0.001	5.0
Barium	2.22	0.01	3.0 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 Analyst

Stacy W Sendler
Review

### **EPA METHOD 1311 TOXICITY CHARACTERISTIC** LEACHING PROCEDURE TRACE METAL ANALYSIS

		•	
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.



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION

### 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Bromofluorobenzene 100% 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.

Deu L. Oylecen

Stacy W Sendler
Review

### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-31-99
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

	Concentration	Detection Limit	Regulatory Limits
Parameter	(mg/L)	(mg/L)	(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.

Aleunh. afreuen

Stacy W Sendler
Review



### PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-31-99
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:	08-27-99

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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

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

Client:

**QA/QC** 

Project #:

N/A

Sample ID:

Matrix Spike

Date Reported: Date Sampled:

08-31-99

Laboratory Number:

G010

N/A Date Received:

Sample Matrix:

TCLP Extract

N/A

Analysis Requested: Condition:

TCLP N/A

Date Analyzed:

08-30-99

ate	Extracted:	N/A

			Spiked			SW-846
	Sample	Spike	Sample	Det.		% Rec.
	Result	Added	Result	Limit	Percent	Accept.
Parameter	(mg/L)	(mg/L)	(mg/L) (mg/L)		Recovery	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.



# EPA METHOD 8040 PHENOLS Jality Assurance Repo

### 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		Detection	Regulatory	
	Concentration	Limit	Limit	
Parameter	(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 G010 - G012.

Analyst Geren



# EPA METHOD 8040 PHENOLS Quality Assurance Report

<b>6</b> "	04/00		N1/A
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

Stacy W Sendler
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.

Deur L. Oferen



# 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:	08-31-99
Laboratory Number:	08-30-TBN	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-30-99
		Analysis Requested:	TCLP

	Concentration	Det. Limit	Regulatory Limit
Parameter	(mg/L)	(mg/L)	(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 A. Cylensen

Stacy W Sendler
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

	Concentration	Det. Limit	Regulatory Limit
Parameter	(mg/L)	(mg/L)	(mg/L)
	(***3,**3)	(3	\g/
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 Accep	tance Criteria	Parameter	Percent Recovery
		2-fluorobiphenyl	97%
References:	Method 3510, Separato	Characteristic Leaching Procedure, S bry Funnel Liquid-Liquid Extraction, S matics and Cyclic Ketones, SW-846, I	W-846, USEPA, July 1992.
Note:		d on 40 CFR part 261 Subpart C sect	. ,

Comments: QA/QC for samples G010 - G012.

Analyst A. Og'even



## 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

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference

#### 8090 Compounds

30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992. Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples G010 - G012.

Analyst A. Carecer

## ENVIROTECH LABS PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client:	QA/QC	Project #:	N/A
Sample ID:	08-30-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	Detectio	n Sample	e Duplicate	e % 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	ИĎ	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	Sampl	e Spiked Sample		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%

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 G010 - G012.

Itacy W Sendler

# CHAIN OF CUSTODY REGORD

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 882-91-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
Pirtict III - (505) 334-6178
Rio Brazos Road
Aug., 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

SEP 0 7 1999

Originated 8/8/95

Submit Original
Plus 1 Copv

to appropriate

District Office

Form C-138

ENVIRONMENTAL BUREAU

UIL CONSERVATION STATE

REQUEST FOR APPROVAL TO ACCEPT	SOLID WAS TE
1. RCRA Exempt: Non-Exempt: 🔀	4. Generator WFS
Verbal Approval Received: Yes No 🔀	5. Originating Site MILAGEO PLANT
2. Management Facility Destination (VEY DISPOSA L	6. Transporter Key
3. Address of Facility Operator LR 3500 #345 AZIEC NM	8. State
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 accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	d for transport.
	OIL CON. DIV. DIST. 3
Estimated Volume 2500 + 6615cy Known Volume (to be entered by the op	perator at the end of the haul) cy
SIGNATURE: Maste Management Pacility Authorized Agent  TITLE: Mcal	DATE: 9-1-99
	LEPHONE NO. <u>605-334-6186</u>
(This space for State Use)	
APPROVED BY: Deny 20 year TITLE: FED	log/5 DATE: 9/3/99
•	mula/Gcologist DATE: 9/7/99

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
WILLIAMS FIELD SERVICES	1/ ,
192 CR 4900	KEY EVERCY DISPOSAL
Bloomfreld NM 87413	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
MILAGRO PLANT	W.
192 Ce 4900	• <u>•</u>
Bloomfield NM 87413	
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Waste Water PONOS	
	Sept.
_	
" NELSON M SLy FF!	representative for:
(Print Nàme)	
	de beaute, alex
WILLIAMS FIRED SERVICES	do hereby certify that,
according to the Resource Conservation and Recove	ry Act (RCRA) and Environmental Protection Agency's July,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  IPT oilfield waste which is non-hazardous by characteristic
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  IPT oilfield waste which is non-hazardous by characteristic by product identification
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEM analysis of and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt or not a second and that nothing has been added to the exempt of the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second a	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic by product identification  n-exempt non-hazardous waste defined above.
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT analysis of	ry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic by product identification  n-exempt non-hazardous waste defined above.
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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. Sendler

Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.lb1/wpd



#### SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: Sunco Disposal

Project #:
Date Reported:

98065-02 10-30-98

Lab ID#:
Sample Matrix:

Plant E120 Soil

Date Sampled:
Date Received:

10-29-98 10-29-98

Preservative: Condition:

Cool and Intact

Date Analyzed: Chain of Custody: 10-29-98

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 Milagro Plant.

Analyst Macter

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E708 IF C. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fay 505 • 632 • 1865



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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%

Trifluorotoluene 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.

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Stacy W Sendler.
Review Review



#### EPA METHOD 8040 PHENOLS

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-Cresoi	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 Green

Stacy W Sendler



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

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
arta recopiance ontena	raidilictor	1 CICCIL ICCOVER

#### 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.

Decent. Ogina

Stary W Sendler



## EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

		Det.	Regulatory
Condition:	Cool & Intact	Analysis Needed:	TCLP metals
Preservative:	Cool	Date Extracted:	N/A
Sample Matrix:	Water	Date Analyzed:	11-12-98
Chain of Custody:	6371	Date Received:	10-29-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Sample ID:	Plant	Date Reported:	11-13-98
Client:	Sunco Disposal	Project #:	98065-02

	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(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.

Alexander L. Querca

Stacy W Lendler



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



## 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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
Tetrachioroethene	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.

Arlayst R. Gleen



## 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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.

Analyst Queen

Review Stacy W Sendler



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

N/A

N/A

N/A

11-12-98

11-11-98

Client: QA/QC Project #: Date Reported: Sample ID: Matrix Duplicate Laboratory Number: E120 Date Sampled: Date Received: Sample Matrix: **TCLP Extract** Analysis Requested: **TCLP** Date Analyzed:

Condition: N/A

Date Extracted:	N/A

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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.



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

Client:
Sample ID:

QA/QC Matrix Spike Project #:
Date Reported:
Date Sampled:

N/A 11-12-98

N/A

N/A

Laboratory Number: Sample Matrix: Analysis Requested:

E120 TCLP Extract TCLP

Date Received:
Date Analyzed:
Date Extracted:

N/A 11-11-98

Condition:

N/A

			Spiked			SW-846
	Sample	Spike	Sample	Det.	Percent Recovery	% Rec. Accept. Range
	Result	Added	Result	Limit		
Parameter	(mg/L)	(mg/L)	L) (mg/L)	(mg/L)		
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
Tetrachioroethene	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.

- L. Green



# 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
, <del>·</del>	Concentration	Limit	Limit
Parameter	(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	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.

Alex R. Ogleven



## 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-Fluorophenoi	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.

Dece L. Okieen

Review Stary W Sendler



## 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 Resuit (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
	0040	

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 E120 and E147 - E148.

Den L. Ogieran



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

Client: QA/QC Project #: N/A Date Reported: 11-12-98 Sample ID: Laboratory Blank Laboratory Number: 11-12-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: 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.

Analysi Analysi Queen

Stacy W Sendler



## EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-12-98
Laboratory Number:	11-04-BN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-04-98
Condition:	Cool and Intact	Date Analyzed:	11-12-98
		Analysis Requested:	TCLP

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

Alexa L. Ogiacan

Review Stacy W Sendler



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	11-12-98
		Analysis Requested:	TCLP

	Sample Result	Duplicate Result	Percent	Det. Limit
Parameter	(mg/L)	(mg/L)	Difference	(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

ND - Parameter not detected at the stated detection limit.

	<del></del>	
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.

Alle L. Ceine

Stacy W Sendler

## 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	225775 Care - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Method	Detection	Sample:	- Duplicate	<b>%</b>	Acceptance.
Conc. (mg/L)		Blank :	Link .			Diff.	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 Sono (mg/L)	Spiker	A COLUMN THE RESERVE THE PARTY.	THE RESERVE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE	Percent Recovery	Acoppanes Rense
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% - <b>120</b> %

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 E120 and E147.

Allen L. Ceren

Stary W Sendler

# CHAIN OF CUSTODY RECORD

SUNCO DISPORT	ب		WFS ML	MLLAGED Plant		ļ	ANALYS	ANALYSIS / PARAMETERS		
Sampler:			Client No.		SJ				Remarks	rtes
MIKETALOUICA	J.		980es	45 -02	lo .o	d d	,			
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix		151		· .		9 ( 14) ( ) ( ) ( ) ( ) ( ) ( )
	८५६०।	0601	E120	water	01	<u>`</u>		-		
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				(505) 632-0615	0615			Cool - k	Cool - Ice/Blue Ice	
6										

SCICE 1: (505) 393-6161 ). Box 1980 bbs. NM 88241-1980 SCICE 11: (505) 748-1283 csia, NM 88210 crict III - (505) 334-6178 Rio Brazos Road

(This space for State Use)

APPROVED BY:

#### New Mexico

Energy Minerals and Natural Resources Department

Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

RECEIVE

to appropriate District Office

SEP 0 7 1999

Submit Original Plus 1 Copy

Form C-138

Originated 8/8/95

c, NM 87410	(303) 621-1131	District Offi
ric IV - (505) 827-7131		ENVIRONMENTAL BUREAU
REQUEST FOR	APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: 🔀		4. Generator FARMWETON Changer L Dist
Verbal Approval Received: Yes	No 🖾	5. Originating Site FCO PLANT FARMINGTON NM
2. Management Facility Destination KEY EN	veegy Services/Disposal	6. Transporter Key or FCD
3. Address of Facility Operator #345 CR		8. State NM
7. Location of Material (Street Address or UL	STR) 3911 MONPOR Rd	· .
9. <u>Circle One</u> :		
Generator; one certificate periob.  (B.) All requests for approval to accept no	on-exempt wastes must be acc and the Generator's certification	companied by a certification of waste from the companied by necessary chemical analysis to on of origin. No waste classified hazardous by ed for transport.
BRIEF DESCRIPTION OF MATERIAL:		
BMALL AMOUNTS of BISULFI	te Mro-Sulfate A	NO CAUSTIC MIDEO.
Brish amounts of Bisulfit		the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
*		PECEIVED AUG 3 1 1999
		OIL CON. DIÙ.
Estimated Volume 12066/s cy Know	wn Volume (to be entered by the c	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Management Facility Authorized	TITLE: M&A	DATE: 8431-991
TYPE OR PRINT NAME: MICHAEL TA	1	ELEPHONE NO. 505-334-6/86

ITLE: GeologiS,



## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
	Kon Treasur Coorners Dicrosol
Chem. Dist Inc / Fremington Ches Dis	KEY ENERGY Seevices/DISPOSAL
3. Originating Site (name):  FC D - PlAnt	Location of the Waste (Street address &/or ULSTR):  3911 MonRoe Rd
farming for 1-M	Fremington N.M 87401
Attach list of originating sites as appropriate 4. Source and Description of Waste	
Bisulfite - Plain water	
Thio-sulfate.	
SMALL Amount of Chistic with Co	ty.where
, Jerry Huglias	representative for:
(Print Name)	
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	do hereby certify that ry Act (RCRA) and Environmental Protection Agency's July waste is: (Check appropriate classification)
EXEMPT oilfield waste NON-EXEM analysis or	MPT oilfield waste which is non-hazardous by characteristic r by product identification
and that nothing has been added to the exempt or no	n-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following documents of MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	mentation is attached (check appropriate items): Other (description):
Name (Original Signature): Jens Hrs	h
Title: Operations Mone	agel
Date: 8-3(-99	<u>'</u>



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. Sendle

Environmental Scientist/Laboratory Manager

u W Sendler

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.



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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.

Den L. Oglesen



## EPA METHOD 8040 PHENOLS

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 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:

3911 Monroe Rd.

Alexander Cylerander

Review Stacy W Sendler



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

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

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:

3911 Monroe Rd.

Deur L. Ogian



## EPA 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

		Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(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.

Deu L. Ofenen



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10 <b>-</b> 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 L. Opicer



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-10-99
Laboratory Number:	08-06-TCLP Vol	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	08-06-99
		Analysis Requested:	TCLP

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Accept	ance Criteria	Parameter	Percent Recovery
		Trifluorotoluene	99%
		Bromofluorobenzene	98%

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.

Deur L. Gjeur Stacy W sendler
Review



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	N/A

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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.

Aleur P. Gleun



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-10-99
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	0.0060	0.050	0.0554	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	0.0002	0.050	0.0499	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	0.0042	0.050	0.0540	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	42-143

ND - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.

Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994. Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments:

QA/QC for samples F814 - F815.

Analyst

Dovious



### EPA METHOD 8040 PHENOLS

#### Quality Assurance Report Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10-99
Laboratory Number:	08-10-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-10-99
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results		Detection	Regulatory
	Concentration	Limit	Limit
Parameter	(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.

Deur P. aferen



# 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

_	Concentration	Det. Limit	Regulatory Limit
Parameter	(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.

Allen L. Oylenn

Stacy W Sendler
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 R. Offeren



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-10-99
Laboratory Number:	08-10-TBN	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-10-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery

2-fluorobiphenyl

99%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples F814 - F815.

Allen L. Column



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	08-10-99
Laboratory Number:	08-06-TBN-MB	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool and Intact	Date Analyzed:	08-10-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachloroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

Note:

Comments:

QA/QC Accep	tance Criteria	Parameter	Percent Recovery	
		2-fluorobiphenyl	100%	
References:	Method 1311, Toxicity	311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July		
	Method 3510, Separat	ory Funnel Liquid-Liquid Extraction, S\	W-846, USEPA, July 1992.	
	Method 8090, Nitroaro	matics and Cyclic Ketones, SW-846, L	JSEPA, Sept. 1986.	

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

QA/QC for samples F814 - F815.

Re

Stacy W Sendler
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:	08-10-99
Laboratory Number:	F814	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-10-99
		Analysis Requested:	TCI P

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)	
Pyridine	ND	ND	0.0%	0.020	
Hexachloroethane	ND	ND	0.0%	0.020	
Nitrobenzene	ND	ND	0.0%	0.020	
Hexachlorobutadiene	ND	ND	0.0%	0.020	
2,4-Dinitrotoluene	ND	ND	0.0%	0.020	
HexachloroBenzene	ND	ND	0.0%	0.020	

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference

#### 8090 Compounds

30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992. Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples F814 - F815.

Allen L. Cefeu



# 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	NĎ	0.098	98.0%	80% - 120%
Barium	1.00	0.22	1.20	98.4%	80% - 120% 80% - 120%
Cadmium	0.500	0.024	0.523	99.8%	80% - 120%
Chromium	0.25	0.23	0.47	97.9%	80% - 120%
Lead	1.00	ND	0.99	99.0%	80% - 120%
Mercury	0.0250	ND	0.0249	99.6%	80% - 120%
Selenium	0.100	ND	0.097	97.0%	80% - 120%
Silver	1.00	ND	0.99	99.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References:

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

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals,

SW-846, USEPA, December 1996.

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

Comments:

QA/QC for samples F789, F814 and F815.

nalyst

Review

# CHAIN OF CUSTODY RECORD

ENVIROTECH INC 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615	Relinquished by: (Signature)	Relinquished by: (Signature)  Date  Time Received by: (Signature)  Received by: (Signature)  Received by: (Signature)				Copyredy	17 P-1/08 11.11 EAIH	) Sample Sample Zab Number Sample Z	Honry Broad Pasial		Farmington (hemical 3911 Mange Rd	Client / Project Name Project Location
Sample Receipt  A  Received Intact  Cool - Ice/Blue Ice	Signature)	Signature)  Date Time 8.4.99 10'.30  Signature)						# H	4P	2 Remarks	AINALI GIG / FAIDAME I E INC	AND YOU LEADANGTEDS

strict I - (505) 393-6161 ). Box 1980 bbs. NM 88241-1980 strici II - (505) 748-1283 1 S. First csia, NM 88210 urict III - (505) 334-6178 7 Rio Brazos Road .cc, NM 87410

# New Mexico

Energy Minerals and Natural Resources Department

RECEIVE Dil Conservation Division 2040 South Pacheco Street

AUG 2 1999

Submit Original Plus 1 Copy

Form C-138

Originated 8/8/95

Santa Fe, New Mexico 87505 (505) 827-7131

rict IV - (505) 827-7131 Environmental Bureau	AUG 2 3 1999 D
REQUEST FOR APPROVAL TO ACCEPT	
1. RCRA Exempt: Non-Exempt: X	DISTO 3  4. Generator COASTACCHEMICAL
Verbal Approval Received: Yes No Y	5. Originating Site VARD
2. Management Facility Destination KEY ENDROY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #349 CR3500 AZJec, NM	8. State UM
7. Location of Material (Street Address or ULSTR) YARD FRANKION NA	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	companied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	ed for transport.
BRIEF DESCRIPTION OF MATERIAL:	
RONWATER MIXED WITH SMAll AMOUNTS OF UNI	used chemicals
*	•
	\e∂
I WAY A	1,98
Last F	
Estimated Volume ZeoGbC cy Known Volume (to be entered by the c	operator at the end of the haul) ————————————————————————————————————
SIGNATURE: Management Facility Authorized Agent  TITLE: MGE	
TYPE OR PRINT NAME: MICHAEL TALOUICH TE	ELEPHONE NO. <u>505-334-6186</u>
(This space for State Use) APPROVED BY: Deing G. TITLE: Geo	0/09/5 DATE: 8/23/99

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
COASTAL CHEMICAL CO. INC.	KEY ENERGY SERVICES
#10 RD 5911	345 RD 3500
FARMINGTON, NM 87401	AZTEC, NM 87410
	<u> </u>
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR): COASTAL CHEMICAL CO. INC.
	#10 RD 5911
	FARMINGTON, NM 87401
	PARMINGION, NII 07401
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
RINSE WATER FROM PUMP HO	SES AND TANKS USED TO DELIVER VIRGIN
CHEMICALS, ALL CHEMICALS	RINSED OUT ARE VIRGIN/UNUSED CHEMICALS.
CHEMICALS MAY INCLUDE: A	LKANOLAMINE, GLYCOL (TEG & EG)
ANTIFREEZE.	EMMODATINE, GETCOL, (IEG & EG)
	The Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Co
	112
	•
I, GARY HARDIN	representative for:
(Print Name)	
COASTAL CHEMICAL CO., INC.	do hereby certify that,
according to the Resource Conservation and Reco 1988, regulatory determination, the above describ	overy Act (RCRA) and Environmental Protection Agency's July, ped waste is: (Check appropriate classification)
	XEMPT oilfield waste which is non-hazardous by characteristic is or by product identification
and that nothing has been added to the exempt or	r non-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following do  XX MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	ocumentation is attached (check appropriate items): Other (description): s
Name (Original Signature):  Title: FACILITY MANAGER  Date: 8-20-99	Landin



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



. Bow 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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Dôw Chemical U.S.A.\* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 55520 Page: 3

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:

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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 esophagoscopic 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.
(R) Indicates a trademark of The Dow Chemical Company

<sup>\*</sup> An Operating Unit of The Dow Chemical Company

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

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

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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

#### MATERIAL BAFETY DATA BHEET TRIETHYLENE BLYCOL

downWind side.

breathing smoke , fumes, mist or yapors on the

		1	HM18 HEAL			
•		B O	HMIB REAL			
\$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CECTION 1 — ID	ENTIFICATION	변 1대 III III III 1 1 1 1 1 1 1 1 1 1 1 1	· 三日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日		
DIBTRIBUTED BY	COASTAL CHEMICAL P.D. BOX 820 ABBEVILLE, LA 7	COMPANY, 1NC	는 별 및 및 및 및 C 및 및 및	***************************************		
EMERBENCY PHONE NUMBER EFFECTIVE DATE MANUFACTURER'S NAME	(318) 893-3862 2385-288 (818) 200-28699 200-28699	OR CHEMTREC	(BOO) 424	-9300 -		
TRADE NAMECHEMICAL FAMILYCAS NUMBERCHEMICAL FORMULA	. 112-27-6	COL YCOL				
RECTION II — HAZARDOUS INGREDIENTS						
THE ZARDUUS CUMPONENTS	# 100 kel ka we we ke ke pa m m m m m m m m m m m m	LV (Unite)	4444444	PRUD. CAS #		
GLYCOL GLYCOL	99 None Establi	shed		112-27-6		
	BECTION III — F	HYBICAL DATA				
FREZING POINT (F) ~7 Deg. C., 19 Deg. F.  VAPOR PRESSURE (mm Hg) (1 mm  VAPOR DENSITY (Air=1) 5.2, Air = 1  SOLUBILITY IN H20 Completely soluble in all proportions APPEARANCE/ODOR Clear, colorless, viscous liquid with slight odor.  BPECIFIC GRAVITY (H20=1). i.i @ 77 Deg. F., 25/25 Deg.C  PH						
SECTION IV - FIRE AND EXPLUSION HAZARD DATA						
FLASH POINTLOWER FLAME LIMITHIGHER FLAME LIMITEXTINGUISH MEDIA	0.9	or spray, Alc				

#### MATERIAL BAFETY DATA BHEET TRIETHYLENE GLYCOL

#### BECTION V - HEALTH HAZARD DATA

RESHOLD LIMIT VALUE.... Recommended 5 MG/M3 based on oil mist.

ROUTED OF ENTRY.

INHALATION?

DKIN?

INGESTION?

Irritant

Mild irritant

Irritant

HEALTH HAZARDS...... ACUTE: Vapors or liquid may be irritating to skin, eyes, or mucous membranes. Avoid inhalation or skin/eve contact.

CARCINOGENICITY NO

NTP? NO

IARC MONOGRAPHB?

**DSHA REGULATE** Nn

Nn

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye implitation 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 shows. Get medic attention. Wash clothing before reuse. If smallowed 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. Bet medical attention.

#### BECTION VI - REACTIVITY DATA

CHEMICAL BTABILITY..... Product is stable

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

INCOMPATIBLE MATERIALS ... Oxidizers or Oxidizing Materials.

DECOMPOSITION PRODUCTS... From firs; Smoke, Carbon dioxide, & Carbon Honoxide

HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID.... None

#### BECTION VII - BPILL OR LEAK PROCEDURE

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

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

#### BECTION VIII - BPECIAL PROTECTION

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

ENTILATION ...... Required in closed areas .CHANICAL EXHAUST..... Required in closed areas

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVEB..... Wear impervious gloves

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

#### MATWINAL BAFETY DATA BHEET TRIETHYLENE GLYCOL

DTHER PROTECTIVE

EQUIPMENT...... Chemical type apron recommended

#### BECTION IX - BPECIAL HANDLING

HANDLING AND STORAGE.... Store away from oxidizers or materials bearing a vellow "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, syes, 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 Bection V. Use with adequate

ventilation.

HAZARD CLASS..... Not Regulated

DOT BITTPING NAME..... Triethylene Blycol REPORTABLE DUANTITY (RG). None UN NUMBER..... None NA #..... None

PACKADINE SIZE..... N/A

#### SECTION X - REGULATURY

TPA ACUTE..... YEB PA CHRONIC..... NO EPA IGNITABILITY..... NO EPA REACTIVITY..... NO EPA SUDDEN RELEASE OF ND PRESSIRE.....

CERCLA RO VALUE..... None

BARA TEQ. .... None SARA BUL.... None SECTION 313..... No

EPA HATARD WASTE #..... None CLEANAIR..... Yes Section 111

CLEAN WATER..... No

FOOT MOTES 'N/A - not applicable N/D - no data available ( - manne less than ) - means greater than App. - approximate Est. - setimated

PREPARED BY:.......... Glen White, 8.1.8., 817-560-4631

## MATERIAL SAFETY DATA SHEET TRIETHYLENE GLYCOL

THIS PRODUCT'S HEALTH AND BAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMER ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE FURNATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED BE ACCURATE, ALTHOUGH NO SUARANTEE 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 TRIETHLYLENE GLYCOL REPROCESSED

HMIS HEALTH

. HMIS FLAMMABILITY

			REACTIVITY PERSONAL PROTECTIO			
-	SECTION I - IDENTI	FICATION				
DISTRIBUTED BY		IPANY, INC				
EMERGENCY PHONE NUMBER EFFECTIVE DATE MANUFACTURER'S NAME		CHEMTREC (800)	424-9300			
TRADE NAME CHEMICAL FAMILY CAS NUMBER CHEMICAL FORMULA	POLYETHYLENE GLYCOL 112-27-6	REPROCESSED				
	ON II - HAZARDOUS	INGREDIENTS				
HAZARDOUS COMPONENTS	% TLV (l	· · · · · · · · · · · · · · · · · · ·	PROD. CAS #			
TRIETHYLENE GLYCOL	98 None Established		112-27-6			
SECTION III - PHYSICAL DATA						
FREEZING POINT (F) VAPOR PRESSURE (mm Hg) VAPOR DENSITY (Air=1) SOLUBILITY IN H20 APPEARANCE/ODOR SPECIFIC GRAVITY (H20=1). PH	-7 Deg. C., 19 Deg. (1 mm 5.2, air = 1 Completely soluble it Light amber color, v 1.1 @ 77 Deg. F., 25	F. n all proport iscous liquid	ions			
SECTION IV - FIRE AND EXPLOSION HAZARD DATA						
FLASH POINT	350 Deg. F. 0.9 9.2 Use water fog or sp Carbon Dioxide (CO2)	ray, Alcohol Follower of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the c	cam, Dry Powder, rnal pressure if r. Keep unnecessary pwind side. Avoid			
	CTION V - HEALTH					

THRESHOLD LIMIT VALUE.... Recommended 5 MG/M3 based on oil mist.

#### MATERIAL SAFETY DATA SHEET TRIETHLYLENE GLYCOL REPROCESSED

ROUTES OF ENTRY

INHALATION?

SKIN?

NO

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 MO

NTP? NO

IARC MONOGRAPHS?

OSHA REGULATE

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 medica attention. Wash clothing before reuse. If swallowed, do not induce vomiting, get immediate medical attention. If inhaled, remove to fresh air. breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

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#### - REACTIVITY DATA SECTION VI

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.

OTHER PROTECTIVE

EQUIPMENT..... Chemical type apron recommended

## MATERIAL SAFETY DATA SHEET TRIETHLYLENE 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

EFA CHRONIC..... NO

EPA IGNITABILITY..... NO

EPA REACTIVITY..... NO

EPA SUDDEN RELEASE OF

TRESSURE...... NO

CERCLA RO VALUE..... None

SARA TPO..... None

SARA RO..... 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 CUSTOME 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

CAS#

MSD: 002850

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS
Proprietary alkylamine

**:** 

AMOUNT (%w/w)

Proprietary alkylamine Water

CAS# 007732-18-5

90 to 100% 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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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 esophagoscopic 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% 19.6% UFL:

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

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Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE Product Code: 29451

Effective Date: 06/30/94 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.

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

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Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE Product Code: 29451

Effective Date: 06/30/94 Date Printed: 07/25/95

MSD: 002850

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 spashes. Eye wash fountain should be located in immediate work area.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT VAPOR PRESSURE : 306-324F, 152-162C

VAPOR DENSITY

: <2.5 mmHg @ 20C : 2.6

: Complete

SOLUBILITY IN WATER SPECIFIC GRAVITY

: 0.93-0.94 @ 20/200

FREEZING POINT

: -4.5C, 24F

APPEARANCE

: Colorless liquid

ODOR

Same and the state of the same

: Amine

#### 10. STABILITY AND REACTIVITY

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

(SPECIFIC MATERIALS TO AVOID) INCOMPATIBILITY: 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)

<sup>(</sup>R) Indicates a Trademark of The Dow Chemical Company

PAGE: 5

Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE

Product Code: 29451

Effective Nate: 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

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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

PAGE: 6

Product: GAS/SPEC (R) CS-PLUS SOLVENT ADDITIVE

Product Code: 29451

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Effective Date: 06/30/94 Date Printed: 07/25/95

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:** AMOUNT (%w/w) Proprietary alkylamine

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

Claim Registry Number: 3499

Filing Date: June 29, 1994

#### 16. OTHER INFORMATION

PRODUCT USE: Gas conditioning solvent.

REVISION INDICATOR: Revised section 15

<sup>(</sup>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, Michigan (1867)

Page: 1

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

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

MSU: 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

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

(Continued on page 2 , over)
(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 2

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

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Effective Date: 06/30/94 Date Printed: 01/10/95 MSD

MSD: 003430

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 extneded period of time to remove as much caustic as possible. Duration of irrigation and treatment is at the discretion of medical personnel. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophagoscopic control. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

#### 5. FIRE FIGHTING MEASURES

(Continued on page 3)
(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 3

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 06/30/94 Date Printed: 01/10/95 MSD: 003430

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 scenarics, not spills). See also "storage and handing" section of this MSDS.

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

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

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

#### 7. HANDLING AND STORAGE

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

(Continued on page 4, over) (R) Indicates a Trademak of The Dow Chemical Company

PAGE: 4

Product: GAS/SPEÇ (R) CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 06/30/94 Date Printed: 01/10/95

MSD: 003430

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. Sclection 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 VAPOR PRESSURE

183C, 361F : 0.5 mmHg @ 25C

VAPOR DENSITY

3.5

SOLUBILITY IN WATER SPECIFIC GRAVITY

: Complete 1.01 @ 25/250

FREEZING POINT

-23.1C

APPEARANCE

Pale straw liquid

ODOR

: Amine odor

#### 10. STABILITY AND REACTIVITY

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

(Continued on page 5)

(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 5

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 06/30/94

Date Printed: 01/10/95

MSU: 003430

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. Chemcial 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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(Continued on page 6, over)
(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 6

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

Effective Date: 06/30/94 Date Printed: 01/10/95

MSD: 003430

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

(Continued on page 7) (R) Indicates a Trademark of The Dow Chemical Company

PAGE: 7

Product: GAS/SPEC (R) CS-PLUS SOLVENT

Product Code: 13693

Iffective Date: 06/30/94 Date Printed: 01/10/95

MSD: 003430

#### 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 PAI

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

#### OSHA HAZARD COMMUNICATION STANDARD:

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

#### CANADIAN REGULATIONS

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

B3 - combustible liquid with a flash point between 37.8C and 93.3C - corrosive to metal or skin Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's

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:** (w\ws) TNUOMA CAS #

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:

(Continued on page 8, over) (R) Indicates a Trademark of The Dow Chemical Company

workplace education program.

PAGE: 8

Product: GAS/SPEC (R) CS-PLUS SOLVENT Product Code: 13693

Effective Date: 06/30/94

Date Printed: 01/10/95

#### REGULATORY INFORMATION (CONTINUED)

Claim Number: 3500

Filing Date: June 29, 1994

16. OTHER INFORMATION

MSDS STATUS: Revised section 15

PRODUCT USE: Gas conditioning solvent.

<sup>(</sup>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.

#### ETHYLENE GLYCOL

HMIS HEALTH

HMIS FLAMMABILITY

HMIS REACTIVITY

1

0

		В	HMIS	PERSONAL	PROTECTION
*======================================	SECTION I -	IDENTIFICATION	ſ		
DISTRIBUTED BY		CAL COMPANY, INC			: <b>2525</b> 255555
EMERGENCY PHONE NUMBER EFFECTIVE DATE MANUFACTURER'S NAME	(318) 893-386 2/06/1996	2 OR CHEMTREC	(800)	424-9300	•
TRADE NAME	GLYCOL 107-21-1	OL .			
SECT		======================================			:=========
hAZARDOUS COMPONENTS	:========== %	========= TLV (Units)			). CAS #
ETHYLENE GLYCOL	100% ACGIH	CEILING 50ppm		107-	-21-1
*======================================	SECTION III -	PHYSICAL DATA	=====		: <b>===</b> =====
FREEZING POINT (F) VAPOR PRESSURE (mm Hg) VAPOR DENSITY (Air=1) SOLUBILITY IN H20 APPEARANCE/ODOR SPECIFIC GRAVITY (H20=1). PH	0.12 MMHG @ 25 2.14 COMPLETELY MIS COLORLESS LIQU 1.1155 @ 20/20 N/A	SCIBLE UID; PRACTICALL 0 C			
SECTION	IV - FIRE AN	D EXPLOSION HAZ	ARD DA	ATA	
FLASH POINT	247 DEG F N/D N/D Water fog or (CO2) NONE KNOWN App	spray, Foam, Dr proach fire fro ke ,fumes, mist	y Powo	ler, Carbo	on Dioxide Avoid

#### ETHYLENE GLYCOL

\_\_\_\_\_\_\_\_ SECTION V - HEALTH HAZARD DATA THRESHOLD LIMIT VALUE.... 50 PPM BASED ON ETHYLENE GLYCOL ROUTES OF ENTRY INHALATION? SKIN? INGESTION? IRRITANT, POSSIBLY Not expected to Ingestion of very NARCOTIC cause significant large amounts health hazard 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 NTP? IARC MONOGRAPHS? OSHA REGULATED NO NO NO 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... Oxidizers or Oxidizing Materials. Alkaline Materials. DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide ZARDOUS POLYMERIZATION. Will not occur

.JLYMERIZATION AVOID.... None

#### 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.		
	CTION VIII - SPECIAL 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		
	Use chemical goggles or full face shield.		
OTHER PROTECTIVE			
EQUIPMENT	Chemical type apron recommended		
S	ECTION IX - SPECIAL HANDLING		
HANDIING AND STOPAGE	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			
	Bulk - Class 9		
DOT SHIPPING NAME	Drum - Ethylene Glycol		
	Bulk - Other regulated substances, liquid, n.o.s.		
	(ethylene glycol)		
REPORTABLE QUANTITY (RQ).			
UN NUMBER			
NA #	Drums - None; Bulk - NA3082		
PACKAGING SIZE			
	SECTION X - REGULATORY		

#### ETHYLENE GLYCOL

EPA ACUTE  EPA CHRONIC  EPA IGNITABILITY  EPA REACTIVITY  EPA SUDDEN RELEASE OF  PRESSURE	YES NO NO	
CERCLA RQ VALUE	5,000 pounds	
SARA TPQSARA RQSECTION 313		100%
EPA HAZARD WASTE # CLEANAIR	Yes, Section 111 and 1990 Amendments	
FOOT NOTES N/A - not app < - means less than > App approximate Est		
PREPARED BY:	Joe Hudman, Coastal Chemical Co., Inc.	713-477-6675

IS 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.

### COASTALGUARD 100 ANTIFREEZE/COOLANT

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		B HMIS	Ы
r			==::
. :		SECTION I - IDENTIFICATION	1
	=======================================	.======================================	===
	DISTRIBUTED BY	COASTAL CHEMICAL CO., INC.	,
1,00%		(318) 893-3862	
	EMERGENCY PHONE NUMBER		
•	EFFECTIVE DATE	2/06/1996	
3		COASTAL CHEMICAL CO., INC.	i
		COASTALGUARD 100 ANTIFREEZE/COOLAN	
		INHIBITED ETHYLENE GLYCOL SOLUTION	1 .
I	CAS NUMBER		
	CHEMICAL FORMULA	Blended Product	
		•	ļ
			===
nc. 713-477-6675	SEC	'ION II - HAZARDOUS INGREDIENTS	,
ı	**************************************		====
IGIGE OUD GUGEOMEDS	HAZARDOUS COMPONENTS	% TLV (Units)	
SIST OUR CUSTOMERS	ETHYLENE GLYCOL	95 % ACGIH CEILING 50ppm	i
REGULATIONS. THE AND IS BELIEVED	EINIDENE GLICOL	95 % ACGIN CELLING Suppli	
OR IMPLIED BY THE	=======================================		:=:
IN THE EXCLUSIVE		SECTION III - PHYSICAL DATA	
INE THE			:==
OVERNMENTAL	FREEZING POINT (F)	APPROX. 22 DEG F	
OVERMINENTAL	VAPOR PRESSURE (mm Hg)		
	VAPOR DENSITY (Air=1)		
	SOLUBILITY IN H20	COMPLETELY MISCIBLE 1	
	APPEARANCE/ODOR	YELLOW/GREEN LIQUID; PRACTICALLY O	DC
	SPECIFIC GRAVITY (H20=1).		
	РН	10.5 - 11.0	
		*******************************	:=:
	SECTION	IV - FIRE AND EXPLOSION HAZARD DA	AT?
			:=:
	FLASH POINT		
	LOWER FLAME LIMIT		
	HIGHER FLAME LIMIT		
	EXTINGUISH MEDIA	Water fog or spray, Foam, Dry Powd	le:
	IDVIOUS	(CO2).	
	UNUSUAL FIRE HAZARD		
		breathing smoke , fumes, mist or va	pc
		downwind side.	
			= :
	51	CTION V - HEALTH HAZARD DATA	

#### COASTALGUARD 100 ANTIFREEZE/COOLANT -

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

ROUTES OF ENTRY

INHALATION?

SKIN?

INGESTION?

IRRITANT, POSSIBLY Not expected to cause significant

large amounts

Ingestion of very

NARCOTIC

health hazard

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?

OSHA REGULATED

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

#### 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.
}	; ====================================	TION VIII - SPECIAL PROTECTION
	=======================================	When ventilation is not adequate, use of NIOSH approved organic vapor/acid gas cartridge respirator is recommended.
	LOCAL EXHAUST	Required in closed areas Required in closed areas Desired
	OTHER PROTECTIVE	Use chemical goggles or full face shield.
	EQUIPMENT	Chemical type apron recommended
:		CTION IX - SPECIAL HANDLING
		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
:	PRECAUTIONARY MEASURES	water contamination. 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	
;	DOT SHIPPING NAME	
1	REPORTABLE QUANTITY (RQ). UN NUMBER NA #	None Drums - None; Bulk - NA3082
		=======================================
!	=======================================	SECTION X - REGULATORY
i	EPA ACUTE EPA CHRONIC EPA IGNITABILITY	YES NO

EPA REACTIVITY..... NO

#### COASTALGUARD 100 ANTIFREEZE/COOLANT

EPA SUDDEN RELEASE OF PRESSURE NO	· .
CERCLA RQ VALUE 50	000 pound for ethylene glycol
SARA TPQ No SARA RQ No SECTION 313 YE	
	es, Section 111 Volatile Organic Compounds & Section .2 Statutory Air Pollutants (1990 Amendments)
FOOT NOTES N/A - not appli < - means less than > - App approximate Est	•
PREPARED BY: Da	vid 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%

3. HAZARDS IDENTIFIC/.TION

**EMERGENCY OVERVIEW** 

POTENTIAL HEALTH [FFECTS (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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PAGE: 2

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21196

Effective Date: 0 /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 ufficient 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 diffects; 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 esophagscopic 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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PAGE: 3

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96 MSD: 000904

diethanolamine is 325F, 163C by Setaflash.

FLAMMABILITY LINITS

LFL: Not determined. UFL: Not determined.

HAZARDOUS COMBUSTION PRODUCTS:

EXTINGUISHING MIDIA: Water fog, alcohol foam, CO2, dry chemical.

FIRE FIGHTING HISTRUCTIONS: Not available.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear self-contained, possitive-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 cullulo ic 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 autoignition temp rature 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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PAGE: 4

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96 MSD: 000904

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 irief 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 GUIDMAINE (S): Diethanolamine: ACGIH TLV is 2 mg/m3, skin; OSHA MAL 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 @ 25/40

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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PAGE: 5

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96

MSD: 000904

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 diethano; amine).

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

ENVIRONMENTAL FATE

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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 patition coefficient (log Kow) is -1.43. Henry's Law Constant (H) is 5.351-14 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 (B0D20) is 1.20 p/p. Theoretical oxygen demand (Th0D) is calculated to be 2.13 p/p. Inhibitory concentration (IC50) in OECU "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) (R) Indicates a Trademark of The Dow Chemical Company

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Product: DIETHAMOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96 MSD: 000904

DISPOSAL: An 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

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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)
(R) Indicates a Tractumark of The Dow Chemical Company

#### SAFETY MATERIAL DATA SHEET

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Product: DIETHAM LAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96

MSD: 00')904

with federal, state or provincial, and local laws. The following specific informatio: 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 000111-42-2 86 ઢ DIETHANOLAMINE

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 Lazard 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.

CAS NUMBER LIST CHEMICAL NAME 000111-42-2 NJ3 PA1 PA3 DIETHANOLAMINE

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%;.

PAl=Pennsylvania Hazardous Substance (present at greater than or equal

PA3=Pennsylvania Environmental Hazardous Substance (present al greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

(Continued on page 8, over)

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#### SAFETY **EMATERIAL** DATA SHEET

PAGE: 8

Product: DIETHANGLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96 Date Printed: 04/27/96

MSD: 000904

#### REGULATORY INFORMATIO: (CONTINUED)

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

COMPREHENSIVE ENVIRON ENTAL 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#

% in Product

Diethanolamine

000111-42-2 100 lb

#### **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:** 85%

Diethanolamine

CAS# 000111-42-2

AMOUNT (%w/w)

#### 16. OTHER INFORMATION

REVISION INDICATOR: Revised section 14.

(R) Indicates a Tradeslark 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.

New Mexico Ainerals and Natural Resources Department bbs, IFM 88241-1980 strict II. (505) 748-1283 🖵 🖵 🕻 Oil Conservation Division 2040 South Pacheco Street csia, NM 88210 trict III - (505) 334-6178 Santa Fe, New Mexico 87505 1 Rio Brazos Road (505) 827-7131 Environmental Bureau District Office .c, NM 87410 OIL CON. DIV. strict IV - (505) 827-7131 Oil Conservation Division शिक्षाल REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE ECPASO Field Secure 1, RCRA Exempt: Non-Exempt: [X] 4. Generator 5. Originating Site Conpressors ite No V Verbal Approval Received: 2. Management Facility Destination KEY ENERGY DISPOSAL 6. Transporter yeu #345 CR3500 Aztec NM 3. Address of Facility Operator 8. State NM 7. Location of Material (Street Address or ULSTR) He NEI Sec T30N, RIDW, NW/4 OF 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. 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 BAS Dehydrator ACIDIC CLEANING AGENTS USED Estimated Volume 100 bb/s Known Volume (to be entered by the operator at the end of the haul) -DATE: 8-20-99 TITLE: MAR Vaste Management FacilityAuthorized Agent TELEPHONE NO. 505-334-6186 TYPE OR PRINT NAME: <u>ANICHAEL TALOWIC</u> (This space for State Use) TITLE: G-CO/OG/15 DATE: TITLE: Sur, rough stell Good 181

### **CERTIFICATE OF WASTE STATUS**

Generator Name and Address:	2. Destination Name:
El Paso Field Services Co.	Key Energy Services
614 Reilly Avenue	P. O: Box 900
Farmington, NM 87401	Farmington, New Mexico 87499
Originating Site (name):  L	ocation of Waste(Street address &/or ULSTR):
	San Juan County, New Mexico 30N, R10W, NW/4 of the NE/4, Section 19
Attach list of originating sites as appropriate	
Source and Description of Waste	
Spent acid and soda ash from gas dehydrator clea	aning
ı, <u>David Bays</u> (Print Name)	representative for:
	do hereby certify that, byery Act (RCRA) and Environmental Protection Agency's July, ed waste is: (Check appropriate classification)
	N-EXEMPT oilfield waste which is non-hazardous by aracteristic analysis or by product identification
and that nothing has been added to the exempt or	non-hazardous waste defined above.
For <b>NON-EXEMPT</b> waste only, the following docu	mentation is attached (check appropriate items):
X MSDS Information RCRA Hazardous Waste A Chain of Custody	Other (description)
Name (Original Signature):	l Bay
Title: Principal E	Environmental Scientist
Date: August 18	, 1999

# ENVIROTECH LABS

file: Potter Conyon andrie

AUG 1999 | RECEIVED 1879 | REC

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

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J. Lawdh.
8/11/199

99039-01.lb1/wpd



#### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sample ID: El Paso Field Services

Project #:

903901

990320

Date Reported:

07-19-99

Lab ID#:

F698

07-15-99

Sample Matrix:

Water

Date Sampled:

Cool

Date Received:

07-15-99

Preservative:

Date Analyzed:

07-19-99

Condition:

Cool and Intact

Chain of Custody:

7169

**Parameter** 

Result

**IGNITABILITY:** 

Negative

**CORROSIVITY:** 

Negative

pH = 6.87

REACTIVITY:

**Negative** 

L. Cejeuen

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.



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 P. Cycler

Stacy W Sendler



### EPA METHOD 8040 PHENOLS

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.

Review Malaker

Note:

Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments:

Potter Canyon, Sunco 100 BBL Tank.

Aller R. Queces



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

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.

Den P. Ogleven

Misteri M Waeters

Received Aug-05-99 03:01pm AUG 05 '99 02:03PM ESL PORTLAND

from 503 620 0393 → PINNACLE LABS

P.2/4

Environmental Services Laboratory

Date: 05-Aug-99

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 Qu	ial Units	DF	Date Analyzed
MERCURY		8	W 7470 / EPA	248.	<del></del>	Analyst: fitn
Meroury, TCLP	-	ND	0.002	mg/L	٦	7/29/98
ICP METALS		8	W 4010 / EPA	200.		Analyst: btn
Artenic, TOLP	- 1	ND	0.05	mg/L	Ť	ŕ
Barlum, TCLP	.94	9,94	0.08	mg/L	1	
Cadmium, TOLP	·	ND	0.05	mg/L	1	
Chromium, TCLP		ND	0.05	mg/L	7	
Lead, TCLP		NO	0,05	mg/L	1	
Selenium, TCLP	0.099	0.059	0.05	mg/L	1	
Silver, TCLP	<b>D</b> -V	ND	0.05	mg/L	1	

990320/F698

Qualifiers:

ND - Not Detected at the Reporting Limit

I - Analyte desected below quantitation limits

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accopied recovery limits

A - RPD outside accepted recovery limits

E - Value above quentilation tango



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Acce	ptance Criteria	Parameter	Percent Recovery	
		Trifluorotoluene	100%	
		Bromofluorobenzene	100%	
References:	erences: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.			
	Method 5030, Purge-and	d-Trap, SW-846, USEPA, July 1992.		
	Method 8010, Halogena	ted Volatile Organic, SW-846, USEPA,	Sept. 1994.	
	Method 8020, Aromatic	Volatile Organics, SW-846, USEPA, Se	ept. 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.

Den L. Gjenn

Stacy W Sendler
Review



## 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

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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

Stacy W Sendler



### 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

			Spiked			SW-846
	Sample	Spike	Sample	Det.		% Rec.
	Result	Added	Result	Limit	Percent	Accept.
Parameter	(mg/L)	(mg/L)	(mg/L)	(mg/L)	Recovery	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.

Aleur L. Cepeusen

Stacy W Sendler



### EPA METHOD 8040 PHENOLS

### 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
	Concentration	Limit	Limit
Parameter	(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 F657 and F698.

Alen P. Opleun

Mistin M Walten
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 . Quecem



### 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
	9040 Compounds	30 no/

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 R. Queen

Review // Waldes



# 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:	07-20-99
Laboratory Number:	07-19-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:	07-19-99
		Analysis Requested:	TCLP

		Det.	Regulatory	
	Concentration	Limit	Limit	
Parameter	(mg/L)	(mg/L)	(mg/L)	
Pyridine	ND	0.020	5.0	
Hexachloroethane	ND	0.020	3.0	
Nitrobenzene	ND	0.020	2.0	
Hexachlorobutadiene	ND	0.020	0.5	
2,4-Dinitrotoluene	ND	0.020	0.13	
HexachloroBenzene	ND .	0.020	0.13	

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery

2-fluorobiphenyl

100%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples F657 and F698.

Alleur L. Ogieuu

Review Misting Malters



## 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

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.

 ${\sf Method\ 3510,\ Separatory\ Funnel\ Liquid\ Extraction,\ SW-846,\ USEPA,\ July\ 1992.}$ 

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.

Delun L. Oferen

Review Mistin M Walters



# 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

	Sample Result	Duplicate Result	Percent	Det. Limit
Parameter	(mg/L)	(mg/L)	Difference	(mg/L)
Pyridine	ND	ND	0.0%	0.020
Hexachioroethane	ND	ND	0.0%	0.020
Nitrobenzene	ND	ND	0.0%	0.020
Hexachlorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachloroBenzene	ND	ND	0.0%	0.020

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992. Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples F657 and F698.

Deur L. Openen

Review Mistini M Walters

7	Cool - Ice/Blue Ice	32-0615	(505) 632-0615				•
7	Received Intact	⊣ighway 64 w Mexico 87401	5796 U.S. Highway 64 Farmington, New Mexico 87401		÷		5;
Y N N/A							
?eceipt	Sample Receipt	ECH INC.	ENVIROTECH IC				
		Received by: (Signature)	Re			ature)	Relinquished by: (Signature)
		Received by: (Signature)	Ą			ature)	Relinquished by: (Signature)
Date Time 7.;に99 / ミのひ	7	Received by: (Signature)	7/15/8 1300 P			iture)	Relinquished by: (Signature
$\dashv$			11330				Bolling in Lad La (Si)
					<u> </u>		
			WATER	6.0		1/4/	
		7	11 1	8673	1775	7/2-100	990320
			Sample Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
		<b>14</b> L.	.0/	99059-0			
Remarks	P.	s /x					Sampler:
	AMETERS	ANALISIS / FARAMETERS	BBL TANK	SUNCO 100	(MONING)		El Paso Field Sources
			,	Project Location	BHer	F F	Client / Project Name
		)					7

strict 1 - (505) 393-6161

D. Box 1980

bbs, NM 88241-1980

strict II - (505) 748-1283

J. S. First

esia, NM 88210

trict III - (505) 334-6178

Rio Brazos Road

ec, NM 87410

strict IY - (505) 827-7131

## New Mexico

Energy Minerals and Natural Resources Department RECEIVED Conservation Division

2040 South Pacheco Street AUG 2 1999 Santa Fe, New Mexico 87505 (505) 827-7131

Environmental Bureau
Oil Conservation Division

Partie EIVE Dubrait

ubmit Original Plus I Copy to appropriate District Office

OIL COM. DIV.

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE			
1. RCRA Exempt: Non-Exempt: 🔀	4. Generator Key Encies Services			
Verbal Approval Received: Yes No 🔀	5. Originating Site MAIN YARD			
2. Management Facility Destination (EYENRERY DISPOSAL	6. Transporter Key			
3. Address of Facility Operator AZtec Nm	8. State NM			
7. Location of Material (Street Address or ULSTR) FLENNGTON, NM	ζ.			
9. <u>Circle One</u> :				
A. All requests for approval to accept oilfield exempt wastes will be accept merator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accept proved the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to			
All transporters must certify the wastes delivered are only those consigne	ed for transport.			
BRIEF DESCRIPTION OF MATERIAL:				
WASTE WATER FROM WAShinG oilfield	service equipment			
	DONTIN VAN CE			
	<b>, , , , , , , , , , , , , , , , , , , </b>			
	· · · · · · · · · · · · · · · · · · ·			
Estimated Volume (10 be entered by the o	perator at the end of the haul) ————————————————————————————————————			
SIGNATURE Management Facility Authorized Agent  Waste Management Facility Authorized Agent	DATE: 8-18-59			
TYPE OR PRINT NAME: MICHAE C TALOUICH TE	ELEPHONE NO. 505-334-6/86			
(This space for State Use)  APPROVED BY: Duny D. Duny TITLE: (-CO)	05/S/ DATE: 8/23/99			
$\frac{1}{2}$				

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:  Kry Energy Service, Four. Four large Division  S657 U.S. Hung 64  Farming fon, Nam 87401  2. Destination Name:  EY EXCEM DISPOSAL  Location of the Waste (Street address &/or ULSTR)  Farming fon Right Truck Fosith, 5651 U.S. Hung 64	
Farming to, von 87401  3. Originating Site (name):  Location of the Waste (Street address &/or ULSTR)	
Farming for, von 87401  3. Originating Site (name):  Location of the Waste (Street address &/or ULSTR)	
3. Originating Site (name): Location of the Waste (Street address &/or ULSTR)	
Francis to Rich Touch Fosiths 56.51 (15 11.	:
Farmington Right Pouch Fosting 5651 U.S. Hung 64	
Farming to, sen	
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Waste water f/mashing oil field equipment	
1, Sobert W. James representative for:	
Robert W. James   representative for:    Sex Energy Service, Inc., Four Corners Division   do hereby certificactoring to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency 1988, regulatory determination, the above described waste is: (Check appropriate classification)    EXEMPT oilfield waste   X NON-EXEMPT oilfield waste which is non-hazardous by characteristics.	's July
analysis or by product identification	
analysis or by product identification and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.	
analysis or by product identification	
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  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	
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	

# 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. Sendler

Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.1b2/wpd



## SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: Lab ID#: Key Energy Shop E755 Water

Project #:
Date Reported:
Date Sampled:

806502 03-04-99 03-01-99 03-01-99

Preservative: Condition:

Sample Matrix:

Cool and Intact

Date Received: Date Analyzed: Chain of Custody:

03-03-99 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

Revieu



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	Regulatory
1	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Bromofluorobenzene	98% 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 P. Ofice



## EPA METHOD 8040 PHENOLS

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 P. Oplean



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

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.

Dew L. Gjewen

Stacy W Sendler
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

		Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(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



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



# 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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.

Parameter	Percent Recovery
Trifluorotoluene	100%
Bromofluorobenzene	100%
	Trifluorotoluene

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 L. afense

Review Jacy W. Sende



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-02-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	03-02-99
Condition:	N/A	Date Extracted:	N/A

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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

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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	03-02-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	03-02-99
Cendition:	N/A	Date Extracted:	N/A

			Spiked			SW-846
	Sample	Spike Sa	Sample	Sample Det.		% Rec.
	Result	Added	Result	Limit	Percent	Accept.
Parameter	(mg/L)	(mg/L)	(mg/L) (mg/L)	(mg/L)	Recovery	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.

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

Comments:

QA/QC for sample E755.

Deu L. Oferen



# EPA METHOD 8040 PHENOLS 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:	TC! P

Analytical Results	Concentration	Detection Limit	Regulatory Limit
Parameter	(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 sample E755.

Analyst L. Queun



# 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-Trichiorophenol	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



# EPA METHOD 8040 PHENOLS Quality Assurance 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:	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	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	03-05-99
Laboratory Number:	03-05-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:	03-05-99
		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
ando noceptance officia		

#### 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.

Decen L. Oglecom

Stacy W Sendler
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:	03-05-99
Laboratory Number:	03-04-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:	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.

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 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.

Deen L. Quecen

Stacy W Sendler



# 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.

OAIOC Accomtomos Ouitorio	Davamatar	Maximum Difference
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.

Deu L. Geeren

Stacy W Sendler



#### **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	Instrument	Method	Detection	Sample	Duplicate	% % %,	Acceptance
Conc. (mg/L) Arsenic	Blank ND	Blank ND	Limit 0.0001	0.0437	0.0435	Diff. 0.5%	Range 0% - 30%
Barium	ND	ND	0.001	0.891	0.896	0.6%	0% - 30% 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	МD	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.

# CHAIN OF CUSTODY RECORD

Client / Project Name			Project Location				ANALYSIS / DABAMETERS	METERS		,
TEY ENERGY / Shop	م د		Shop				ANALTOIO			
Sampler: MIKETALOVICH	3		Client No. 861502	72	to .c	alo			Remarks	
Sample No./	Sample	Sample	Lab Number	Sample	tnoO	1617L				
Shop	31-48	950	6755	WARE	Ş.	>				
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				ENIROTECH INC	EGH	<u>5</u>		Samp	Sample Receipt	<b> </b>
									>	§ Z
				5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615	5796 U.S. Highway 64 nington, New Mexico 87 (505)	4 87401		Received Intact Cool - Ice/Blue Ice	7 7	
				(coc)	705-0015				,	

District I - (505) 393-6161
-2:0. Box.::980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
P'-trict III - (505) 334-6178
Rio Brazos Road

District IV - (505) 827-7131

# New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 2040 South Pacheco Street

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: Non-Exempt: X	4. Generator Budington
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site VAL VERDE Plan &
2. Management Facility Destination KEV DISONSAL	6. Transporter Key
3. Address of Facility Operator #345 CR 3500 AZ/ec NM	8. State
7. Location of Material (Street Address or ULSTR) VALVERDE Plant	7
9. Circle One: Bloom Field WM	
A. All requests for approval to accept oilfield exempt wastes will be acc Generator; one certificate per job.  B. All requests for approval to accept non-exempt wastes must be acc PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	d for transport.
BRIEF DESCRIPTION OF MATERIAL:	No require the former of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s
Amine Reclaimer WASH RINSE.	DECEIVED  AUG 1 2 1999  OIL GOING LEUVO  DUSTI. 33
Estimated Volume 210 hb/s cy Known Volume (to be entered by the op	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Maste Management Facility Authorized Agent  TYPE OR PRINT NAME: MICKEL TALOUICA TE	DATE: 8-12-99  LEPHONE NO. 505-3346186
APPROVED BY: Man A Mail TITLE: Surimon w	09/3/ DATE: 8/12/99

## CERTIFICATE OF WASTE STATUS

	NEGEIVER
. Generator Name and Address:	AUG 1 Destination Name:
Burlington Resources 3535 East 30 th Street Farmingto NM 87401	OIL COMO DIVO
Originating Site (name):	Location of the Waste (Street address /or ULSTR):
Val Verde Plant	Val Verde Plant
Source and Description of Waste:	
remove scaling. The waste was analy parameters were chosen through "gen characteristics.	aste was generated from rinsing the reclaimer with 50% Sodium Hydroxide solution to zed for TCLP metals and benzene and exhibited no hazardous characteristics. The TCLP erators knowledge". Solution has been nuetralized to a pH of 6 and does not have corrosive
Jeff Schoenbache	representative for:
Burlington Resou	do hereby certify that,
•	vation and Recovery Act (RCRA) and Environmental Protection Agency's July, he 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 (chech appropriate items):
MSDS Information RCRA Hazardous Waste Chain of Custody	Other (description): e Analysis
Name (Original Signature):  Title: Environmental Representative  Date: Wednesday, August 11, 1999	1. Achsenlock

## **CERTIFICATE OF WASTE STATUS**

l. Generator Name and Address:	2. Destination Name:
Burlington Resources 3535 East 30 th Street	Sunco Disposal
Farmingto NM 87401	
6. Originating Site (name):	Location of the Waste (Street address /or
Val Verde Plant	ULSTR): Val Verde Plant
. Source and Description of Waste:	
Amine reclaimer wash rinse.	
, 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 wa	ste is: (Check the appropriate classi
LIELINI I OHIICIG WASLE	IPT oilfield waste which is non-hazardous by characteristic y product identification.
and that nothing has been added to the exempt or non-exe	empt non-hazardous waste defined above.
For NON-EXEMPT waste only the following documenta	tion is attached (chech appropriate items):
For NON-EXEMPT waste only the following documenta MSDS Information	tion is attached (chech appropriate items): Other (description):
MSDS Information RCRA Hazardous Waste Analysis	
MSDS Information	
MSDS Information RCRA Hazardous Waste Analysis	
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody  Name (Original Signature):	
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	





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
ead	<0.5	0.5	5.0	mg/L
elenium	<0.25	0.25	1.0	mg/L
ilver	<0.5	0.5	5.0	mg/L
CLP VOLATILES-ZHE - EPA METHOD 1311				J
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

Sharol Willams, Organic Lab Supervisor

2506 West Main Street, Farmington, NM 87401

## **QUALITY CONTROL / QUALITY ASSURANCE**

2506 West Main Street, Farmington, NM 87401

## **Quality Control / Quality Assurance**

# Spike Analysis / Blank Analysis TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

**Burlington Resources** 

Project:

Sample Matrix:

Val Verde Plant

Extract

Date Reported:

07/30/99

Date Analyzed:

07/30/99

Date Received:

07/27/99

Spike Analysis

Parameter	Spike Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	Percent Recovery
Arsenic	0.46	<0.005	0.50	92%
Barium	0.82	0.24	0.50	116%
Cadmium	0.39	< 0.004	0.50	78%*
Chromium	0.39	<0.01	0.50	78%*
Lead	0.85	<0.05	1.00	85%
Selenium	0.88	<0.005	1.00	88%
Silver	0.39	<0.01	0.50	78%*

#### **Method Blank Analysis**

Parameter	Result	Detection Limit	Units
Arsenic	ND	0.25	mg/L
Barium	ND	0.5	mg/L
Cadmium	ND	0.2	mg/L
Chromium	ND	0.5	mg/L
Lead	ND	0.5	mg/L
Selenium	ND	0.25	mg/L
Silver	ND	0.5	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

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

Reviewed by\_\_\_\_\_

2506 West Main Street, Farmington, NM 87401

## **Quality Control / Quality Assurance**

### **Known Analysis** TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

**Burlington Resources** 

Project:

Sample Matrix:

Val Verde Plant

Extract

Date Reported:

08/02/99

Date Analyzed:

07/30/99

Date Received:

07/27/99

**Known Analysis** 

	Found	Known	Percent	
Parameter	Result	Result	Recovery	Units
Arsenic	2.02	2.00	101%	mg/L
Barium	1.88	2.00	94%	mg/L
Cadmium	1.93	2.00	98%	mg/L
Chromium	1.96	2.00	98%	mg/L
Lead	1.94	2.00	97%	mg/L
Selenium	2.05	2.00	103%	mg/L
Silver	0.51	0.50	102%	mg/L

References:

Method 1311: Toxicity Characteristic Leaching Procedure,

SW-846, Rev. 0, July 1992.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total

Metals, SW-846, Rev. 1, July 1992.

Comments:

## ENVIRONMENTAL/SAFETY DEPARTMENT

3535 East 30th Street, Farmington NM 87401 P.O. Box 4289, Farmington, NM 87499 (505) 326-9700 Fax: (505) 326-9725

DATE:	August 9, 1999
TO:	Mike Talovich
COMPANY:	Sunco Disposal
FAX:	327-4962
FROM:	Jeff Schoenbacher
NO. OF PAGE	S (including cover): 5
COMMENTS	OR SPECIAL INSTRUCTIONS:
Hard Copy wil	l follow.
Thx. Jeff Scho	enbacher
BR Fax # 326-9	9725
Please call me	at 326-9841 if you have any questions.

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)

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

APPROVED BY:

# New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

## RECEIVED

AUG1 01999

Form C-138 Originated 8/8/95

> Submit Original Plus 1 Copy to appropriate District Office

Environmental Bureau

TITLE Eminonmhol Goologist DATE: 8-10

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: 🔀	4. Generator WFS
Verbal Approval Received: Yes No 🗓	5. Originating Site Compresse Sites
2. Management Facility Destination VEY EXELLY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #345, CR 3500 AZ Lec NM	8. State NM
7. Location of Material (Street Address or ULSTR) LOMPRESSOLS HES	
9. Circle One:	
<ul> <li>A. All requests for approval to accept oilfield exempt wastes will be accepted acceptance; one certificate per job.</li> <li>B. All requests for approval to accept non-exempt wastes must be accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted accepted ac</li></ul>	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	d for transport.
BRIEF DESCRIPTION OF MATERIAL:	Augustian Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Company Comp
NON-EXEMPT WASTEWATER OFF COMPRESSOR	•
	RECEIVED AUG O 5 1999
	OIL COM. DUV. DIST. 3
CONTINU Ation	
Estimated Volume 160066/5 cy Known Volume (to be entered by the o	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Maste Management Facility Authorized Agent  TYPE OR PRINT NAME: MICHAEL TALOUICK  TE	DATE: 8-5-99 ELEPHONE NO. 505-3346/86
(This areas for State Heat)	
LAPPROVED BY DEWY SI TONTHIE GEOL	10e 15T DATE \$1/6/49

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
	KEY ENERGY SERVICES
Williams Field Service	Sunco Disposal Well
	P.O. Box 900, Farmington, NM 87499
3. Originating Site (name):	Location of the Waste (Street addrsss A/or ULSTR); Cedar Hill, PLA-9, 32-9, 32-8#2, 32-8#3,
Navaio. $29-6#2$ . $29-6#4$ . $30-8$ . 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,	
Attach list of originating sites as appropriate	
4. Source and Description of Wasts	
Rain Water, wash water	
	İ
Buster Gaston, San Juan Busines	ss Unit Operations Coordinator
(Print Name)	
PRODUCTION OPERATORS, INC.	
according to the Resource Conservation and Rec	overy Act (RCRA) and Environmental Protection Agency's July.
according to the Resource Conservation and Reci 1988, regulatory determination, the above describ EXEMPT oilfield wasts XX NON-E	do hereby certify that, overy Act (RCRA) and Environmental Protection Agency's July, sed waste is: (Check appropriate describation)  XEMPT olifield waste which is non-hazardous by characteristic s or by product identification
according to the Resource Conservation and Rec. 1988, regulatory determination, the above describ  EXEMPT oilfield waste XX NON-E analysis	overy Act (RCRA) and Environmental Protection Agency's July ped waste is: (Check appropriate description)  XEMPT official waste which is non-hazardous by characteristic
according to the Resource Conservation and Rec. 1988, regulatory determination, the above describe EXEMPT oilfield waste XX NON-E analysis and that nothing has been added to the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt	overy Act (RCRA) and Environmental Protection Agency's July ped waste is: (Check appropriate description)  XEMPT oilfield waste which is non-hazardous by characteristic s or by product identification  r non-exempt non-hazardous waste defined above.  Ocumentation is attached (check appropriate items):  Other (description):
EXEMPT oilfield wasts  and that nothing has been added to the exempt of MSDS Information  RCRA Hazardous Waste Analysis	overy Act (RCRA) and Environmental Protection Agency's July ped waste is: (Check appropriate classification)  XEMPT olifield waste which is non-hazardous by characteristic s or by product identification  r non-exempt non-hazardous waste defined above.  Outher (description):
according to the Resource Conservation and Rec.  1988, regulatory determination, the above describ  EXEMPT oilfield wasts  XX NON-E  analysi  and that nothing has been added to the exempt o  For NON-EXEMPT waste only the following do  MSDS Information  RCRA Hazardous Waste Analysi  Chain of Custody	overy Act (RCRA) and Environmental Protection Agency's July ped waste is: (Check appropriate cleesification)  XEMPT oilfield waste which is non-hazardous by characteristic s or by product identification  r non-exempt non-hazardous waste defined above.  commentation is attached (check appropriate items): Other (description):
according to the Resource Conservation and Rec. 1988, regulatory determination, the above described.  EXEMPT oilfield wasts  EXEMPT oilfield wasts  ANON-EXEMPT waste only the following domination waste only the following domination waste Analysis.  Chain of Custody  Name (Original Signature):	overy Act (RCRA) and Environmental Protection Agency's July ped waste is: (Check appropriate classification)  XEMPT oilfield waste which is non-hazardous by characteristic s or by product identification  r non-exempt non-hazardous waste defined above.  commentation is attached (check appropriate items): Other (description):

2.

# ENVIROTECH LABS

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 Environmental contracting needs.

Respectfully submitted,

Envirotech, Inc.

Stacy W. Sendler

Environmental Scientist/Laboratory Manager

enclosure

\$W\$\sws\97050-04.lb2/wpd

#### /IROTECH RACTICAL SOLUTIONS FOR A BETTER TOMORHOW

Α

#### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sample ID:

Lab ID#: E696

Sample Matrix: Preservative: Candition:

Williams Field Service

Waste Water Water

Cool and Intact

Project #:

Date Reported: Date Sampled:

Date Received: Date Analyzed:

Chain of Custody:

705004

02-26-99 02-22-99

02-22-99

02-23-99 6615

Parameter

Result

Cool

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. 281.23. (i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)

Reference:

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

Comments:

Horse Canyon.

inh. Coperan

Review Stacy W Lender

#### **EPA METHOD 1311** TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	93-93 <del>-99</del>
Leboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	5615	Date Received:	02 <b>-22-99</b>
Sample Matrix:	Water	Date Analyzed:	03-03-99
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Analysis Needed:	TCLP metals
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	Concentration	Limit	Level
Parameter	(mg/ <u>L</u> )	(mg/L)	(mg/L)
Arsenic	0.0473	0.0001	5.0
Barlum	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
Mércury	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. Add Digestion of Aqueous Samples and Extracts for Total

Metals, SW-846, USEPA, December 1998.

Methods 7080, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by

GFAA and Cold Vapor Techniques, SW-848, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Horse Canyon.

#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	62-22-99
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

		Detection	Regulatory
•	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Tetrachioride	ND	0.0001	0.5
Benzene	0.303	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	0.0035	0.0003	0.5
Tetrachloroethene	0.0012	0.0005	0.7
Chiorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

ND - Parameter not detected at the stated detection limit.

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· ^ 4 /^	Tariff a all a		Percent Recovery
QA/QC Acceptance	ariteria	Parameter	Percent Recovery
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Trifluorotoluena 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.

Dew L. ajeuer

RELITION W. Sende

#### EPA METHOD 8040 PHENOLS

Client.	Williams field Service	Project #:	70 <b>5004</b>
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E698	Date Sampled:	02- <b>22-99</b>
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Extracted:	N/A
Preservative.	Cool	Date Analyzed:	03-01-99
Condition:	Cool & Intact	Analyšis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
			eli di ini di di di di mangan di Camana di Alban Indonésia. Indonésia di di di di di di di di di di di di di
o-Cresol	4.53	0.020	200
p,m-Cresol	6.08	0.040	200
2,4,6-Trichiorophenol	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	1	98%	
	2.4.6-Tribromonhene	<b>N</b>	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

Stay W. Sende

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

Client:	Williams field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	02-22- <del>9</del> 9
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
Nitrobenzane	0.207	0.020	2,0
Hexachlorobutadiene	0.430	0.020	· 0.5
2,4-Dinitrotoluene	0.076	0.020	0.13
HexachioroBenzene	0.100	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	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. 1988.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

Horse Canyon.

Deen R. Oferen

Mary W. Sender

# CHAIN OF CUSTODY RECORD

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# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION

PHACTICAL SOLUTIONS FOR A BETTER LONORROW

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

Client.
Sample ID:
Laboratory Number:

QA/QC Laboratory Blank 02-26-TCV Blank TCLP Extract Project #: Oate Reported: Date Sampled: N/A 03-01-99 N/A

Sample Matrix: Preservative: Condition: TCLP Extract N/A N/A

Date Received: Date Analyzed: Analysis Requested:

02-26-99 TCLP

N/A

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyi Chioride	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 Tetrachioride	ND	0.0001	0.5
Benzene	ND	0.0001	0.5
1.2-Dichloroethane	ND	0.0001	0.5
Trichlorgethene	ND	0.0003	0.5
Tetrachioroethene	ND	0.0008	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichiorobenzene	ND	0.0002	7.6

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria

Parameter

Percent Recovery

Trifluorotoluena Bromofluorobenzene 100% 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, Arcmatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 281.24, July 1, 1992.

Comments:

QA/QC for samples E696 - E696.

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Rainer teary W. Jende

Condition:

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

Client: QA/QC
Sample ID: Method Blank
Laboratory Number: 02-22-TV-MB
Sample Matrix: TCLP Extract
Preservative: N/A

N/A

Project #:
Date Reported:
Date Sampled:
Date Received:
Date Analyzed:
Date Extracted:
Analysis Requested:

N/A 02-26-99 02-22-99 TCLP

03-01-99

N/A

NA

Regulatory Detection Limits Limit Concentration (mg/L)(mg/L)(mg/L) Parameter 0.0001 0.2 ND Vinyl Chloride 0.7 0.0001 ND 1,1-Dichloroethene 200 0.0001 ND 2-Butanone (MEK) 6.0 0.0001 Chloroform ND 0.5 0.0001 ND Carbon Tetrachloride 0.5 0.0001 Benzene ND 0.5 0.0001 1,2-Dichloroethane ND 0.5 0.0003 ND Trichloroethene 0.0005 0.7 **Tetrachioroethene** ND 100 0.0003 Chlorobenzene ND 7.5 0.0002 ND 1.4-Dichlorobenzene

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria

Parameter

Percent Recovery

Trifluorotoluene Bromofluorobenzene 99% 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, SVV-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.

Analyst .

REVIEW W. Sende

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

Client: Sample ID:

Condition:

QA/QC Matrix Duplicate Project #: Date Reported: N/A 03-01-99 N/A

Laboratory Number: Sample Matrix: Analysis Requested: E696 TCLP Extract TCLP N/A

Date Sampled: Date Received: Date Analyzed:

Date Extracted:

N/A 02-26-99 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	9.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	ND	NĎ	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%
Tetrachioroethene	ND	ND	0.0005	0. <b>0</b> %
Chlorobenzene	ND	סא	0.0003	0.09
1.4-Dichlorobenzene	ND	ND	0.0002	0.0%

NO - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-848, USEPA, July 1992,

Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.

Method 8010, Halogenated Volatile Organic, SW-848, USEPA, Sept. 1994. Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments:

QA/QC for samples E695 - E696.

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

Client:

QA/QC

Sample ID:

Matrix Spike

Laboratory Number:

E695

Sample Matrix:
Analysis Requested:

TCLP Extract

Condition:

TCLP N/A Project#:

N/A

Date Reported:

03-01-99

Date Sampled: Date Received: N/A

Date Analyzed:

N/A 02-2**6-**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	98%	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	0.0 <del>5</del> 0	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichioroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0006	99%	<del>26</del> -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, Toxibity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 6030, Purge-and-Trap, SW-848, 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.

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Stary W. Sende

# EPA METHOD 8040 PHENOLS Quality Assurance Report Laboratory Blank

Client:	QA/QC	Project #	N/A
Sample ID:	Laboratory Blank	Data Reported:	03-01-99
Laboratory Number:	03-01-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Properol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	03-01- <del>96</del>
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results		Detection	Regulatory	-
Parameter	Concentration (mg/L)	Limit (mg/L)	Limit (mg/L)	. <b>.</b> .
o-Cresoi	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	
Pentachiorophenol	QN	0.020	100	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:		100	Percent Recovery
	2-fluorophenol 2,4,6-tribromophenol		98 % 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.

Alexand. Coleman

Herry W. Sende

#### **EPA METHOD 8040** PHENOLS Quality Assurance Report

Client: Sample ID: Laboratory Number: Sample Matrix: Preservative: Condition:

CAVOC Methox Blank 02-22-TCA-MB TCLP Extraction

Cool Cool & Intact

N/A Project #. 03-01-99 Date Reported: Date Sampled. N/A Date Received: NVA 02-22-99 Date Extracted: 03-01-99

Date Analyzed: Analysis Requested: TCLP

Parameter	Joncentration (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-Trichlorophenoi	·	0.020	2.0
2,4,5-Trichlorophenol		0.020	400
Pentachiorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

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

References:

Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid

Waste, 5W-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.

# 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 Samoled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact	Date Analyzed:	03-01-99
ing green mere		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Differ <b>enc</b> e
o-Cresol	ND	ND	0.020	0.0%
p,m-Cresoi	ND	ND	0.040	0.0%
2,4,6-Trichiorophenol	0.708	0.701	0.020	1.0%
2,4,5-Trichlorophenol	0.222	0.219	0.020	1.1%
Pentachiorophenol	0.091	0. <b>09</b> 0	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 Funniel 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 support C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E695 - E696.

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# ENVIROTECH LABS

# EPA Method 8090 Nitroeromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

Client:
Sample ID:
Laboratory Number:
Sample Matrix:
Preservative:
Condition:

QA/QC Laboratory Blank 03-01-TBN-Blank Hexane N/A

N/A

Date Reported:
Date Sampled:
Date Received:
Date Extracted:
Date Analyzed:
Analysis Requested:

Project #:

03-01-99 N/A N/A N/A N/A 03-01-99

TCLP

NΑ

Regulatory Det. Concentration Limit Limit (mg/L) **Parameter** (mg/L) (mg/L) **Pyridine** 0.020 5.0 ND 0.020 3.0 Hexachioroethane ND Nitrobenzene ND 0.020 2.0 0.5 Hexachlorobutadiene ND 0.020 2.4-Dinitrotoluene 0.020 0.13 ND HexachioroBenzene 0.13 ND 0.020

ND - Parameter not detected at the stated detection ilmit.

QA/QC Acceptance Criteria

Parameter

Percent Recovery

2-fluoroblphenyl

99%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E695 - E698.

Allen P. Oplencom

Stay W. Sendle

# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client	QA/QC	Project#:	N/A
Sample ID:	Method Blank	Date Reported:	03-01-99
Laboratory Nurriber.	02-22-8N-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Çool	Date Extracted:	02-22-99
Condition:	Cool and Intact	Date Analyzed:	03-01-99
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachioroethane	ПD	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.0 <b>20</b>	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	<b>\$</b> 8%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnal Liquid-Liquid Extraction, SW-848, USEPA, July 1992.

Method 8090, Nitroarometics 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 £695 - £696.

Adem P. Ogieren

Herrew July Sende

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

Client:
Sample ID:
Laboratory Number:
Sample Matrix:

QA/QC Matrix Duplicate E895 TCLP Extract Project #:
Date Reported:
Date Sampled:
Date Received:
Date Extracted:
Date Analyzed:

03-01-99 N/A N/A 02-22-99

NVA

Preservative: Condition:

N/A N/A

Analysis Requested:

**03-01-99** TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	ND	ND	0.0%	0.020
Hexachloroethane	0.056	0.055	1.0%	0.020
Nitrobenzene	ND	ND	0.0%	0.020
Hexachlorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	<b>₽.0%</b>	0.020
HexachloroBenzene	ND	ND	0.0%	0.020

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria

Parameter

Maximum Difference

8090 Compounds

30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992. Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E695 - E696.

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#### **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:	<b>E695</b>	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 Slank	Detection Limit	Sample	Duplicate	1.10	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	ON	ND	0.0001	0.0149	0.0150	0.7%	<b>0% - 30%</b>
Mercury	ND	ND	0.0001	ND	ND	0.0%	ዕ% - 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%

Sold	Solke	Sample	Soled	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	Acceptance
Cone (mg/L)	Added.		Sample	Recovery	Ranga
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	D.0498	99.6%	80% - 120%
Lead	0.1000	0.0149	0.115	99.9%	80% - 120%
Mercury	0.0260	ND	0.0249	99.6%	80% - 120%
Selenium	0.1000	9.0315	0.131	99.6%	80% - 1 <b>20</b> %
Silver	0.0500	ND	0.0498	99.6%	80% - 120%

NO - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1995

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals,

SW-848, 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.

District 1 - (505) 393-6161 P. O. Box 1980? Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 P'-trict III - (505) 334-6178

Rio Brazos Road

District IV - (505) 827-7131

~\_-c, NM 87410

Energy Minerals and Natural Resources Department
Oil Conservation Division RECEIVED 2040 South Pacheco Street

JUN 1 3 1999

Submit Original Plus 1 Copy to appropriate District Office

Form C-138

Originated 8/8/95

Santa Fe, New Mexico 87505 (505) 827-7131

New Mexico

Environmental Bureau Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE					
1. RCRA Exempt: Non-Exempt: X	4. Generator Bueling fon					
Verbal Approval Received: Yes 🔲 No 💹	5. Originating Site LOCATION LIST					
2. Management Facility Destination KEY ENERGY DISPOSAL	6. Transporter Key					
3. Address of Facility Operator PR 3500 # 345 AZIEC NM	8. State NM					
7. Location of Material (Street Address or ULSTR) SEELOCATION LIST						
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.  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	d for transport.					
BRIEF DESCRIPTION OF MATERIAL:						
DRAIN WATER FROM COMPRESSOR OF TANK  DECEIVED  JUN 1 5 1999  ONL CON. DIV.  DIST. 3	CONTINUENCE OF job (REMIT)  CONTINUENCE OF job (REMIT)  FOR COMPFESSOR STATION  WHOTE STREAMS					
Estimated Volume 3000+ bbls cy Known Volume (to be entered by the op						
SIGNATURE: Maste Management FacilityAuthorized Agent  Waste Management FacilityAuthorized Agent	DATE: 6-11-99					
TYPE OR PRINT NAME: MICHAEL TACOUTEH TE	LEPHONE NO. <u>505-334-6186</u>					
(This space for State Use)						
APPROVED BY: Dony S. Jam TITLE: CECLO	05 is DATE: 6/15/9/					
APPROVED BY: Mortyn J. Title: Environm	makel Geologist DATE: 6/16/99					

#### BURLINGTON RESOURCES

SAN JUAN DIVISION

June 2, 1999

Sunco Trucking P.O. Box 900 5651 U.S. Highway 64 Farmington, NM 87499

Attention: Mike Talovich, Manager

Re: Drained Water from Used Oil Tank Annual Non-Exempt Certification

Dear Mr. Talovich:

The purpose of this correspondence is to submit to your department the attached Certificate of Waste Status form for water generated from draining the used oil tank at the compressor stations. This waste stream was analyzed to comply with 40 CFR 262.11 waste determination requirements contained in the Resource Conservation and Recovery Act (RCRA). The parameters that were chosen for characterizing this waste stream was determined through "generators knowledge" defined under 40 CFR 262.11 (c) (2). The analysis for this waste stream exhibits this waste as being a non-hazardous waste. As required, the analysis was sent to you November 17, 1998 and was identified as Sample Project CC-51816.

Should you have any questions concerning the content or need additional information please feel free to contact me at 505-326-9537. Thank you for your time and consideration.

Sincerely

effery T. Schoenbacher Environmental Representative

CC: Correspondence

JTS:

#### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:		2. Destination Name	<del></del>	
Burlington Resources 3535 East 30 th Street Farmington NM 87401		Sunco Dispo	sal	
3. Originating Site (name):		Location of the Wa	ste (Street add	ress /or
All Compressor Stations		See Attached. San CC-51816 (non-ha		roject
	Unit:	•	Township:	Range:
4. Source and Description of Waste:				
Drained water from oil tank.				
I, Jeff Schoenbacher			r	epresentative for:
Burlington Resources			do	hereby certify that,
according to the Resource Conservation and Recover	-		_	ency's July,
1988, regulatory determination, the above described	d waste is: (Cn	eck the appropriate classific	auonj	
	EMPT oilfield or by product	waste which is non-hidentification.	azardous by ch	aracteristic
and that nothing has been added to the exempt or non	-exempt non-h	azardous waste defin	ed above.	
For NON-EXEMPT waste only the following docume	ntation is attac	ched (chech appropri	ate items):	
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	Othe	er (description):		
Name (Original Signature):	_			

Facil	Facility ID: Compressor Site:	ð	Quarter:	Section:	Township:	Range:	Lat/Long		
35	311 Compressor Station		SW	27	30N	7W		San Juan	NM
4	355 Compressor Station		SW	14	32N	11W		San Juan	NM
21	Albright		NW	22	29N	10W		San Juan	NM
34	Antler Compressor Station		SW	15	32N	11W	W108°-1.544'	La Plata	03
9	Arch Rock	2/21/00	SW	14	32N	11W	W107°-51.536'	San Juan	NM
v	Buena Vista	9/ 5/01	NE	13	30N	M6	W107°-43.702'	San Juan	NM
7	Cedar Hill	9/30/01	SW	29	30N	10W	W107°-54.449'	San Juan	NM
23	Cox Canyon		NE	24	30N	M6		San Juan	NM
12	Frances Mesa	00/6/9	SW	27	30N	JW.	W107°-33.719'	Rio Arriba	NM
∞	Gobernador Compressor	11/11/00	SW	10	31N	W.	W107°-37.028'	Rio Arriba	NM
7	Hart Canyon	10/11/00	SE	20	31N	10W	W107°-54.032'	San Juan	NM
13	Manzanares	10/11/00	SE	4	29N	8W		San Juan	NM
17	Middle Mesa Compressor	11/14/01	SW	01	31N	WL	W107°-33.866'	San Juan	NM
41	Pump Canyon	11/ 7/00	ŊĘ.	24	30N	M6	W107°-43.936'	San Juan	NM
28	Pump Mesa	8/19/03	SW	27	30N	7W	W107°-38.712'	San Juan	NM
16	Quinn	8/ 9/01	SW	16	31N	8W	W107°-41.303'	San Juan	NM

Page 1

02-Jun-99

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		:					
	NM	NM	NM	NM	93	NM	NM
	San Juan	San Juan	San Juan NM	Rio Arriba	La Plata	San Juan	San Juan NM
Lat/Long				W107°-33.096' Rio Arriba NM			
Range:	W.	11W	8W	W.	11W	11W	10W
Township: Range:	31N	29N	31N	30N	32N	29N	29N
Section:	10	35	32	22	14	11	34
Quarter:	SW	SE	SE	NE	SW	SE	SW
Que	1/17/02		00/6/9	8/19/03		9/27/99	
Facility ID: Compressor Site:	22 Rattlesnake	Rudy	15 Sandstone	Sims Mesa	Ute Compressor Station	Val Verde Plant	Zachary
Facili	22	19	15	18	က	36	70

#### BURLINGTON RESOURCES

SAN JUAN DIVISION November 11, 1998

Sunco Trucking P.O. Box 900 5651 U.S. Highway 64 Farmington, NM 87499

Attention: Mike Talovich, Manager

Re: Characterization of Drained Water from Used Oil Tank

Dear Mr. Talovich:

The purpose of this correspondence is to submit to your department the attached wastewater analysis for water generated from draining the used oil tank.

Per your request, I have enclosed the waste analysis (CC#51816) for your records and for submitting to OCD under the C-138 Non-Exempt Waste approval form. The main purpose for analyzing this particular waste streams was to comply with 40 CFR 262.11 waste determination requirements contained in the Resource Conservation and Recovery Act (RCRA). As a result, the water was analyzed for hazardous characteristics focusing on TCLP metals, TCLP VOA, TCLP Semi-VOA, and flash point. Upon evaluating the analysis for this waste, it appears the material does not exhibit the characteristics of a hazardous waste. The pH, herbicides, and pesticides were not analyzed since the liquid is wash-down water, which is not characteristically corrosive and herbicide/pesticide do not come in contact with this waste.

Regarding the generation rates, the material will be generated periodically at all the compressor units' (13)
Burlington Resources currently operates. The plans for draining the waste oil tanks of water component would proceed by a company representative contacting Sunco when a waste oil shipment is warranted. The intention of removing the water component from the waste oil tank is a direct waste minimization practice to eliminate the oil/water from mixture Burlington Resources operations.

Should you have any questions concerning the content or need additional information please feel free to contact me at 505-326-9537. Thank you for your time and consideration.

Sincerely

Deffery I Schoenbacher

Environmental Representative

Enc.

Sample Project CC-51816

CC:

Bruce Gantner

Ed Hasely Greg Kardo

Gaza Scabolt Ken Johnson

Correspondence

Compressor Files

JTS:

ID:505-326-9725

NOV 11'98

11:22 No.002 P.03

2606 W. Main Street Fermington, New Mexico 87601

# PRELIMINARY

#### **VOLATILE ORGANIC TOXICITY CHARACTERISTIC LIST** TCLP Leachate

Method 8260

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID:

DW #11298

Laboratory ID: Sample Matrix: 0398G06445 Water/Oil Mix Date Reported:

11/10/98

Date Sampled:

11/02/98

Date Received: Date Analyzed; 11/02/98 11/09/98

$(x,y) \mapsto (y,y)$	

Benzene	0.20	0.10	0.5	mg/L
2-Butanone (MEK)	ND	0.10	0.5	mg/L
Carbon tetrachloride	ND	0.10	100	mg/L
Chloropenzene	ND	0.10	6.0	mg/L
Chloroform	ND	0,10	7.5	mg/L
1,2-Dichloroethane	ND	0.10	0.5	mg/L
1.1-Dichloroethene	ND	0.10	0.7	mg/L
1,4 Dichlorobenzene	ND	0.10	200	mg/L
Tetrachloroethene	ND	0,10	0.7	mg/L
Trichioroethene	ND	0,10	0,5	mg/L
Vinvi chioride	ND	0.10	0.2	ma/L

ND- Analyte not detected at stated detection level.

Reported By:

Reviewed:

NOV 11'98

11:23 No.002 P.04

Inter-Mountain Laboratories, Inc.

2506 W. Main Street Farmington, New Mexico 87401

### PRELIMINARY

#### SEMIVOLATILE ORGANICS /TCLP TCLP Leachate

Method 8270

Client

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID: Laboratory ID:

Sample Matrix:

0398G08445

DW # 11298

Oil / Water Mix

Date Reported:

11/10/98

Date Sampled:

11/02/98

Date Received:

11/02/98

Date Analyzed:

11/09/98

				V. V.
Cresol(Total)	ND	1.0	200.0	mg/L
2,4-Dinitrotaluene	ND	0.10	0.13	mg/L
Hexachlorobenzene	ND	0.10	0.13	mg/L
Hexachiorobutadiene	ND	0.20	0.5	mg/L
Hexachioroethane	ND	0.10	3.0	mg/L
Nitrobenzene	ND	Q.50	2.0	mg/L
Pentachlorophenol	ND	0.20	100	mg/L
Pyridine	ND	0.50	5.0	mg/L
2,4,5-Trichlorophenol	ND	0.50	400.0	mg/L
2,4,6-Trichlorophenol	ND	0.50	2.0	mg/L

ND - Analyte not detected at stated detection level.

Reported By:

Reviewed:

ID:505-326-9725

NOV 11'98

11:24 No.002 P.05

Inter Mountain Laboratories, inc.

2806 W. Main Elreet Farmington, New Maxica 87401

#### TOXICITY CHARACTERISTIC LEACHING PROCEDURE PRELIMINARY TRACE METAL CONCENTRATION

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID: Laboratory ID: DW #11298 0398G06445

Sample Matrix:

Oll / Water Mix

Date Reported:

11/10/98

Date Sampled:

11/02/98

Date Received:

11/02/98

mg/L

Date Analyzed:

11/10/98

|--|

0.061

Arsenic	<0.061	0.061	<b>.</b> .	mg/L
Barium	0.21	0.001	100	mg/L
Cadmlum	<0.008	800.0	1	mg/L
Chromium	0.084	0.008	5	mg/L
Lead,	<0.04	0,04	5	mg/L
Mercury	<0.0004	0.0004	0.2	mg/L
Selenium	<0.05	0.05	1	mg/L
Slver	<0.03	0.03	5	mg/L

References:

Method 1311: Toxicity Characteristic Leaching Procedure,

SW-846 "Test Methods for Evaluating Solid Weste:

< 0.061

Physical/Chemical Methods" 3rd Edition, Final Update III, December, 1996.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846 "Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods" 3rd Edition, Final Update III, December, 1996.

Comments:

Reviewed:

Inter-Mountain Laboratories, Inc.

2506 W. Main Street Farmington, New Mexico 87401

#### Flash Point

PRELIMINARY

Client:

**Burlington Resources** 

**Project**:

Oil Water Tank / Compressor Stations

Sample ID:

DW #11298 0398G06445

Laboratory ID: Sample Matrix:

Oil / Water Mix

Condition:

Intact

Date Reported:

11/10/98

Date Sampled:

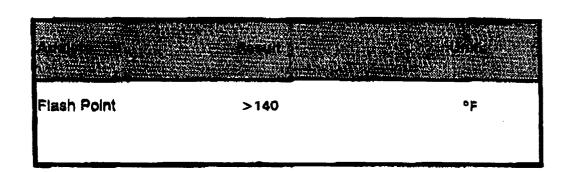
11/02/98

Date Received:

11/02/98

Date Analyzed:

11/05/98



#### 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 D58.

Reported by:

Reviewed by:\_\_\_\_\_

धरांदर र - (५०५) ३९३-६१६१ D. Box 1980 N bbs, 1214 86241-1980 scrict\_Liz- (505) 748-1283 1 S. First .csia, NM 88210 trict III - (505) 334-6178 7 Rio Brazos Road .c. NM 87410 strict IV - (505) 827-7131

1. RCRA Exempt:

#### New Mexico Energy Minerals and Natural Resources Penar Oil Conservation Division

2040 South Pacheco Street Santa Fe. New Mexico 87505 (505) 827-7131

JUN 4

Submit Original Plus I Čopy to appropriate District Office

depolation

4RD

Form C/138

Originated 8/8/95

martyne Kieling

Environmental Bureau Oil Conservation Division

REQUEST FOR	APPROVAL TO ACCEPT	SOLID WAS TE
RCRA Exempt: Non-Exempt: 🔀	•	4. Generator FMC C
Verbal Approval Received: Yes	No 🔯	5. Originating Site 'V

2. Management Facility Destination Key Services Disposate 6. Transporter/Kec 023500 #345 AZIEC 3. Address of Facility Operator 8. State 2405 Southside Aver 7. Location of Material (Street Address or ULSTR) ROAD FAINHINGTON 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 lob.
- (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 oil field equipment washing bay

COME CROME Previously verbally approved 4/29/99 - lacked character is ties

Estimated Volume 2 806615 cy	Known Volume (to be entered by the operator at the end of the haul) ————————————————————————————————————

TITLE: MGL

Waste Management FacilityAuthorized Agent

TELEPHONE NO. 505-334-6/86 TYPE OR PRINT NAME: MICHAEL TALOWICK

(This space for State Use)			• (
APPROVED BY:	TITLE:	· · · · · · · · · · · · · · · ·	DATE:

TITLE: Environ mental Geologist DATE: 6-4-99

### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
FMC CORPORATION	KEY ENERGY SERVICES
#20 County Road 5777	Disposal Facility
Farmington, NM	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
	2405 SOUTH SIDE RIVER ROAD
SAME -	FARMINGTON, N/M 87401
	77,117,127,137,147,147,147,147,147,147,147,147,147,14
Attach list of originating sites as appropriate	
4. Source and Description of Waste	water with residual arease and small
Wash bay sump failes. There in the sare	y water with residual grease and small ying-off of well heads.
amounts of fire dope them the opin	77113
L	
. Luis ORTIZ	- representative for:
FMC CORP. WIFLUHAR	Governo
	ory Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	
EXEMPT oilfield waste X NON-EXE	MPT oilfield waste which is non-hazardous by characteristic
analysis o	r by product identification
and all the model and hands are all the second and	on-evemet non-hazardous waste defined shove
and that nothing has been added to the exempt or n	on-exempt normazarous waste defined above.
For NON-EXEMPT waste only the following docu  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	
For NON-EXEMPT waste only the following docu MSDS Information RCRA Hazardous Waste Analysis Chain of Custody  Name (Original Signature):	mentation is attached (check appropriate items):
For NON-EXEMPT waste only the following docu MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	mentation is attached (check appropriate items):



Airei viicei Results.

Œ

ACZ Laboratories, Inc.

2773 Downhill Drive

Steamboat Springs, CO 80487

(800) 334-5493

On Site Technologies, LTD.

612 E Murray Dr

Farmington, NM 87499

David Cox

Lab Sample ID: *L22950-01* 

Client Sample ID: 9905003-01A

Client Project ID:

ACZ Report ID: RG92325 FMC301 Outdoor Sump

Date Sampled: 4/30/99 09:20

Date Received: 5/4/99

Date Reported: 5/13/99

Sample Matrix: Waste Water

Soil Analysis

(arameter)	EPA Method	Result Oi	mi Units	SIDL	POIL	Date	ualyst
Ignitability (Flashpoint)	M1010, Pensky-Martens Closed Cup	No Flash	C	1	5	5/12/99	as/cv

Wet Chemistry

Parameter	EPA Method	Result	Onei	Units	MDI	HOL	Dafe A	nalysi
Cyanide, reactive	Section 7.3 SW-846 (3rd Ed) & M9012		U	mg/L	0.03	0.1	5/6/99	bg
pH (lab)	M150.1 - Electrometric	7.2		units	0.1	0.1	5/5/99	cd
Sulfide, reactive	Section 7.3 SW-846 (3rd Ed) & M9030	0.2	В	mg/Kg	0.1	1	5/5/99	mh

Note: Flashpoint - No Flash to 93° C.

programs (malifiers (pased on EPA CLP 3/90)

U = Analyte was analyzed for but not detected at the indicated MDL

B = Analyte concentration detected at a value between MDL and PQL

PQL = Practical Quantitation Limit

Vice President of Operations: Ralph Poulsen

**CHAIN-OF-CUSTODY RECORD** DS6227

Page I of I

# On Site Technologies, LTD.

Farmington, NM 87401 612 Е. Миттау Drive

(505) 325-2432

Subcontractor:

ACZ Laboratories, Inc.

2773 Downhill Drive

Steamboat Springs, Colorado 80487

7.EP.

(800) 334-5493 (970) 879-2216

**TJV0776** 

Acct #:

03-May-99

Requested Tests

(46/5 (M)

E150.1

**Bottle Type** 

**Collection Date** 

Matrix

Sample ID

5x17.3.3.2 5x17.3.4.2 cyan 10€ such 10€ SW1010

1LAMGU 1LAMGU

4/30/99 10:05:00 AM 4/30/99 9:20:00 AM

Aqueous Aqueous

9905003-01A 9905003-02A

Please analyze two (2) water samples for Reactivity, Corrosivity and Ignitability. Comments:

5/3/99 1530

Date/Time

Received by:

Received by:

Date/Time

Relinquished by: Heider Roca.

Relinquished by:

		I	Page 1 of 2
SAMPLE RECEIPT FORM			
CLIENT: $\frac{GN-SJ7E}{L229SO}$	DATE	5/4	199
1) Does this project require special handling procedures such as CLP protocol?	MA	YES	NO
2) Are the custody seals on the cooler intact?	NA	YES	NO
3) Are the custody seals on the sample containers intact?	₩À.	YES	NO
4) Is there a Chain of Custody (COC), or other directive shipping papers present?	-1	(YES)	NO
5) Is the COC complete?		(YES)	NO
Relinquished? Yes No Requested Analysis? Yes	No		1
6) Is the COC in agreement with the samples received?		YES'	NO
# of Samples: Yes No Sample ID: Yes	No	}	
Matrix: Yes No # of Containers: Yes	No		}
7) Is there enough sample for all requested analysis?		YES	NO
8) Are all samples within holding times for requested analysis?		YES	NO
9) Were all sample containers received intact?		YES	NO
10) Are samples requiring no headspace, headspace free?	(NA)	YES	NO
11) Do the samples require a Foriegn Soils Permit Label or quarantine?		YES	NO
12) Do samples require special disposal/hold considerations?			
Non-Hazardous: Yes No Hazardous: Yes No	Hold:	moi	nths
Describe "NO" items (except #1, 11, & 12):			
Was the client contacted? Yes No  If yes: Date: Name of person contacted	l:		
Actions taken or client instructions:  Signature:			

			SAN	MPLE RE	СЕІРТ Б	ORM		<del></del>	P	age 2 of 2
CLIENT: PROJECT #:	ON-5	ITE 950			CEN I I		DATE ANALYST:	5/	14/49 DALE	
		TEMPE	ERATURI	E VERIFICA	TION SAI	MPLE C	HECK (°C	<b>E</b> )		
CONTAINER TEMP (°C) RAD  D 2° to 6° µR/hr  CCIENT U.6 12  If container radioactivity is  > 25 µR/hr then each sample must be screened.										
	I	PRESERV	VATION (	CHECK (pH	) & RADIO	DACTIV	ITY SCRI	EEN		
SAMPLE	R <2	G <2	Y < 2	YG < 2	B < 2	BG < 2	O < 2	T > 12	P > 12	RAD µR/hr
							<del> </del>			
										<b></b>
	<b>-</b>		<del>                                     </del>				1			<del>                                     </del>
·										
							<b></b>	-		<del> </del>
	<del> </del>		<u> </u>		-		<del> </del>			<del> </del>
		<del> </del>	}				<del> </del>			+
	1	<del> </del>	<del> </del>	<del> </del>	<del> </del>		<del> </del>		<del> </del>	<del> </del>
	<del>                                     </del>	<del> </del>	1		<del>                                     </del>				<del> </del>	<del>                                     </del>
Temperature of INTERNAL CO			emperature	blank bottle	next to samp	ples Lor	hand deliver	red on ice _		
REPORT COM	IMENTS:									

# CHAIN OF CUSTODY RECORD

Date: 4/50/99

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499 LAB: (505) 325-5667 • FAX: (505) 327-1496

ON SITE

TECHNOLOGIES, LTD.

Date: 7/20///

Date/Time 4 (20/10) LAB ID Date/Time Date/Time as possible 66612 By Date Title Burn **ANALYSIS REQUESTED** Telefax No. Company Contract Fruite Menta 10 Working Days for results immediately Special Instructions / Remarks: City, State, Zip Farm nator Telephone No. 325-1198 Name Shown Fldom 13. Mailing Address 24-48 Hours Received by: Received by: Received by: Rush Containers N тяочэя Number of PRES. J. 7. C. Date/Time:// 3./ 14.60 MATRIX Date/Time Date/Time 77409 4/30/191:20 TIME 10:05 Envicenment Sw. Dept. Date . Project No. DATE Costalar samp 153 Tracor SURP (Client Signature Must Accompany Request) SEVICE Company Contract France SEVICE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE STATE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SIN THE SI SAMPLE IDENTIFICATION Clifford Sun D Talme Surp ンたっこう PROJECT LOCATION: FMC فاكهار SAMPLER'S SIGNATURE: City, State, Zip Purchase Order No.: Method of Shipment: Name Relinquished by: Relinquished by: Relinquished by: Authorized by: 302 0. FAC

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

To Re-order Call 325-9600 or Fax 325-9764 BibhBigraphiss FORM # 01

### Mountain States Analytical, Inc. The Quality Solution

On-Site Technologies, Ltd.

612 E Murray Drive Farmington, NM

Mr. David Cox

Project: TCLP Liquid Analysis

Sample ID: 9904003-01A

Matrix:

Water

MSAI Sample: 95512 MSAI Group: 26488 Date Reported: 04/27/99 Discard Date: 05/27/99 Date Submitted: 04/07/99 Date Sampled: 04/05/99

Collected by:

Purchase Order:

Project No.: 9904003

Test	Analysis	Results as Received	Units	Method Detection Limit
03931	Flame/hrICP Prep, TCLP, 3010A Method: SW-846 3010A	Batch. w134		
0410	Mercury Prep CVAA, Filtration Method: SW-846 7470A	Batch. w428		
13027	Metals by hrICP, TCLP (UTS) Method: SW-846 6010B			
	Arsenic	ND	mg/l	0.02
	Barium	0.348	mg/l	0.004
	Cadmium	ND	mg/l	0.004
	Chromium	ND	mg/l	0.010
	Lead	ND	mg/l	0.02
	Selenium	ND	mg/l	0.02
	Silver	ND	mg/l	0.004
1525	Mercury by CVAA, Filtration 7470A Method: SW-846 7470A	ND	mg/l	0.0001
0944	. TCLP Filtration, Volatile (<0.5%) Method: IN HOUSE MSAI	0	% Solids	Not Determined
0945J	TCLP Filtration,hrICP Metals <0.5 Method: SW-846 1311	0.030	% Solids	0.001
0945M	TCLP Filtration, Mercury (<0.5%) Method: SW-846 1311	0.030	% Solids	0.001
0945\$	TCLP Filtration, Semi-VOA,(<0.5%) Method: SW-846 1311	0.030	% Solids	0.001





### Mountain States Analytical, Inc.

The Quality Solution

Page

2

On-Site Technologies, Ltd.

MSAI Sample:

95512

Sample ID: 9904003-01A

MSAI Group:

26488

Test Ar	nalysis	Results as Received	Units	Method Detection Limit
3939 s\	VOA Extraction, Filtration ethod: SW-846 3510C	Complete		
7066 Se	emi-VOA, TCLP Filtration			
	ethod: SW-846 8270A			
	,4-Dinitrotoluene	ND	ug/l	6.0
Не	exachlorobenzene	ND	ug/l	7.6
Не	exachlorobutadiene	ND	ug/l	29
He	exachloroethane	ND	ug/l	32
Ni	itrobenzene	ND	ug/l	6.5
Ру	vridine	ND	ug/l	6.0
2-	Methylphenol (o-Cresol)	ND	ug/l	9.2
	and 4- Methylphenol (m+p cresol)	ND	ug/l	8.9
	entachlorophenol	ND	ug/l	9.0
2,	4,5-Trichlorophenol	ND	ug/l	14
2,	4,6-Trichlorophenol	ND	ug/l	3.2
14146 Va	platiles, TCLP Filtration, 8260B			
Me	thod: SW-846 8260B			
Ве	enzene	ND	ug/l	1.6
Ca	irbon tetrachloride	ND	ug/l	3.7
Ch	lorobenzene	ND	ug/l	2.7
Ch	loroform	ND	ug/l	2.2
1,	2-Dichloroethane	ND	ug/l	2.7
1,	1-Dichloroethene	ND	ug/l	14.0
2-	Butanone (MEK)	ND	ug/l	100
Te	etrachloroethene	ND	ug/l	2.3
Tr	richloroethene	ND	ug/l	3.2
Vi	nyl chloride	ND	ug/l	9.8
1,	4-Dichlorobenzene	ND	ug/l	1.6

### Analytical Report



The Quality Solution

Page

3

On-Site Technologies, Ltd.

Sample ID: 9904003-01A

MSAI Sample:

95512

MSAI Group:

26488

ND - Not detected at the Method Detection Limit.

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

> Respectfully Submitted, Reviewed and Approved by:

Rolf E. Larsen

Project Manager

### 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990423A

Matrix: (soil/water) WATER

Lab Sample ID: 990413WB

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: Z4972

Level: (low/med) LOW

Date Received: \_\_\_\_\_

% Moisture: \_\_\_\_ decanted: (Y/N) \_\_\_ Date Extracted:

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 04/23/99

Injection Volume: 1.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	(ug/L or ug	/Kg) UG/L	Q
N0019500 67-72-1 98-95-3 87-68-3 88-06-2 95-95-4 121-14-2 118-74-1 87-86-5	2-Methylphend 3 and 4-Methylphend Hexachloroethe	ylphenol hane  tadiene orophenol oluene nzene	25.0 25.0 10.0 10.0 25.0 25.0 10.0 25.0 10.0	ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
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CONCENTRATION UNITS:

### WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990427A

EPA	S1	S2	S3	S4	S5	S6	S7	S8	TOT
SAMPLE NO.	(2FP)#	(PHL)#	(NBZ)#	(FBP)#	(TBP)#	(TPH)#	#	#	OUT
_==========	=====	=====	=====	=====	=====	=====	=====	=====	===
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				QC LIMITS
S1	(2FP)	=	2-Fluorophenol	( 1- 90)
S2	(PHL)	=	Phenol-d6	( 1- 67)
S3	(NBZ)	=	Nitrobenzene-d5	(18-114)
S4	(FBP)	=	2-Fluorobiphenyl	(31- 97)
S5	(TBP)	=	2,4,6-Tribromophenol	(19-139)
S6	(TPH)	=	Terphenyl-d14	(15-141)

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

### WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.:

SDG No.: 990423A

	EPA	S1	S2	S3	S4	S5	S6	S7	S8	TOT
	SAMPLE NO.	(2FP)#	(PHL)#	(NBZ)#	(FBP)#	(TBP)#	(TPH)#	#	#	OUT
	=========	======	=====	=====	=====	=====	=====	=====	=====	===
01	CZEA	66	61	5*	78	95	84			1
02	CZNWA	63	60	83	94	25	101			0
03	SBLK	55	38	71	66	80	87			0
04	LCS	54	38	82	77	89	87			ol
05	WATER	60	43	70	66	83	82			ol
06	WATERMS	59	42	82	76	88	85			0
07	WATERMSD	60	42	83	80	92	89			0
08	DRY	61	44	76	72	85	88			0
09	OIL	69	48	85	88	113	116			0
10	WWSAMPLE	75	59	95	106D	112	114			o
11	1326-4	8	54	91	89	96	104			0
12	1328-4	89	70D	95	100D	99	109			0
13	1329-3	56	40	70	64	75	87			0
14	TBLK04/09	62	43	79	73	82	91			Ö
15	ACETONE	0*	0*	0*	0*	0*	0*			6
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			QC LIMITS
S1	(2FP)	= 2-Fluorophenol	( 1- 90)
S2	(PHL)	= Phenol-d6	( 1- 67)
S3	(NBZ)	= Nitrobenzene-d5	(18-114)
S4	(FBP)	= 2-Fluorobiphenyl	(31- 97)
S5	(TBP)	= 2,4,6-Tribromophenol	(19-139)
S6	(TPH)	= Terphenyl-d14	(15-141)

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

### 3C WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990423A

Matrix Spike - EPA Sample No.: WATER

COMPOUND	SPIKE	SAMPLE	MS	MS	QC.
	ADDED	CONCENTRATION	CONCENTRATION	%	LIMITS
	(ug/L)	(ug/L)	(ug/L)	REC #	REC.
Phenol	400	97.9	269	43	12- 68
2-Chlorophenol	400	0.00	340	85	50- 98
1,4-Dichlorobenzene	400	0.00	278	70	35- 83
N-Nitrosodi-N-propylami	400	0.00	357	89	69-105
1,2,4-Trichlorobenzene	400	0.00	299	75	37- 89
4-Chloro-3-methylphenol	400	0.00	358	90	63-103
Acenaphthene	400	0.00	365	91	65- 97
4-Nitrophenol	400	0.00	198	50	8- 76
2,4-Dinitrotoluene	400	0.00	379	95	66-114
Pentachlorophenol Pyrene	400 400	0.00	435 393	109 98	52-112 76-108
FALGUE	-100	0.00			/0-108

	SPIKE ADDED	MSD CONCENTRATION	MSD %	ેલ્	QC L	IMITS
COMPOUND	(ug/L)	(ug/L)	REC #	RPD #	RPD	REC.
Phenol	400	273	44	1	35	12- 68
2-Chlorophenol	400	329	82	7	17	50- 98
1,4-Dichlorobenzene	400	297	74	7	21	35- 83
N-Nitrosodi-N-propylami	4.00	349	87	2	10	69-105
1,2,4-Trichlorobenzene	400	311	78	4	21	37- 89
4-Chloro-3-methylphenol	400	367	92	2	12	63-103
Acenaphthene	400	375	94	3	10	65- 97
4-Nitrophenol	400	215	54	8	40	8- 76
2,4-Dinitrotoluene	400	391	98	3	13	66-114
· Pentachlorophenol	400	440	110	1	18	52-112
Pyrene	400	399	100	2	8	76-108

<sup>#</sup> Column to be used to flag recovery and RPD values with an asterisk
\* Values outside of QC limits

RPD:	0 out	of	11	outs	ide	lin	nits	
Spike	Recov	erv:	0	out	of	22	outside	limits

COMMENTS:	

### FORM 3 WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 990423A

Matrix Spike - Sample No.: LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (uq/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
	=======	=============	=======================================	=====	======
Phenol	100		39.8	40	12- 68
2-Chlorophenol	100		78.1	78	50- 98
1,4-Dichlorobenzene	100		65.9	66	35- 83
N-Nitrosodi-N-propylami	100		89.5	90	69-105
1,2,4-Trichlorobenzene	100		65.1	65	37- 89
4-Chloro-3-methylphenol	100		91.2	91	63-103
Acenaphthene	100		84.5	84	65- 97
4-Nitrophenol	100		46.8	47	8- 76
2,4-Dinitrotoluene	100		97.9	98	66-114
Pentachlorophenol	100		102	102	52-112
Pyrene	100		95.7	96	76-108

RPD: 0 out of 0 outside limits Spike Recovery: 0 out of 11 outside limits

COMMENTS:	

<sup>#</sup> Column to be used to flag recovery and RPD values with an asterisk

<sup>\*</sup> Values outside of QC limits

### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: MOUNTAIN STATES

Contract:

VBLK1

Lab Code: MSAI Case No.:

SAS No.:

SDG No.: 990423WL

Matrix: (soil/water) WATER

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: V8670

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 04/23/99

Lab Sample ID: 990423WB

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L

75-01-4Vinyl Chloride 75-35-41,1-Dichloroethene 78-93-32-Butanone 67-66-3Chloroform 56-23-5Carbon Tetrachloride 107-06-21,2-Dichloroethane 71-43-2Benzene 79-01-6Trichloroethene 127-18-4Tetrachloroethene 108-90-7Chlorobenzene 106-46-71,4-Dichlorobenzene	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	מממממממממ
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### 2A WATER VOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 990423WL

	EPA	S1	S2	S3	OTHER	TOT
	SAMPLE NO.	(TOL)#	(BFB)#	(DCE)#	OTHER	OUT
	SAMPLE NO.	(101)#	(DFD)#	======	=====	===
01	VBLK1	103	101	101		0
02	VLCS	103	101	101		o
03	VLCSD	103	103	101		o l
04	01A	106	103	99		Öl
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QC LIMITS

S1 (TOL) = Toluene-d8 (79-123)

S2 (BFB) = Bromofluorobenzene (74-127)

S3 (DCE) = 1,2-Dichloroethane-d4 (62-143)

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

### FORM 3 WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI

Case No.:

SAS No.:

SDG No.: 990423WL

Matrix Spike - Sample No.: vlcs

COMPOUND	SPIKE	SAMPLE	LCS	LCS	QC.
	ADDED	AMOUNT	AMOUNT	%	LIMITS
	(ug/L)	(ug/L)	(ug/L)	REC #	REC.
1,1-Dichloroethene Benzene Trichloroethene Toluene Chlorobenzene	20.0 20.0 20.0 20.0 20.0 20.0		24.3 22.4 22.9 21.9 20.3	122 112 114 110 102	61-131 81-125 78-122 88-119 75-123

COMPOUND	SPIKE ADDED (ug/L)	LCSD AMOUNT (ug/L)	LCSD % REC #	% RPD #	QC LI RPD	IMITS REC.
=======================================	======	=======================================	=====	=====	=====	=====
1,1-Dichloroethene	20.0	24.5	122	0	13	61-131
Benzene	20.0	22.0	110	2	11	81-125
Trichloroethene	20.0	22.6	113	1	12	78-122
Toluene	20.0	20.9	104	6	9	88-119
Chlorobenzene	20.0	20.3	102	0	12	75-123

 $<sup>\</sup>sharp$  Column to be used to flag recovery and RPD values with an asterisk

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:
-----------

<sup>\*</sup> Values outside of QC limits

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

Sequence : 1524 -2

04/21/99 14:31:08 Group: 26488

RPD

2.7

LIMIT

20.0

Analysis Batch Number: 1524 -04/14/99-147 -2

Test Identification : 1524 -Mercury by CVAA, TCLP, 7470A

Number of Samples : 9

Batch Data-Date/Time : 04/14/99 / 15:07:31

**ANALYTE BLANK#** CONC FOUND # CONC LIMIT PBW-428 Mercury 0.0200 0.1000 SPIKE QC LIMITS SAMPLE# ANALYTE CONC ADDED CONC SAMPLE CONC SPIKE % REC # LOWER UPPER 25.0000 95.2 26527-95678 0.0210 23.8200 80.0 120.0 Mercury 26527-95678-2 Mercury 25.0000 0.0210 21.3890 85.5 50.0 150.0 MSD QC LIMITS RESULT 2 SAMPLE# ANALYTE CONC ADDED CONC SAMPLE %REC2 # LOWER UPPER 26527-95678 Mercury 25.0000 0.0210 24,4700 97.8 80.0 120.0 DUPLICATE SAMPLE# ANALYTE RESULT 1 RESULT 2 RPD # LIMIT DILUTION 26527-95678 0.0210 0.0020 165.2(11) 20.0 1.00 Mercury CONTROL QC LIMITS SAMPLE# ANALYTE CONC FOUND CONC KNOWN LOWER UPPER % REC # PBW-428 Mercury 2.5450 2.5000 101.8 80.0 115.0 QC LIMITS CCV # ANALYTE TRUE VALUE BATCH READ % REC # LOWER UPPER ICV-Mercury 3.0000 3.2300 107.7 90.0 110.0 CCV--2 Mercury 5.0000 5.0460 100.9 80.0 120.0 ccv--3 Mercury 5.0000 5.0330 100.7 80.0 120.0 CCV--4 Mercury 5.0000 4.9330 98.7 80.0 120.0 CCV--5 Mercury 5.0000 4.8940 97.9 80.0 120.0 CCV--6 Mercury 5.0000 4.8800 97.6 80.0 120.0 CCB# **ANALYTE** CONC FOUND # CONC LIMIT ICR-Mercury 0.0060 0.1000 CCB-Mercury 0.0480 0.1000 CCB-Mercury -0.0010 0.1000 CCR-Mercury -0.0090 0.1000 CCB-Mercury -0.0110 0.1000

Result Footnotes

(11) - The duplicate results cannot be evaluated because both results are <MDL.

Groups & Samples

Mercury

CCB-

26476-95486 26484-95500 26485-95504 26488-95512 26527-95678 26528-95679 26531-95682 26533-95687 26561-95789

-0.0200

0.1000

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

04/21/99 14:31:10 Group: 26488

Analysis Batch Number: HREXT-04/20/99-114 -2

Test Identification : HREXT-Metals for hr TCLP, by ICP

Sequence : DATQ110

Number of Samples : 9

Batch Data-Date/Time : 04/21/99 / 07:46:52

BLANK#	ANALYTE	co	NC FOUND	# CONC	LIMIT					
PBW1 - 134	Silver	ND .			0.0040					
	Arsenic		0.0049		0.0200					
	Barium		0.0010		0.0040					
	Cadmium	ND			0.0040					
	Chromium		0.0004		0.0100					
	Copper		0.0023		0.0100					
	Lead		0.0067		0.0200					
	Selenium		0.0211		0.0200					
	Zinc		0.0171		0.0500					
CDIVE							00	LIMITS		
SPIKE SAMPLE#	ANAI VTE	CONC	ADDED	CONC CAMDLE	CONC EDIA	E % DEC :			,	
26527-95678	ANALYTE Silver		0.1000	CONC SAMPLE 0.0005	<u>CONC SPIK</u> 0.097			125.0	<u>.</u>	
20321-93010	Arsenic		5.0000	0.0053	5.177		75.0			
	Barium		0.0000	0.0528	9.741			125.0		
	Cadmium		0.1000		0.098			125.0		
	Chromium		0.5000	0.0045			75.0			
			0.5000	0.1556 0.0128	0.640 0.521			125.0		
	Copper Lead		0.5000				75.0			
	Selenium			0.0138	0.483					
	Zinc		5.0000	0.0162	5.363			125.0		
26527-95678-2			5.0000 0.1000	0.0462	5.080			125.0 125.0		
20321-93010-2	Arsenic		5.0000	0.0005	0.095					
	Barium		0.0000	0.0053	5.021			125.0		
	Cadmium			0.0528	9.615			125.0		
	Chromium		0.1000	0.0045	0.096			125.0		
			0.5000 0.5000	0.1556	0.631		75.0			
•	Copper Lead		0.5000	0.0128	0.510		75.0			
	Selenium		5.0000	0.0138	0.464			125.0		
	Zinc		5.0000	0.0162 0.0462	5.309 4.969		75.0 75.0	125.0 125.0		
MSD							QC L	MITS		
SAMPLE#	ANALYTE	CONC	ADDED	CONC SAMPLE	RESULT	2 %REC2	# LOWER	UPPER	RPD #	LIMIT
26527-95678	Silver		0.1000	0.0005	0.097	7 97.2	75.0	125.0	0.1	20.0
	Arsenic		5.0000	0.0053	5.173	7 103.4	75.0	125.0	0.1	20.0
	Barium	1	0.0000	0.0528	9.723	6 96.7	<i>7</i> 5.0	125.0	0.2	20.0
	Cadmium		0.1000	0.0045	0.098	38 94.3	75.0	125.0	0.7	20.0
	Chromium		0.5000	0.1556	0.641	2 97.1	75.0	125.0	0.1	<b>20.</b> 0
	Copper		0.5000	0.0128	0.521	2 101.7	75.0	125.0	0.1	20.0
	Lead		0.5000	0.0138	0.482			125.0	0.2	20.0
	Selenium		5.0000	0.0162	5.423			125.0	1.1	20.0
	Zinc		5.0000	0.0462	5.072			125.0	0.2	20.0
DUPLICATE										
SAMPLE#	ANALYTE	Q.F	SULT 1	RESULT 2	RPD #	LIMIT DI	LUTION			
26527-95678	Silver		0.0005	0.0005	4.1	20.0	1.00			
_	Arsenic		0.0053	0.0058	9.6	20.0	1.00			
	Barium		0.0528	0.0534	1.2	20.0	1.00			
	Cadmium		0.0045	0.0028	47.5(5a)	20.0	1.00			
	Chromium		0.1556	0.1587	2.0	20.0	1.00			

Page 2 ·

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

Sequence : DATQ110

04/21/99 14:31:11 Group: 26488

Analysis Batch Number: HREXT-04/20/99-114 -2

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 9

Batch Data-Date/Time : 04/21/99 / 07:46:52

DUPL TOATE

DUPLICATE						
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
26527-95678	Copper	0.0128	0.0126	1.3	20.0	1.00
	Lead	0.0138	0.0116	17.7	20.0	1.00
	Selenium	0.0162	0.0264	48.1(5a)	20.0	1.00
	Zinc	0.0462	0.0574	21.6(5a)	20.0	1.00
CONTROL					QC LI	MITS
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	
LCSW-134	Silver	0.0984	0.1000	98.4		120.0
	Arsenic	4.8491	5.0000	97.0		120.0
	Barium	9.6968	10.0000	97.0		120.0
	Cadmium	0.0960	0.1000	96.0		120.0
	Chromium	0.4888	0.5000	97.8		120.0
	Copper	0.5082	0.5000	101.6		120.0
	Lead	0.4840	0.5000	96.8		120.0
	Selenium	5.1090	5.0000			
	Zinc			102.2		120.0
	21110	4.8156	5.0000	96.3	80.0	120.0
				QC LI	MITS	
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER !	JPPER
ICV-	Silver	0.1000	0.1000	99.9	90.0	110.0
	Arsenic	1.0000	0.9832	98.3	90.0	110.0
	Barium	1.0000	1.0166	101.7	90.0	110.0
	Cadmium	1.0000	0.9788	97.9	90.0	110.0
	Chromium	1.0000	0.9992	99.9	90.0	110.0
	Copper	1.0000	0.9974	99.7	90.0	110.0
	Lead	5.0000	4.9879	99.8	90.0	110.0
	Selenium	1.0000	1.0075	100.8	90.0	110.0
	Zinc	1.0000	0.9952	99.5	90.0	110.0
CCV12	Silver	0.1000	0.0999	99.9	90.0	110.0
	Arsenic	1.0000	0.9743	97.4	90.0	110.0
	Barium	1.0000	1.0138	101.4	90.0	110.0
	Cadmium	1.0000	0.9798	98.0	90.0	110.0
	Chromium	1.0000	0.9989	99.9	90.0	
	Copper	1.0000	0.9971	99.7	90.0	
	Lead	5.0000	4.9911	99.8	90.0	110.0
	Selenium	1.0000	1.0007	100.1	90.0	
	Zinc	1.0000	0.9952	99.5	90.0	
CCV23	Silver	0.1000	0.0987	98.7	90.0	
	Arsenic	1.0000	1.0029	100.3	90.0	
	Barium	1.0000	1.0348	103.5	90.0	
	Cadmium	1.0000	0.9575	95.8	90.0	
	Chromium	1.0000	0.9989	99.9	90.0	
	Copper	1.0000	1.0281	102.8	90.0	
	Lead	5.0000	4.9387	98.8	90.0	
	Selenium	1.0000	0.9965	99.7	90.0	
	Zinc	1.0000	0.9843	98.4	90.0	
CCV34	Silver	0.1000	0.0993	99.3		
	Arsenic	1.0000	0.0993	99.3 98.7	90.0	
	Barium	1.0000			90.0	
	- 21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.0000	1.0149	101.5	90.0	110.0

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

04/21/99 14:31:12 Group: 26488

Analysis Batch Number: HREXT-04/20/99-114 -2

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples :

9

Batch Data-Date/Time : 04/21/99 / 07:46:52

QC LIMITS

Sequence : DATQ110

CCV #	ANALYTE	TRIJE	VALUE	BATCH READ	% REC #	LOWER UPPER
CCV34	Cadmium	TKOL	1.0000	0.9836	98.4	90.0 110.0
CCV3 4	Chromium		1.0000	1.0069	100.7	90.0 110.0
	Copper		1.0000	0.9976	99.8	90.0 110.0
	Lead		5.0000	4.9862	99.7	90.0 110.0
	Selenium		1.0000	0.9866	98.7	90.0 110.0
	Zinc		1.0000	0.9965	99.7	90.0 110.0
				311132		,,,,,
CCB#	ANALYTE		NC FOUND	# CONC	LIMIT	
ICB-	Silver		0.0001		0.0040	
	Arsenic		0.0012		0.0200	
	Barium		0.0000		0.0040	
	Cadmium	ND			0.0040	
	Chromium		0.0002		0.0100	
	Copper		0.0019		0.0100	
	Lead		0.0058		0.0200	
	Selenium	ND			0.0200	
	Zinc		0.0002		0.0500	
CCB1-	Silver		0.0004		0.0040	
	Arsenic		0.0073		0.0200	
	Barium	ND			0.0040	
	Cadmium	ND			0.0040	
	Chromium		0.0000		0.0100	
	Copper		0.0014		0.0100	
	Lead		0.0026		0.0200	
	Selenium		0.0059		0.0200	
	Zinc		0.0001		0.0500	
CCB2-	Silver		0.0002		0.0040	
	Arsenic		0.0015		0.0200	
	Barium		0.0006		0.0040	
	. Cadmium		0.0002		0.0040	
	Chromium		0.0007		0.0100	
	Copper		0.0011		0.0100	
	Lead		0.0051		0.0200	
	Selenium	ND			0.0200	
	Zinc		0.0007		0.0500	
CCB3-	Silver		0.0013		0.0040	
	Arsenic		0.0124		0.0200	
	Barium	ND			0.0040	
	Cadmium		0.0001		0.0040	
	Chromium	ND			0.0100	
•	Copper		0.0012		0.0100	
	Lead	ND			0.0200	
	Selenium		0.0124		0.0200	
	Zinc	ND			0.0500	

Result Footnotes

<sup>(1</sup>d) - The preparation blank concentration is less than 5% of the regulatory limit

<sup>(5</sup>a) - Duplicates not evaluated: Results are <10x detection limit

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

04/21/99 14:31:13

Group: 26488

Analysis Batch Number: HREXT-04/20/99-114 -2

Test Identification : HREXT-Metals for hr TCLP, by ICP

Sequence : DATQ110

Number of Samples : 9

Batch Data-Date/Time : 04/21/99 / 07:46:52

Groups & Samples

26476-95486 26484-95500 26485-95504 26488-95512 26527-95678 26528-95679 26531-95682 26533-95687

26561-95789

### 143

### On Site Technologies, LTD.

**CHAIN-OF-CUSTODY RECORD** 

Page 1 of 1

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

### Subcontractor:

Mountain States Analytical, Inc. 1645 West 2200 South

FA E

Salt Lake City, UT 84119

06-Apr-99

(800) 973-6724 (801) 972-6278

Acct #:

9904003-01A Sample ID Aqueous Matrix 4/5/99 11:06:00 AM **Collection Date Bottle Type** 1LAMGU SW1311 SW1311/6010ASW1311/8240ASW1311/8270A SW3010A Requested Tests SW3510 SW7470

Comments:

<u>Please call David Cox @ 505-325-1556 for instructions on analysis. All samples will be composited for TCLP Metals, TCLP Volatiles and TCLP Semivolatiles analyses.</u>

Relinquished by: Samial, Montin

4/6/99 1655

Date/Time

Received by: Ratt K

Date/Time

04/07/98 @ 1030

Relinquished by:

Received by:

ON SITE

# **CHAIN OF CUSTODY RECORD**

Date: 1/2/as

Page:

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499 LAB: (505) 325-5667 • FAX: (505) 327-1496

on J	Authorized by:	Method of Shipment:	Relinquished by:	Relinquished by:	Relinquished by:				į	C. 3413	FPR Som	14.70 VO	F1 ( 5	FMP SUND	6'5 m	6'5m	·		SAMPLER		i i	PBO IECT	IN\	/O			Purchase Order No.:
(Client Signature Must Accompany Request)	adov: SAR	Shipment:	ed by:	•	ed by: / Mau / /Muun	1/1				001-31-3 EAR-180	mp 2-3 FMC-100	0x1#1 FMC-100	FMC-100	10 # Fre - 186	Middle + South fold Frein	o South Fid FMC-100	SAMPLE IDENTIFICATION		SAMPLER'S SIGNATURE:		FMC SUMP	PROJECT I OCATION:	Cit. Char Zin - 37/	7	t 1201	Name Shawn Adams	Order No.:
	Date 4/5/69		Date/Time	Date/Time	Date/Time √		·			0 1/1/27 12:00	11.150 11:00		11.14.11.20	1/2/17 11:30	1/5/99 12:00	1/5/M 11:06	DATE TIME	SAMPLE				NIM 71711		F	Dept.		Project No.
		F			人でも	0.5			 ,	14CL	Hick	402	100	Hec	Vone	None	MATRIX PRES.		Numb	or (	of			RE	PO	RT	
大公	pecial W.S	Rush	Received by:	Received by:	Received by:				 			_						_	Conta	ine		—	RE	SL	JLT	SI	-
1 19 G	Special Instructions / Remarks: 1	24-48 Hours	d by:	d by: ( )	d by:				•	* 0	ソソ	X	X 2	Υ	\ X	X	\ \ \	_	\\ \start \( \text{\text{\$\infty}} \)	. 1	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	leiepiloile No.	Sign Crace, Elp	City State Zin	Mailing Address	Company	Name
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Jew J	Sam	Working I					$\neq$								2 <u>5</u>  .	00		\			\LYSI8				7	,	
TCO, Hend Ambor jaus Then analyze	Sample to be mixed	10 Working Days					<i>/</i>								\ \	10		\	\ \ \		ANALYSIS REQUESTED	I didiga i No.		2,	4		Title

Distribution: White - On Site Yellow - LAB Pink - Sampler

strict I - (£95) 393-6161 D. Box 1950 - 151 bbs, NM 82241-1980 strict II - (505) 748-1283 1 S. First csia, NM 88210 trict III - (505) 334-6178 Rio Brazos Road

.c. NM 87410

### New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

### RECEIVED

MAY 2 6 1999

Form C-138 Originated 8/8/95

> Submit Original Plus 1 Copy to appropriate District Office

DATE: 5-28-99

trict IV - (505) 827-7131	Environmental Bureau
REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: X	4. Generator FMC COLORATION
Verbal Approval Received: Yes No No	5. Originating Site YARDWASh SUMP
2. Management Facility Destination Key DIS Poss	6. Transporter Ley
3. Address of Facility Operator 世为45 以 3500 AZIEC NM	8. State UM
7. Location of Material (Street Address or ULSTR) #17 Carry ROAD 5777	
9. <u>Circle One</u> :	
Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes accept non-exempt wastes accept non-exempt wastes accept non-exempt wastes accept non-exempt wastes accept non-exempt wastes accept non-exempt on of origin. No waste classified hazardous by	
BRIEF DESCRIPTION OF MATERIAL:	· · · · · · · · · · · · · · · · · · ·
WATER MIRED WILL GREASE AND PIN WATER  DEGENTE  MAY 2 1 1999	pe dôpe nosthy
OIL CON. D DIST. 3	
Estimated Volume 160 66/s cy Known Volume (to be entered by the op	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Mulau Title: Mee  Waste Management Fecility Authorized Agent  TYPE OR PRINT NAME: MICHAEL TALOVICH  TE	DATE: 5-70-99
	<i>,</i>
APPROVED BY: Martyne Thub- TITLE: Envi	OCOLOGIST DATE: 5-28-59

### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
FMC Corporation	KEA ENEURA ZEUNICEZ
#20 County ROAD 5777	Disposal facility
FARMINGTON NM	Landing of the West (Orange of the DECTO)
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
SAME	#17 County ROAD_5777  FARMINGTON, NM
	FARMINGTON, NM
Attach list of originating sites as appropriate 4. Source and Description of Waste	
The course and accompanies of the course	
WASH BAY SUMP TANKS. MOSTLY	WATER WITH RESIDUAL GREASE
AND SMALL AMOUNTS OF PIPE	
of wellteads.	
of woodfields.	
1, Luis Ortiz	representative for:
(Print Name)	
FMC CORP. WEUHEAD EQUIPMENT	Didision do hereby certify that, ery Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	
EXEMPT oilfield waste X NON-EXE	MPT oilfield waste which is non-hazardous by characteristic
	or by product identification
and that nothing has been added to the exempt or n	on-exempt non-hazardous waste defined above.
For NON-FYEMPT waste only the following door	montation is attached (about appropriate items):
For NON-EXEMPT waste only the following docu	
For NON-EXEMPT waste only the following docu  MSDS Information RCRA Hazardous Waste Analysis	mentation is attached (check appropriate items): Other (description):
MSDS Information	
MSDS Information RCRA Hazardous Waste Analysis	
MSDS Information RCRA Hazardous Waste Analysis	
MSDS Information RCRA Hazardous Waste Analysis	
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody  Name (Original Signature):	
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	

### Analytical Report



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

Attn: Mr. David Cox Project: TCLP Analysis

Sample ID: 9904032-01A Matrix: Waste Water

2 04

001

MSAI Sample: 95990
MSAI Group: 26620
Date Reported: 05/10/99
Discard Date: 06/09/99
Date Submitted: 04/20/99
Date Sampled: 04/19/99
Collected by:

Purchase Order:

Project No.: 9904032

Test	Analysis	Results as Received	Unita	Dilution Factor	Method Detection Limit
03931	Flame/hrISP Prep, TCLP, 3010A Method: SW-846 3010A	Batch. w160		1	<del></del>
0410	Mercury Prep CVAA, Filtration Method: SW-846 7470A	Batch, w434		1	
13027	Netals by hriCP, TCLP (UTS)				
1	Method: SW-846 60108				
	Arsenia	ND	mg/l	<b>1</b>	0.1
i	Barium	1.08	mg./t	1	0.1
:	Codmium	0.022	ng/i	1	0.1
	, Chromium	ND	mg/t	1	0
	Lead	0.14	mg/L	1	0.1
	Salanium	NO	mg/l	1	0.1
	Silver	MO	mg/l	1	0.1
1524	Mercury by CVAA, TCLP, 7470A Method: SM-846 7470A	0.0001	wg/l	1	0.1
0946	TCLP Extraction, ZHE, SH, 1311 Hethod: SH-846 1311	100	X Solids	1	
0947J	TCLP Extraction, hrlCP, Netals Method: 5W-846 1311	100	₹ Sotids		
1	TCLP Extraction, Mercury, 1311 Method: 50-846 1311	100	% Solids	1	
09475	) TCLP Extraction, Sami-VOA, 1311 Method: SW-846 1311	100	% Solids	1	



### Analytical Report



Page 2

On-Site Technologies, Ltd.

MSAI Sample: MSAI Group: 95990 26620

Sample ID: 9904032-01A

076

29

32

065

060

08

07

090

14

13

016

037

027

022

027

140

00

023

032

098

016

Method Results Dilution Detection Test Analysis as Received Units Factor Limit 0949 Semi-VOA, TCLP Method: \$4-846 8270A 2,4-Dinitrotoluene 10g/L 0.0 Hexach Lorobenzene NO mg/L 0.1 Nexachlorobutadiana ng/l ю 0.1 Hexach Loroethane MO mg/L 0.1 Mitrobenzane MD mg/l 0.1 Pyridine MO mg/L 2-Mathylphenol (o-Cresol) me/l 0.1 3 and 4- Methylphenol (m-p cresol) MD ma/l 0.1 Pentach Lorophenol ND mg/l 1.0 2.4.5-Trichlorophenol NO mg/l 0.1 2,4,6-Trichtorophenol mg/L ١.0 30001 SVOA Extraction, TCLP Complete Method: SN-846 35109 ; 14145 Volatiles; TCLP 82608, sm Method: \$W-846 82608 Ronzana M7) mg/L 10 0.1 Carbon tetrachloride mg/l 10 0.1 Chlorobenzene ND ng/t 10 0.1 Chloroform ND. mg/l 10 0.1 1,2-Dichloroethane MO mg/l 10 1,1-Dichloroethene NO mg/l 10 0.1 2-Butanone (MEK) MD mg/L 10 ٥.٠ **Tetrachloroethene** mg/l 10 0.1 Trichloroethene ΝĎ **1** 10 0.1 Vinyl chloride mg/l NO. 10 0.1 1,4-Dichlorobenzene 10 mg/l



### **Analytical Results**

ACZ Laboratories, Iuc. 2773 Downhill Drive Steumbout Springs, CO 80487

(800) 334-5493

On Site Technologies, I.TD. 612 E Murray Dr Farmington, NM 87499

David Cox 😴

Lab Sample ID: L22950-02

Client Sample ID: 9905003-02A

FMC 302

Client Project ID:

ACZ Report ID: RG92326

INDOOR SUMP

Date Sampled: 4/30/99 10:05

Date Received: 5/4/99

Date Reported: 5/13/99

Sample Matrix: Studge

Soil Analysis

Parameter .... Fairs Ignitability (Flashpoint) M1010, Pensky-Martens Closed Cup No Plash Č 5/12/99 M9045 pH, Compsivity 8.6 witz Q.L 0.1 5/12/99

Wet Chemistry

Baram-uses 1.1	FPA Method	Result	Qual	Units	MDL	PQI,	Duse	Analyst
Cyanide, reactive	Section 7.3 SW-846 (3rd Ed) & M9012		U	mg/Kg	0.03	0.1	\$16/99	bg
Sulfide, reactive	Section 7.3 SW-\$46 (3rd Ed) & M9030	2.1		mg/Kg	0.1	ł	5/5/99	mh

Note: Flashpoint - No Flash to 94° C.

loorganic Charliffers (based on EPACLP 3:00)

U - Analyte was analyzed for but not detected at the indicated MDL

B = Analyte concentration detected at a value between MDL and PQL

PQ1. = Practical Quantitation Limit

REPIN101c.01.96.01

Page 1 of 1

Vice President of Operations: Ralph Poulsen

### Martyhe Kieling RECEIVED HAY 17 1960



Analyirellikesiiks

Ø

ACZ Laboratories, Inc. 2773 Downhill Drive

Steamboat Springs, CO 80487

(800) 334-5493

On Site Technologies, LTD.

612 E Murray Dr

Farmington, NM 87499

David Cox

Lab Sample ID: *L22950-02* 

Client Sample ID: 9905003-02A

Client Project ID:

ACZ Report ID: RG92326 FMC302 Indoor Sump

Date Sampled: 4/30/99 10:05

Date Received: 5/4/99

Date Reported: 5/13/99

Sample Matrix: Sludge

Soil Analysis

Uranido Agento	EPA Method	Result Qui	al Units	VIDL	170)[	Diffe	natvet
Ignitability (Flashpoint)	M1010, Pensky-Martens Closed Cup	No Flash	C	l	5	5/12/99	as/cv
pH, Corrosivity	M9045	8.6	units	0.1	0.1	5/12/99	as

Wet Chemistry

Tarang Tarang	EPA Method	Result	Onal	Units	MDE	, P()), -	Director	udysi
Cyanide, reactive	Section 7.3 SW-846 (3rd Ed) & M9012		U	mg/Kg	0.03	0.1	5/6/99	bg
Sulfide, reactive	Section 7.3 SW-846 (3rd Ed) & M9030	2.1		mg/Kg	0.1	1	5/5/99	mh

Note: Flashpoint - No Flash to 94° C.

Add This to Key Disposal
Frac corporation
with District III stamp 5721/99

Ingreame Qualifiers (based on EPA CLF 3/90)

U = Analyte was analyzed for but not detected at the indicated MDL

B = Analyte concentration detected at a value between MDL and PQL

PQL = Practical Quantitation Limit

Vice President of Operations: Ralph Poulsen

Page I of 1 ",

## CHAIN-OF-CUSTODY RECORD

On Site Technologies, LTD. 612 Е. Murray Drive

Farmington, NM 87401

(505) 325-2432

Subcontractor:

ACZ Laboratories, Inc.

2773 Downhill Drive

Steamboat Springs, Colorado 80487

TEL:

(800) 334-5493 (970) 879-2216

**1**3V0776

03-May-99

Acct #:

Requested Tests

SULFIDE

CYAN IDE

648/2 (00)

E150.1 **Bottle Type** 1LAMGU 4/30/99 10:05:00 AM 4/30/99 9:20:00 AM Collection Date

> Aqueous Aqueous

9905003-01A 9905003-02A

Matrix

Sample ID

527.3.2 517.3.4.2 SW1010 1LAMGU

Please analyze two (2) water samples for Reactivity. Corrosivity and Ignitability.

Comments:

5/3/99 1530

Date/Time

Received by: /

Received by:

Date/Time

Relinquished by:

Relinquished by: Heider Rose

Pag CAMPLE DECEIPT EODM								
SAMPLE RECEIPT FORM		,						
CLIENT: $\frac{ON-SJ7E}{L229SO}$	DATE	5/4	199					
Does this project require special handling procedures such as CLP protocol?	NA	YES	NO					
2) Are the custody seals on the cooler intact?	NA	YES	NO					
3) Are the custody seals on the sample containers intact?	₩À.	YES	NO					
4) Is there a Chain of Custody (COC), or other directive shipping papers present?		(YES)	NO					
5) Is the COC complete?		YES	NO					
Relinquished? Yes No Requested Analysis? Yes	No							
6) Is the COC in agreement with the samples received?		(YES)	NO					
# of Samples: Yes No Sample ID: Yes	No							
Matrix: Yes No # of Containers: Yes	No							
7) Is there enough sample for all requested analysis?		YES	NO					
8) Are all samples within holding times for requested analysis?								
9) Were all sample containers received intact?		(YES)	NO					
10) Are samples requiring no headspace, headspace free?	NA	YES	NO					
11) Do the samples require a Foriegn Soils Permit Label or quarantine?		YES	NO					
12) Do samples require special disposal/hold considerations?								
Non-Hazardous: Yes No Hazardous: Yes No	Hold:	mor	nths					
Describe "NO" items (except #1, 11, & 12):								
Was the client contacted? Yes No  If yes: Date: Name of person contacted:  Actions taken or client instructions:								
Signature:								

			SAN	MPLE REC	CEIPT F	ORM			_	Page 2 of
CLIENT: PROJECT #:	0N-5	ITE FSC/					DATE ANALYST:	5/	14/49 DACE	
•		ТЕМР	ERATURI	E VERIFICA	TION SA	MPLE C	HECK (°C	)		
				CONTAINER  ID  CUENT	TEMP (°C) 2° to 6°  \(\lambda \left[ \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot	RAD μR/hr 12	If contained > 25 µR/hr must be scr	then each		
SAMPLE	R	G	Y	CHECK (pH) YG < 2	) & RADIO B < 2	BG	J ITY SCRE O <2	Т	P	RAD μR/hı
	<2	<2	< 2		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	< 2		> 12	> 12	μκπ.
Temperature o			emperature	blank bottle	next to sam	ples <u>L</u> or	hand deliver	ed on ice _		
REPORT COM	MMENTS:									

£ 4
<b>(</b> \
Comm
Emp

# CHAIN OF CUSTODY RECORD

Date: 4/30/99

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499 LAB: (505) 325-5667 • FAX: (505) 327-1496

ON SITE TECHNOLOGIES, LTD.

Date: 7/-0///

				١
urchase Order No.:	Project No.		Name Shawn Flance Title Jural	
IN Name Shaws Hans		TA r s	met Fruitermenta	
Company (; )	Anstyl S.W. Dept.		F.O. Box 3376	
Address A. O. Serv 3576			City, State, Zip Farmington 1111 87499	
0,00	111 47469	ı	7	
Surden	_		ANALYSIS REQUESTED	
PMIC Troping >1	Sand			
AMPLER'S SIGNATURE:		Mumb Sontai		
SAMPLE IDENTIFICATION	SAMPLE SAMPLE DATE TIME MATRIX PRES.			
Fire 301 Billion Sun D	1 1.20 A. A.	(4	X	
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Authorized by:	Date 7/20/9 9	Specia	/ Re	
(Client Signature <u>Must</u> Accompany Request)	1	, X , Z	Costilated and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of t	
		A P	Consultant Offices	7

Site Yellow - LAB Pink - Sampler Goldenrod - Cilent

To Re-order Call 325-9400 or Fax 325-9764 BIPHBIFPIPHIBS\* FORM# 01



### Mountain States Analytical, Inc.

The Quality Solution

May 10, 1999

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

Reference:

Project: TCLP Analysis Project No.: 9904032 MSAI Group: 26620

Dear Mr. Cox:

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

9904032-01A FMC Indoor Sump Composite

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

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

We look forward to working with you on future projects.

With Regards,

Rolf E. Larsen Project Manager



### Analytical Report



The Quality Solution

On-Site Technologies, Ltd.

612 E Murray Drive Farmington, NM 87401

Attn: Mr. David Cox Project: TCLP Analysis

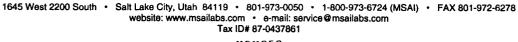
Sample ID: 9904032-01A Matrix: Waste Water

MSAI Sample: 95990
MSAI Group: 26620
Date Reported: 05/10/99
Discard Date: 06/09/99
Date Submitted: 04/20/99
Date Sampled: 04/19/99

Collected by: Purchase Order:

Project No.: 9904032

	Analysis	Results as Received	Units	Dilution Factor	Method Detection Limit
	Flame/hrICP Prep, TCLP, 3010A Method: SW-846 3010A	Batch. w160		1	
0410	Mercury Prep CVAA, Filtration Method: SW-846 7470A	Batch. w434		1	
13027	Metals by hrICP, TCLP (UTS)				
	Method: SW-846 6010B				
	Arsenic	ND	mg/l	1	0.02
	Barium	1.08	mg/l	1	0.004
	Cadmium	0.022	mg/l	1	0.004
	Chromium	ND	mg/l	1	0.010
	Lead	0.14	mg/l	1	0.02
	Selenium	ND	mg/l	1	0.02
	Silver	ND	mg/l	1	0.004
	Mercury by CVAA, TCLP, 7470A •Method: SW-846 7470A	0.0001	mg/l	1	0.0001
0946	TCLP Extraction, ZHE, sw, 1311 Method: SW-846 1311	100	% Solids	1	
0947J	TCLP Extraction, hrICP, Metals Method: SW-846 1311	100	% Solids	1	
0947M	TCLP Extraction, Mercury, 1311 Method: SW-846 1311	100	% Solids	1	
0947s	TCLP Extraction, Semi-VOA, 1311 Method: SW-846 1311	100	% Solids	1	





### Analytical Report



Page 2

On-Site Technologies, Ltd.

MSAI Sample:

MSAI Group:

95990 26620

Sample ID: 9904032-01A

		Results		Ditution	Method Detection
Took	Analysis	as Received	Units	Factor	Limit
	Anatysts	as Received	Ones	ractor	Limit
0949	Semi-VOA, TCLP				
0,4,	Method: SW-846 8270A				
	2,4-Dinitrotoluene	ND	mg/l	1	0.0060
	Hexachlorobenzene	ND	mg/l	1	0.0076
	Hexachlorobutadiene	ND	mg/l	1	0.029
	Hexachloroethane	ND	mg/l	1	0.032
	Nitrobenzene	ND	mg/l	1	0.0065
	Pyridine	ND	mg/l	1	0.0060
	2-Methylphenol (o-Cresol)	ND	mg/l	1	0.008
	3 and 4- Methylphenol (m+p cresol)	ND	mg/l	1	0.007
	Pentachlorophenol	ND	mg/l	1	0.0090
	2,4,5-Trichlorophenol	ND	mg/l	1	0.014
	2,4,6-Trichlorophenol	ND	mg/l	1	0.013
3000T	SVOA Extraction, TCLP	Complete		1	
	Method: SW-846 3510B				
14145	Volatiles, TCLP 8260B, sw				
	Method: SW-846 8260B				
	Benzene	ND	mg/l	10	0.0016
	· Carbon tetrachloride	ND	mg/l	10	0.0037
	Chlorobenzene	ND	mg/l	10	0.0027
	Chloroform	ND	mg/l	10	0.0022
	1,2-Dichloroethane	ND	mg/l	10	0.0027
	4,1-Dichloroethene	ND	mg/l	10	0.0140
	2-Butanone (MEK)	ND	mg/l	10	0.100
	Tetrachloroethene	ND	mg/l	10	0.0023
	Trichloroethene	ND	mg/l	10	0.0032
	Vinyl chloride	ND	mg/l	10	0.0098
	1,4-Dichlorobenzene	ND	mg/l	10	0.0016







On-Site Technologies, Ltd.

MSAI Sample:

95990

Sample ID: 9904032-01A

MSAI Group: 26620

ND - Not detected at the Method Detection Limit.

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

Respectfully Submitted, Reviewed and Approved by:

Rolf E. Larsen Project Manager

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

Sequence : 1524 -1

04/26/99 13:53:56 Group: 26620

20.0

Analysis Batch Number: 1524 -04/22/99-147 -1

Test Identification: 1524 -Mercury by CVAA, TCLP, 7470A

Number of Samples : .15

Batch Data-Date/Time : 04/22/99 / 15:14:59

BLANK#	ANALYTE	CONC FOUND	# CONC	LIMIT				
26629-96011	Mercury	0.1120(	1d)	0.1000				
SPIKE						QC L	IMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	E % REC #		UPPER	
26629-96019	Mercury	25.0000	0.1250	24.8160			120.0	•
26629-96018-2	•	25.0000	0.1250	22.3600			150.0	
MSD						QC LIM	IITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	2 <u>%REC2</u> #	LOWER L	<u>JPPER</u>	RPD
26629-96020	Mercury	25.0000	0.1250	24.6880	98.3	80.0 1	120.0	0.5
DUPLICATE								
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD # L	LIMIT DILU	TION		
26629-96018	Mercury	0.1250	0.0470	90.7(5a)		.00		
	·							
CONTROL					QC LIMITS			
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC # L	LOWER UPPER			
26629-96012	Mercury	2.6080	2.5000	104.3	80.0 115.0			
				QC LIMI	110			
CCV #	ANALYTE	TRUE VALUE	BATCH READ		LOWER UPPER			
ICV-	Mercury	3.0000	3.1830	106.1	90.0 110.0			
CCV2	Mercury	5.0000	5.1060	102.1	80.0 120.0			
CCV3	Mercury	5.0000	4.9950	99.9	80.0 120.0			
CCV4	Mercury	5.0000	4.9940	99.9	80.0 120.0			
CCV5	Mercury	5.0000	5.0410	100.8	80.0 120.0			
	ne. our ,	3.0000	3.0410	100.0	0010 12010			
CCB#	ANALYTE	CONC FOUND	# CONC	LIMIT				
I CB-	Mercury	0.0340		0.1000				
CCB-	Mercury	0.0560		0.1000				
CCB-	Mercury	-0.0040		0.1000				
CCB-	Mercury	-0.0450		0.1000				
CCB-	Mercury	-0.0500		0.1000				

Result Footnotes

### Groups & Samples

26620-95990	26626-96008	26627-96009	26629-96011	26629-96012	26629-96013	26629-96014	26629-96015
26629-96016	26629-96017	26629-96018	26629-96019	26629-96020	26629-96021	26629-96022	26629-96026
26629-96027	26629-96028	26629-96029					

<sup>(1</sup>d) - The preparation blank concentration is less than 5% of the regulatory limit

<sup>(5</sup>a) - Duplicates not evaluated: Results are <10x detection limit

BLANK#

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

CONC FOUND #

04/26/99 13:53:57 Group: 26620

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

ANALYTE

Batch Data-Date/Time : 04/23/99 / 07:19:29

Sequence : DATQ112

CONC LIMIT

DLANK#	ANALITE	CONC TOOM	# <u>CONC</u>	E I I'I I					
PBW1-160	Silver	0.0001	0	.0040					
	Arsenic	0.0098	0	.0200					
	Barium	0.0008	3 0	.0040					
	Beryllium	ND	0	.0002					
	Cadmium	0.0006	0	.0040					
	Chromium	ND	0	.0100					
	Copper	0.0021	. 0	.0100					
	Nickel	ND	0	.0040					
	Lead	0.0011	0	.0200					
	Antimony	ND	0	.0200					
	Selenium	ND	0	.0200					
	Thallium	ND	0	.0200					
	Vanadium	ND		.0040					
	Zinc	0.0253	0	.0500					
SPIKE						QC	LIMITS		
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #		UPPER		
26629-96018	Silver	0.1000	0.0856	0.1927	107.1		125.0		
	Arsenic	5.0000	1.0347	6.2665	104.6	75.0	125.0		
	Baríum	10.0000	0.1766	9.6578	94.8	75.0	125.0		
	Beryllium	0.1000	0.0605	0.1653	104.8	75.0	125.0		
	Cadmium	0.1000	4.0258	4.1988	173.0(2k)	75.0	125.0		
	Chromium	0.5000	0.0356	0.5346	99.8	75.0	125.0		
	Copper	0.5000	10.7664	11.3455	115.8	75.0	125.0		
	Nickel	5.0000	10.1367	14.7737	92.7	75.0	125.0		
	Lead	0.5000	0.2250	0.6840	91.8	75.0	125.0		
	Antimony	1.0000	1.0731	2.1852	111.2	75.0	125.0		
	Selenium	5.0000	-0.0074	5.3374	106.9	75.0	125.0		
	Thallium	0.2000	0.0926	0.2757	91.6	75.0	125.0		
	Vanadium	1.0000	0.0175	1.0023	98.5	75.0	125.0		
	Zinc	5.0000	92.8440	96.1863	66.8(2k)	75.0	125.0		
26629-96018-2	Silver	0.1000	0.0856	0.1597	74.1(2b)	75.0	125.0		
	Arsenic	5.0000	1.0347	5.9613	98.5	75.0	125.0		
	Barium	10.0000	0.1766	9.2387	90.6		125.0		
	Beryllium	0.1000	0.0605	0.1530	92.5	75.0	125.0		
	Cadmium	0.1000	4.0258	3.8209	-204.9(2k)	75.0	125.0		
	Chromium	0.5000	0.0356	0.5151	95.9	75.0	125.0		
	Copper	0.5000	10.7664	10.1744	-118.4(2k)	75.0	125.0		
	Nickel	5.0000	10.1367	14.2540	82.3		125.0		
	Lead	0.5000	0.2250	0.6626	87.5	75.0	125.0		
	Antimony	1.0000	1.0731	2.0435	97.0	75.0	125.0		
	Selenium	5.0000	-0.0074	5.1196	102.5	75.0	125.0		
	Thallium	0.2000	0.0926	0.2038	55.6(2b)	75.0	125.0		
	Vanadium	1.0000	0.0175	0.9635	94.6	75.0	125.0		
	Zinc	5.0000	92.8440	92.9369	1.9(2k)	75.0	125.0		
MSD			•				IMITS		
				DECLUIT O	%REC2 #	LOWER	LIDDED	RPD #	LIMIT
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2			UPPER	_	
26629-96018	ANALYTE Silver Arsenic	CONC ADDED 0.1000 5.0000	0.0856 1.0347	0.1846 6.2140	99.0 103.6	75.0	125.0 125.0	4.3 0.8	20.0

Page '2'.

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

Sequence : DATQ112

04/26/99 13:53:58 Group: 26620

RPD #

0.5

2.5

2.9

0.3

2.4

1.5

2.9

0.4

6.4

0.4

0.4

LIMIT

20.0 20.0

20.0

20.0

20.0

20.0

20.0

20.0 20.0

20.0

20.0

20.0

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

Batch Data-Date/Time : 04/23/99 / 07:19:29

MSD								IMITS
SAMPLE#	ANALYTE	CONC_ADDED	CONC SAMPLE	RESULT		C2 #	LOWER	UPPER
26629-96018	Barium	10.0000	0.1766	9.61		.3	75.0	125.0
	Beryllium	0.1000	0.0605		.1612 100.6		75.0	125.0
	Cadmium	0.1000	4.0258	4.07		.5(2k)	75.0	125.0
	Chromium	0.5000	0.0356	0.53			75.0	125.0
	Copper	0.5000	10.7664	11.07		.2(2k)	75.0	125.0
	Nickel	5.0000	10.1367	14.51		.6	75.0	125.0
	Lead	0.5000	0.2250	0.67		.7	75.0	125.0
	Antimony	1,0000	1.0731	2.12			75.0	125.0
	Selenium	5.0000	-0.0074	5.31			75.0	125.0
	Thallium	0.2000	0.0926	0.2587 83.0		75.0		
	Vanadium	1.0000	0.0175	0.9981 98.1		75.0		
	Zinc	5.0000	92.8440	95.7562 58.2(2k)		75.0	125.0	
DUPLICATE								
SAMPLE#	ANALYTE	RESULT 1	RESULT 2	<u>RPD</u> #	LIMIT	DILUT	ION	
26629-96018	Silver	0.0856	0.0891	3.9	20.0	1.	00	
	Arsenic	1.0347	1.0634	2.7	20.0	1.	00	
	Barium	0.1766	0.1807	2.3	20.0	1.	00	
	Beryllium	0.0605	0.0612	1.0	20.0	1.	00	
	Cadmium	4.0258	4.1278	2.5	20.0	1.	00	
	Chromium	0.0356	0.0367	2.8	20.0	1.	00	
	Copper	10.7664	10.9413	1.6	20.0	1.	00	
	Nickel	10.1367	10.3956	2.5	20.0	1.	00	
	Lead	0.2250	0.2305	2.4	20.0	1.	00	
	Antimony	1.0731	0.8731	20.6(5a)	20.0	1.	00	
	Selenium	-0.0074	0.0000	200.0(11)	20.0	1.	00	
	Thallium	0.0926	0.0715	25.8(5a)	20.0	1.	00	
	Vanadium	0.0175	0.0194	10.1	20.0	0.0 1.00		
	Zinc	92.8440	95.1303	2.4	20.0	1.	00	
CONTROL	•				QC LIM	IITS		
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER L	<b>IPPER</b>		
LCSW-160	Silver	0.0979	0.1000	97.9	80.0	120.0		
	Arsenic	5.0317	5.0000	100.6	80.0	120.0		
	Barium	9.8980	10.0000	99.0	80.0	120.0		
	Beryllium	0.0996	0.1000	99.6	80.0	120.0		
	Cadmium	0.1032	0.1000	103.2	80.0	120.0		
	Chromium	0.5204	0.5000	104.1	80.0	120.0		
	Copper	0.5133	0.5000	102.7	80.0	120.0		
	Nickel	5.0423	5.0000	100.8	80.0	120.0		
	Lead	0.4969	0.5000	99.4	80.0	120.0		
	Antimony	0.9997	1.0000	100.0		120.0		
	Selenium	5,1649	5.0000	103.3		120.0		
	Thallium	0.1956	0.2000	97.8		120.0		
	Vanadium	0.9960	1.0000	99.6		120.0		
	Zinc	4.9727	5.0000	99.5		80.0 120.0		

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

04/26/99 13:53:59 Group: 26620

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

Batch Data-Date/Time : 04/23/99 / 07:19:29

QC LIMITS

Sequence : DATQ112

				QC	LIMITS
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER UPPER
ICV-	Silver	0.1000	0.0991	99.1	90.0 110.0
	Arsenic	1.0000	0.9804	98.0	90.0 110.0
	Barium	1.0000	1.0061	100.6	90.0 110.0
;	Beryllium	0.1000	0.1026	102.6	90.0 110.0
	Cadmium	1.0000	1.0167	101.7	90.0 110.0
•	Chromium	1.0000	1.0402	104.0	90.0 110.0
1 1	Copper	1.0000	1.0015	100.1	90.0 110.0
1	Nickel	2.0000	1.9955	99.8	90.0 110.0
!	Lead	5.0000	4.9244	98.5	90.0 110.0
	Antimony	1.0000	1.0088	100.9	90.0 110.0
	Selenium	1.0000	0.9919	99.2	90.0 110.0
	Thallium	1.0000	0.9854	98.5	90.0 110.0
	Vanadium	0.4000	0.4248	106.2	90.0 110.0
	Zinc	1.0000	0.9922	99.2	90.0 110.0
CCV12	Silver	0.1000	0.1006	100.6	90.0 110.0
	Arsenic	1.0000	0.9892	98.9	90.0 110.0
į	Barium	1.0000	1.0106	101.1	90.0 110.0
	Beryllium	0.1000	0.1023	102.3	90.0 110.0
!	Cadmium	1.0000	1.0071	100.7	90.0 110.0
	Chromium	1.0000	1.0336	103.4	90.0 110.0
	Copper	1.0000	1.0074	100.7	90.0 110.0
	Nickel	2.0000	2.0107	100.5	90.0 110.0
	Lead	5.0000	4.9657	99.3	90.0 110.0
	Antimony	1.0000	1.0100	101.0	90.0 110.0
•	Selenium	1.0000	0.9996	100.0	90.0 110.0
	Thallium	1.0000	0.9854		
•	Vanadium	0.4000	0.4289	98.5 107.2	90.0 110.0
	Zinc	1.0000	1.0025	107.2	90.0 110.0
ccv23	Silver	0.1000	0.0988		90.0 110.0
3372 3	. Arsenic	1.0000		98.8	90.0 110.0
	Barium	1.0000	1.0082	100.8	90.0 110.0
	Beryllium	0.1000	1.0131	101.3	90.0 110.0
	Cadmium	1.0000	0.1010	101.0	90.0 110.0
	Chromium	1.0000	1.0291 1.0358	102.9	90.0 110.0
	Copper	1.0000	0.9868	103.6	90.0 110.0
	Nickel	2.0000		98.7	90.0 110.0
	Lead	5.0000	2.0325		90.0 110.0
	Antimony	1.0000	5.0713	101.4	90.0 110.0
	Selenium	1.0000	1.0245	102.4	90.0 110.0
	Thallium	1.0000	1.0131	101.3	90.0 110.0
	Vanadium	0.4000	0.9906	99.1	90.0 110.0
	Zinc		0.4253	106.3	90.0 110.0
ccv34	Silver	1.0000 0.1000	1.0118	101.2	90.0 110.0
3373 4	Arsenic		0.0982	98.2	90.0 110.0
	Barium	1.0000 1.0000	0.9932	99.3	90.0 110.0
	Beryllium	0.1000	1.0115	101.2	90.0 110.0
	Cadmium	1.0000	0.1003	100.3	90.0 110.0
	Chromium		1.0455	104.6	90.0 110.0
	Copper	1.0000	1.0479	104.8	90.0 110.0
	coppei	1.0000	0.9813	98.1	90.0 110.0

Pagé : 4 .

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

04/26/99 13:54:00 Group: 26620

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

Batch Data-Date/Time : 04/23/99 / 07:19:29

QC LIMITS

Sequence : DATQ112

			,	QC	LIMITS
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER UPPER
CCV34	Nickel	2.0000	2.0264	101.3	90.0 110.0
	Lead	5.0000	5.0431	100.9	90.0 110.0
	Antimony	1.0000	1.0196	102.0	90.0 110.0
	Selenium	1.0000	0.9995	100.0	90.0 110.0
	Thallium	1.0000	0.9777	97.8	90.0 110.0
	Vanadium	0.4000	0.4213	105.3	90.0 110.0
	Zinc	1.0000	1.0137	101.4	90.0 110.0
CCV45	Silver	0.1000	0.0993	99.3	90.0 110.0
	Arsenic	1.0000	0.9812	98.1	90.0 110.0
	Barium	1.0000	1.0031	100.3	90.0 110.0
	Beryllium	0.1000	0.1012	101.2	90.0 110.0
	Cadmium	1.0000	1.0305	103.1	90.0 110.0
	Chromium	1.0000	1.0412	104.1	90.0 110.0
	Copper	1.0000	0.9845	98.5	90.0 110.0
	Nickel	2.0000	1.9951	99.8	90.0 110.0
•	Lead	5.0000	4.9377	98.8	90.0 110.0
	Antimony	1.0000	1.0073	100.7	90.0 110.0
	Selenium	1.0000	0.9852	98.5	90.0 110.0
!	Thallium	1.0000	0.9681	96.8	90.0 110.0
!	Vanadium	0.4000	0.4214	105.3	90.0 110.0
	Zinc	1.0000	1.0030	100.3	90.0 110.0
	21110	1.0000	1.0050	100.5	70.0 110.0
CCB#	ANALYTE	CONC FOUND		LIMIT	
ICB-	Silver	ND		0.0040	
	Arsenic	0.0127	7	0.0200	
	Barium	0.000	1	0.0040	
	Beryllium	ND		0.0002	
1	Cadmium	0.0002	2	0.0040	
	Chromium	ND		0.0100	
	. Copper	0.0002		0.0100	
	Nickel	ND		0.0040	
	Lead	ND		0.0200	
	Antimony	0.0019		0.0200	
	Selenium	ND		0.0200	
1	Thallium	ND		0.0200	
	Vanadium	0.0007	7	0.0040	
	Zinc	ND		0.0500	
CCB1-	Silver	0.000		0.0040	
	Arsenic	0.0017		0.0200	
1	Barium	ND		0.0200	
	Beryllium	ND		0.0040	
	Cadmium	0.000			
	Chromium	ND		0.0040 0.0100	
	Copper	ND ND			
	Nickel	ND ND		0.0100	
1	Lead	0.0021		0.0040	
	Antimony	ND	•	0.0200	
	Selenium	0.0018	2	0.0200	
	Thallium	ND		0.0200	
1		ND		0.0200	

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

Sequence : DATQ112

04/26/99 13:54:00 Group: 26620

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

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Batch Data-Date/Time : 04/23/99 / 07:19:29

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB1-	Vanadium	ND	0.0040
	Zinc	ND	0.0500
CCB2-	Silver	ND	0.0040
	Arsenic	0.0045	0.0200
	Barium	ND	0.0040
	Beryllium	ND	0.0002
	Cadmium	0.0001	0.0040
	Chromium	ND	0.0100
	Copper	0.0004	0.0100
	Nickel	ND	0.0040
	Lead	ND	0.0200
	Antimony	0.0058	0.0200
	Selenium	ND	0.0200
	Thallium	ND	0.0200
	Vanadium	ND	0.0040
	Zinc	0.0046	0.050
CCB3-	Silver	0.0003	0.0040
	Arsenic	0.0087	0.020
	Barium	ND	0.004
	Beryllium	ND	0.000
	Cadmium	0.0002	0.004
	Chromium	ND	0.010
	Copper	0.0005	0.010
	Nickel	ND	0.004
	<b>L</b> ead	ND	0.020
	Antimony	ND	0.020
	Selenium	ND	0.020
	Thallium	ND	0.020
	Vanadium	ND	0.004
	Zinc	0.0001	0.050
CCB4-	. Silver	0.0008	0.004
	Arsenic	0.0033	0.020
	Barium	0.0003	0.004
	Beryllium	ND	0.000
	Cadmium	ND	0.004
	Chromium	ND	0.010
	Copper	ND ·	0.010
	Nickel	ND	0.0040
	Lead	0.0017	0.020
	Antimony	ND	0.0200
	Selenium	ND	0.020
	Thallium	ND	0.020
	Vanadium	ND	0.0040
	Zinc	ND	0.0500

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

Sequence : DATQ112

04/26/99 13:54:01 Group: 26620

Analysis Batch Number: HREXT-04/22/99-114 -1

Test Identification : HREXT-Metals for hr TCLP, by ICP

Number of Samples : 16

Batch Data-Date/Time : 04/23/99 / 07:19:29

----- Result Footnotes

(2k) - Sample concentration >4X spk added. Serial dilution was recovered within 10% limits.

(2b) - The action limit for pre-pres TCLP spike recov is <50% & the sample 80-100% of reg limit

(5a) - Duplicates not evaluated: Results are <10x detection limit

(11) - The duplicate results cannot be evaluated because both results are <MDL.

----- Batch Notes

Zinc serial dilution reovered at a 10x and 50x in DATP113(w160).

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Groups & Samples

\_\_\_\_\_\_

26575-95831 26620-95990 26626-96008 26627-96009 26629-96013 26629-96014 26629-96015 26629-96016 26629-96017 26629-96018 26629-96021 26629-96022 26629-96026 26629-96027 26629-96028 26629-96029

LEA0499AMB

Lab Name: MOUNTAIN STATES Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990430C

Matrix: (soil/water) WATER

Lab Sample ID: 96210

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: X6290

Level: (low/med) LOW

Date Received:

% Moisture: \_\_\_\_ decanted: (Y/N)\_\_ Date Extracted:

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/30/99

Injection Volume: 1.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

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		<del></del>
95-48-72-Methylphenol (o-Cresol)	25.0	U
N00195003 and 4-Methylphenol	25.0	U
67-72-1Hexachloroethane	10.0	U
98-95-3Nitrobenzene	10.0	U
87-68-3Hexachlorobutadiene	10.0	U
88-06-22,4,6-Trichlorophenol	25.0	U
95-95-42,4,5-Trichlorophenol	25.0	U
121-14-22,4-Dinitrotoluene	10.0	U
118-74-1Hexachlorobenzene	10.0	U
87-86-5Pentachlorophenol	25.0	U
110-86-1Pyridine	10.0	U

### 2C WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.:

SDG No.: 990430C

SAMPLE NO. (2FP) # (PHL) # (NBZ) # (FBP) # (TBP) # (TPH) # # # # OUT		7777	01		- 02	04	OF.	00	07		mom l
01 LEA0499AMB		EPA	S1	S2	S3	S4 (EDD) #	S5 (TDD) #	S6	S7 "	S8 <sub>_</sub>	TOT
01 LEA0499AMB									Ī		1 1
02       LEA0499ALCS       44       31       75       67       71       59       0         03       LEA0499ALCSD       51       36       84       70       70       56       0         04       CBSEBA       32       24       78       64       58       60       0         05       CBSEBAMS       44       34       85       72       70       61       0         06       CBSERAMSD       45       35       88       72       66       59       0         07       CENEBA       38       33       1*       66       64       72       1         08       CBNEAA       52       39       83       75       73       85       0         10       CBSEAA       52       43       79       68       87       0         11       12       12       13       14       15       14       15       14       15       14       15       14       15       14       15       14       14       15       14       14       15       14       14       15       14       14       14       14       14       14 <td>0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>=====</td> <td>=====</td> <td>1 1</td>	0.1								=====	=====	1 1
03 LEA0499ALCSD 51 36 84 70 70 56 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
04 CBSEBA 32 24 78 64 58 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		l									
05 CBSEBAMS											
06 CBSEBAMSD											
07 CBNEBA 38 33 1* 66 64 72 1 1 08 CBNEAA 52 39 83 75 73 85 0 09 CBNEAB 50 35 79 70 68 87 0 10 CBSEAA 52 43 79 68 70 60 0 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29					00 00						
08 CENEAA 52 39 83 75 73 85 0 0 0 0 0 10 CESEAA 52 43 79 68 70 60 0 0 11 12 12 13 14 15 16 17 18 19 19 19 12 12 12 12 12 12 12 12 12 12 12 12 12											
09 CBNEAB 50 35 79 70 68 87 0 0 10 CBSEAA 52 43 79 68 70 60 0 0 0 11 12											
10 CBSEAA 52 43 79 68 70 60 0 0 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 25 25 26 29 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
11       12         13       14         15       16         17       18         19       19         20       19         21       19         22       10         23       19         24       19         25       10         26       10         27       10         28       10         29       10											
12		CDOLLEY	22	13	,,	00	, 0				ا ا
13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29											
14         15         16         17         18         19         20         21         22         23         24         25         26         27         28         29	13									<del></del>	
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18         19         20         21         22         23         24         25         26         27         28         29											
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### QC LIMITS S1 (2FP) = 2-Fluorophenol( 1- 90) S2 (PHL) = Phenol- $d\bar{6}$ (1-67)S3 (NBZ) = Nitrobenzene-d5 (18-114)S3 (NBZ) = Nitrobenzene-a5 (10-11-7) S4 (FBP) = 2-Fluorobiphenyl (31-97) S5 (TBP) = 2,4,6-Tribromophenol (19-139) S6 (TPH) = Terphenyl-d14(15-141)

<sup>#</sup> Column to be used to flag recovery values

<sup>\*</sup> Values outside of contract required QC limits

D Surrogate diluted out

### 2C WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990504A2

	777	01			04					mom
	EPA	S1	S2	S3	S4	S5 (TDD) #	S6	S7 ,,	S8 ,,	TOT
	SAMPLE NO.	(2FP)#	(PHL)#	(NBZ)#	(FBP)#	(TBP)#	(TPH)#	#	#	OUT
0.7		=====	=====	======	======	=====	======	=====	=====	===
01	SBLK1	49	35	66	76	97	76			0
02	LCS	54	33	75	85	98	90			0
03	1346-4	66	47	76	90	100	78			0
04	1346-4MS	57	41	78	86	92	82			0
05	1346-4MSD	57	16	79	81	89	82			0
06	990403201A	59	46	66	78	91	70			0
07	1347-3	52	42	82	90	88	75	l l		0
08	SBLK1	60	25	78	77	63	64			0
09	LCS	59	14	86	80	65	75			0
10	S-5	55	41	70	76	63	78			0
11	RWMA-4	63	8	81	56	60	88			
12	RWMA-3	67	50	84	76	64	85			0
13	GW-2	68	52	87	79	61	73			0
14	RWMA-2A	72	61	85	82	74	87			0
15	RWMA-1	61	54	77	80	67	64			lol
16						ļ				[
17								·		
18										
19				[ <del></del> ]				[ <del>  </del>		
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22				<del></del>	· ————				<del></del>	
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27					<del></del>					
28										
29		l								
30										

				QC LIMITS
S1	(2FP)	=	2-Fluorophenol	( 1- 90)
S2	(PHL)	=	Phenol-d6	( 1- 67)
S3	(NBZ)	=	Nitrobenzene-d5	(18-114)
S4	(FBP)	=	2-Fluorobiphenyl	(31- 97)
S5	(TBP)	=	2,4,6-Tribromophenol	(19-139)
S6	(TPH)	=	Terphenyl-d14	(15-141)

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

### 3C ' :' WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990430C

Matrix Spike - EPA Sample No.: CBSEBA

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=======================================	=======	==========	==========	======	=====
Phenol	100	0.00	31.9	32	12- 68
2-Chlorophenol	100	0.00	62.6	63	50- 98
1,4-Dichlorobenzene	100	0.00	49.3	49	35- 83
N-Nitrosodi-N-propylami	100	0.00	85.7	86	69-105
1,2,4-Trichlorobenzene	100	0.00	51.5	52	37- 89
4-Chloro-3-methylphenol	100	0.00	70.0	70	63-103
Acenaphthene	100	0.00	85.7	86	65- 97
4-Nitrophenol	100	0.00	45.0	45	8- 76
2,4-Dinitrotoluene	100	0.00	99.9	100	66-114
Pentachlorophenol	100	0.00	85.0	85	52-112
Pyrene	100	0.00	97.4	97	76-108

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC L: RPD	IMITS REC.
Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitrosodi-N-propylami 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dinitrotoluene -Pentachlorophenol Pyrene	100 100 100 100 100 100 100 100 100 100	33.1 63.9 53.4 87.8 58.9 68.9 86.1 43.8 94.0 83.0 93.1	33 64 53 88 59 69 86 44 94 83	2 8 2 13 2 0 3 6 2 5	35 17 21 10 21 12 10 40 13 18 8	12- 68 50- 98 35- 83 69-105 37- 89 63-103 65- 97 8- 76 66-114 52-112 76-108

<sup>#</sup> Column to be used to flag recovery and RPD values with an asterisk
\* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

### FORM 3 WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.:

SAS No.: SDG No.: 990430C

Matrix Spike - Sample No.: LEA0499ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
	========	==========		=====	======
Phenol	100		28.9	29	12- 68
2-Chlorophenol	100		59.0	59	50- 98
1,4-Dichlorobenzene	100		59.1	59	35- 83
N-Nitrosodi-N-propylami	100		74.2	74	69-105
1,2,4-Trichlorobenzene	100		67.8	68	37- 89
4-Chloro-3-methylphenol	100		75.0	75	63-103
Acenaphthene	100		85.9	86	65- 97
4-Nitrophenol	100		38.6	39	8- 76
2,4-Dinitrotoluene	100		90.4	90	66-114
Pentachlorophenol	100		80.1	80	52-112
Pyrene	100		91.8	92	76-108

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC L. RPD	IMITS REC.
Phenol 2-Chlorophenol 1,4-Dichlorobenzene N-Nitrosodi-N-propylami 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol Acenaphthene 4-Nitrophenol 2,4-Dinitrotoluene Pentachlorophenol Pyrene	100 100 100 100 100 100 100 100 100 100	33.7 68.5 61.7 82.4 72.0 75.8 86.0 38.4 87.6 78.8 89.8	34 69 62 82 72 76 86 38 88 79	15 15 4 10 6 1 0	35. 17 21 10 21 12 10 40 13 18	12- 68 50- 98 35- 83 69-105 37- 89 63-103 65- 97 8- 76 66-114 52-112

# Column to be used to flag recovery and RPD values with an asterisk
\* Values outside of QC limits

RPD: 0 out of 11 outside limits Spike Recovery: 0 out of 22 outside limits

### VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK1

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.:

SAS No.:

SDG No.: 990506WL

Matrix: (soil/water) WATER

Lab Sample ID: 990506WB

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: V8930

Level: (low/med) LOW

Date Received:

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

Date Analyzed: 05/06/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND

(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND	(ug/L or ug/	/kg) ug/L		Q
74-97-5	Bromochlorometha	ne		5	ט
74-87-3	Chloromethane			5	U
75-01-4	Vinyl Chloride_			5	ַ
74-83-9	Bromomethane			5	ע
75-00-3	Chloroethane			5	U
67-64-1				25	U
75-35-4	1,1-Dichloroethe	ne		5	[ע
	Methylene Chlori			5	U
75-15-0	Carbon Disulfide			5	U
156-60-5	trans-1,2-Dichlo	roethene		5	ע
108-05-4	Vinyl Acetate			5	U
75-34-3	1,1-Dichloroetha	ne		5	ַ ט
78-93-3	2-Butanone			25	U
	cis-1,2-Dichloro	ethene		5	U
	Chloroform			5	U
71-55-6	1,1,1-Trichloroe	thane		5	U
56-23-5	Carbon Tetrachlo	ride		5	U
107-06-2	1,2-Dichloroetha	ne		5	U
71-43-2				5	U
79-01-6	Trichloroethene			5	U
78-87-5	1,2-Dichloroprop	ane		5	U
75-27-4	Bromodichloromet	hane		5	U
100-75-8	2-Chloroethyl Vi	nyl Ether		5	ע
10061-01-5	cis-1,3-Dichloro	propene		5	U
108-88-3				5	U
10061-02-6	trans-1,3-Dichlo	ropropene		5	U
79-00-5	1,1,2-Trichloroe	thane		5	U
108-10-1	4-Methyl-2-Penta	none		5	ן ט
591-78-6	2-Hexanone			5	U
127-18-4	Tetrachloroethen	e		5	U
124-48-1	Dibromochloromet	hane	ļ	5	U
108-90-7	Chlorobenzene		į.	5	U
	Ethylbenzene			5	ש
	-42-m+p-Xylene			10	U
·			·		

### VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK1

Lab Name: MOUNTAIN STATES Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990506WL

Matrix: (soil/water) WATER

Lab Sample ID: 990506WB

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: V8930

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/06/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND

(ug/L or ug/Kg) ug/L

Q

CAD IVO.	COMPOUND (ug/ L OF ug/	ng/ ug/ii	Q
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	ŭ
140-88-5	Ethyl Acrylate	20	Ŭ
79-34-5	1,1,2,2-Tetrachloroethane	5	υl
78-83-1	Isobutyl Alcohol	250	Ū
71-36-3	n-Butyl Alcohol	500	บไ
110-57-6	trans-1,4-Dichloro-2-butene	20	U
80-62-6	Methyl Methacrylate	20	Ū
123-91-1	1,4-Dioxane	500	Ū
74-95-3	Dibromomethane	5	Ū
79-46-9	2-Nitropropane	20	Ū
97-63-2	Ethyl Methacrylate	20	ן ט
106-93-4	1,2-Dibromoethane	5	บ
	1,1,1,2-Tetrachloroethane	5	וֹט
	Cyclohexanone	250	Ū
96-18-4	1,2,3-Trichloropropane	5	וט
10645-7	Pentachloroethane	20	Ū
98-82-8	Isopropylbenzene	5	<u>"</u>
100-44-7	Benzyl Chloride	20	Ū
541-73-1	1,3-Dichlorobenzene	5	Ū
106-46-7	1,4-Dichlorobenzene	5	ט
104-51-8	n-Butylbenzene	5	ן ט
	Naphthalene	5	ט
	Dichlorodifluoromethane	5	וט
	Trichlorofluoromethane	5	Ū
60-29-7	Ethyl Ether	20	Ū
110-009		5	U
107-08-8	Acrolein	200	Ū
	Freon 113	20	Ū
504-60-9	trans-Piperylene	20	บ
504-60-9	cis-Piperylene	20	Ü
75-05-8	Acetonitrile	20	ŭ
74-88-4	Methyl Iodide	20	IJ
		20	
I <del></del>		l	l

EPA SAMPLE NO.

VBLK1

Lab Name: MOUNTAIN STATES Contract:

Lab Code: MSAI Case No.: SAS No.: SDG No.: 990506WL

Matrix: (soil/water) WATER

Lab Sample ID: 990506WB

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: V8930

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/06/99

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

107-05-1Allyl Chloride	20	U
107-13-1Acrylonitrile	20	Ū
1634-04-4Methyl t-Butyl Ether	20	Ü
126-99-82-Chloro-1,3-Butadiene	200	Ū
107-12-0Propionitrile (ethyl Cyanide	250	Ü
141-78-6Ethyl Acetate	20	Ü
126-98-7Methacrylonitrile	20	ן ט
109-99-9Tetrahydrofuran	20	บ
110-82-7Cyclohexane	20	ט
	20	ט
1476-11-5cis-1,4-Dichloro-2-butene	20 5	U
594-20-72,2-Dichloropropane		_
563-58-61,1-Dichloropropene	5 -	U
142-28-91,3-Dichloropropane	5	U
103-65-1n-Propylbenzene	5	U
108-86-1Bromobenzene	5	U
95-49-8o-Chlorotoluene	5	Ū
108-61-81,3,5-Trimethylbenzene	5	ָּט
106-43-4p-Chlorotoluene	5	Ū
98-06-6tert-Butylbenzene	5	U
95-63-61,2,4-Trimethylbenzene	5	U
135-98-8sec-Butylbenzene	5	Ŭ
99-87-6p-Isopropyltoluene	5	U
120-82-11,2,4-Trichlorobenzene	5	ן ט
96-12-81,2-Dibromo-3-Chloropropane	5	U
67-68-3Hexachlorobutadiene	5	U
87-61-61,2,3-Trichlorobenzene	5	Ū
95-50-11,2-Dichlorobenzene	5	U
76-14-2Freon 114	20	U
110-54-3Hexane	20	ָּט
	·	· ———

### WATER VOLATILE SURROGATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.:

SAS No.:

SDG No.: 990506WL

SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE NO.  SAMPLE		EPA	S1	S2	S3	OTHER	TOT
						OTHER	
01         VBLK1         100         101         108         0           02         VLCS         100         106         108         0           03         VLCSD         99         103         105         0           04         CYSWA         99         101         112         0           05         CYNEA         98         100         113         0           06         CXSEA         99         104         112         0           07         13362         100         101         107         0           08         13362MS         99         101         108         0           09         13362MSD         98         102         108         0           10         13372         99         103         110         0           11         4130         98         100         109         0           12         9101         98         100         100         0           13         01A         97         100         106         0           14         13422         99         102         110         0           15 <t< td=""><td></td><td>SAMPLE NO.</td><td></td><td>(DrD)#</td><td>i</td><td></td><td>1</td></t<>		SAMPLE NO.		(DrD)#	i		1
02         VLCS         100         106         108         0           03         VLCSD         99         103         105         0           04         CYSWA         99         101         112         0           05         CYNEA         98         100         113         0           06         CXSEA         99         104         112         0           07         13362         100         101         107         0           08         13362MS         99         101         108         0           09         13362MSD         98         102         108         0           10         13372         99         103         110         0           11         4130         98         100         109         0           12         9101         98         100         110         0           13         01A         97         100         106         0           14         13422         99         102         110         0           15         13553         98         102         109         0           16 <td< td=""><td>01</td><td>TOT V1</td><td></td><td>101</td><td></td><td> =====</td><td></td></td<>	01	TOT V1		101		=====	
03         VLCSD         99         103         105         0           04         CYSWA         99         101         112         0           05         CYNEA         98         100         113         0           06         CXSEA         99         104         112         0           07         13362         100         101         107         0           08         13362MS         99         101         108         0           09         13362MSD         98         102         108         0           10         13372         99         103         110         0           11         4130         98         100         109         0           12         9101         98         100         110         0           13         01A         97         100         106         0           14         13422         99         102         110         0           15         13553         98         102         109         0           16         13573         99         102         100         0           18 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
04       CYSWA       99       101       112       0         05       CYNEA       98       100       113       0         06       CXSEA       99       104       112       0         07       13362       100       101       107       0         08       13362MSD       99       101       108       0         09       13362MSD       98       102       108       0         10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       100       0         18       13463       99       100       107       0         19       2749       99							
05         CYNEA         98         100         113         0           06         CXSEA         99         104         112         0           07         13362         100         101         107         0           08         13362MS         99         101         108         0           09         13362MSD         98         102         108         0           10         13372         99         103         110         0           11         4130         98         100         109         0           12         9101         98         100         110         0           13         01A         97         100         106         0           14         13422         99         102         110         0           15         13553         98         102         109         0           16         13573         99         102         109         0           17         13583         99         102         100         0           18         13463         99         100         106         0           20 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>  <del></del></td><td></td></td<>						<del></del>	
06       CXSEA       99       104       112       0         07       13362       100       101       107       0         08       13362MS       99       101       108       0         09       13362MSD       98       102       108       0         10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       109       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       1829       100		i i					
07       13362       100       101       107       0         08       13362MSD       99       101       108       0         09       13362MSD       98       102       108       0         10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       109       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       101       101       0         22       1908       100					)		
08       13362MS       99       101       108       0         09       13362MSD       98       102       108       0         10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       109       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         24       1333       99							
09       13362MSD       98       102       108       0         10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       103       0         24       1333       99       97						ļ ————	
10       13372       99       103       110       0         11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
11       4130       98       100       109       0         12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       29       100					1		
12       9101       98       100       110       0         13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1890081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20       20       20       20       20 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
13       01A       97       100       106       0         14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       100       103       0		1			i .		
14       13422       99       102       110       0         15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20			!				
15       13553       98       102       109       0         16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>ļ</td><td></td></td<>						ļ	
16       13573       99       102       109       0         17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20       20       20							
17       13583       99       102       110       0         18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1890081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20						l	
18       13463       99       100       107       0         19       2749       99       100       106       0         20       SHOP       99       101       109       0         21       2829       100       102       107       0         22       1S90081       100       101       101       0         23       9108       100       100       103       0         24       1333       99       97       101       0         25       2821       100       100       103       0         26       27       28       29       20       20       20							
19     2749     99     100     106     0       20     SHOP     99     101     109     0       21     2829     100     102     107     0       22     1S90081     100     101     101     0       23     9108     100     100     103     0       24     1333     99     97     101     0       25     2821     100     100     103     0       26     27     28     29     29     20		· ·					
20     SHOP     99     101     109     0       21     2829     100     102     107     0       22     1890081     100     101     101     0       23     9108     100     100     103     0       24     1333     99     97     101     0       25     2821     100     100     103     0       26     27     28     29			1	1			
21     2829     100     102     107     0       22     1890081     100     101     101     0       23     9108     100     100     103     0       24     1333     99     97     101     0       25     2821     100     100     103     0       26     27     28     0     0       29     29     0     0     0					l		
22     1S90081     100     101     101     0       23     9108     100     100     103     0       24     1333     99     97     101     0       25     2821     100     100     103     0       26     0     0     0     0       27     0     0     0       28     0     0     0       29     0     0     0							
23     9108     100     100     103     0       24     1333     99     97     101     0       25     2821     100     100     103     0       26     0     0     0     0       27     0     0     0       28     0     0     0							
24 1333 99 97 101 0 25 2821 100 100 103 0 26 27 28 29					ł .		
25 2821 100 100 103 0 26 27 28 29							
26 27 28 29							t i
27 28 29		2821	100	100	103		0
28							
29							
30							
	30	Í			l	l	l

QC LIMITS

S1 (TOL) = Toluene-d8 (79-123)S2 (BFB) = Bromofluorobenzene (74-127)

S3 (DCE) = 1,2-Dichloroethane-d4 (62-143)

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

. WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.:

SAS No.:

SDG No.: 990506WL

Matrix Spike - EPA Sample No.: 13362

COMPOUND	SPIKE ADDED ()	SAMPLE AMOUNT ()	MS AMOUNT ()	MS % REC #	QC. LIMITS REC.
=======================================	========		===========	=====	=====
1,1-Dichloroethene	20.0	0.00	20.5	102	61-155
Benzene	20.0	0.00	22.5	112	86-122
Trichloroethene	20.0	0.00	37.4	187*	78-125
Toluene	20.0	0.00	22.4	112	86-115
Chlorobenzene	20.0	0.00	21.5	108	87-112

COMPOUND	SPIKE ADDED ()	MSD AMOUNT ()	MSD % REC #	% RPD#	. ~	MITS REC.
=======================================	=======	==========	=====	=====	======	=====
1,1-Dichloroethene	20.0	21.5	108	6	10	61-155
Benzene	20.0	22.6	113	1	9	86-122
Trichloroethene	20.0	37.3	186*	0	14	78-125
Toluene	20.0	22.6	113	1	10	86-115
Chlorobenzene	20.0	21.8	109	1	7	87-112

 $<sup>\</sup>ensuremath{^{\dagger}}$  Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

### FORM 3 WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: MOUNTAIN STATES

Contract:

Lab Code: MSAI Case No.:

SAS No.:

SDG No.: 990506WL

Matrix Spike - Sample No.: vlcs

COMPOUND	SPIKE ADDED ()	SAMPLE AMOUNT (ug/L)	LCS AMOUNT ()	LCS % REC #	QC. LIMITS REC.
=======================================	=======	=========	=======================================	======	=====
1,1-Dichloroethene	20.0		19.1	96	61-155
Benzene	20.0		21.1	106	86-122
Trichloroethene	20.0		20.4	102	78-125
Toluene	20.0		20.8	104	86-115
Chlorobenzene	20.0		20.3	102	87-112

	SPIKE ADDED	LCSD AMOUNT	LCSD %	00	~	IMITS
COMPOUND	()	()	REC #	RPD #	RPD	REC.
=======================================	========	==========	=====	=====	=====	=====
1,1-Dichloroethene	20.0	18.9	94	2	10	61-155
Benzene	20.0	21.0	105	1	9	86-122
Trichloroethene	20.0	20.4	102	0	14	78-125
Toluene	20.0	21.0	105	1	10	86-115
Chlorobenzene	20.0	20.8	104	2	7	87-112

<sup>#</sup> Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:	

# On Site Technologies, LTD.

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

# **CHAIN-OF-CUSTODY RECORD**

Page I of I

Subcontractor:

Mountain States Analytical, Inc. 1645 West 2200 South

FAX:

Salt Lake City, UT 84119

19-Apr-99

(800) 973-6724 (801) 972-6278

Acct #:

9904032-01A Sample ID Aqueous Matrix 4/19/99 11:00:00 AM **Collection Date Bottle Type** 1LAMGU SW1311 SW1311/6010ASW1311/8240ASW1311/8270A SW3010A ယ Requested Tests SW3510 SW7470

Comments:

<u>Please call David Cox @ 505-325-1556 for instructions on analysis. All samples will be composited for TCLP Metals, TCLP Volatiles and TCLP Semivolatiles analyses.</u>

Relinquished by: Heidi Rees.

Relinquished by:

4/19/99 1610

Date/Time

Received by: Latt H Received by:

Date/Time

04/20/99 Q 1030

<b>CHAIN OF</b>		•
<	ON SITE	

CUSTODY RECORD
Date: 4/1/9/39

5226

657 W. Maple • P. O. Box 2606 • Farmington NM 87499 LAB: (505) 325-5667 • FAX: (505) 325-6256

TECHNOLOGIES, LTD.

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Name & Shawn Adams		TA T S	Company	HMA	
Company Contract For Con month	SLK Dept.	יסק: דבונ	Mailing Address	7/1/	
3376		ESI BE	City, State, Zip		
City, State, Zip Farmington, NM	87499	1	Telephone No.		Telefax No.
				ANALYSIS REQUESTED	ESTED
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Sampler: WES HALL		Number Contai	TON THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF T		
SAMPLE IDENTIFICATION D	SAMPLE MATRIX PRES.	i.S.	Jeno Jor		LABID
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Method of Shipment:		Rush	24-48 Hours	10 Working Days	Special Instructions:
Authorized by: (Client Signature Must Accompany Request)	Date 1/11/9 2	TI	Q.		the work

District I - (505) 393-6161 P. C. Box-1940 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 P!-trict III - (505) 334-6178 Rio Brazos Road

APPROVED BY

c, NM 87410

### New Mexico Energy Minerals and Natural Resources PEOREN ED Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

MAY 03 1999

Environmental Bureau Oil Conservation Division Form C-138 Originated 8/8/95

> Submit Original Plus I Copy to appropriate District Office

<u>Biet 14</u> - (202) 827-7131	
REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: X	4. Generator WFS
Verbal Approval Received: Yes 🔲 No 💢	5. Originating Site Milagro Plant
2. Management Facility Destination KEY DISPOSAL	6. Transporter Key
3. Address of Facility Operator Physical: Ca 3500 #345 Azlec, Um	8. State NM
7. Location of Material (Street Address or ULSTR) 197 CR 4900 Bloom Field NM 874	/3
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	d for transport.
BRIEF DESCRIPTION OF MATERIAL:	
WASTE WATER FROM EVAPORATION POND AX X	be NATURAL GAS
Breechment Plant.	
	DECEIVED APR 2 9 1999
·	Oll Con. Div
Estimated Volume 2500+bbls cy Known Volume (to be entered by the op	perator at the end of the haul) cy
SIGNATURE: Milling Management Facility Authorized Agent  Waste Management Facility Authorized Agent	DATE: 4-29-99
TYPE OR PRINT NAME: MICHAEL TALOUICH TE	LEPHONE NO. <u>505-334-6186</u>
(This space for State Use)	

### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
WILLIAMS FIELD SETWICES	
192 CR 4900	KEY ENERGY DISPOSAL
BLOOMFIELD MM. 87413	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
MILABRO PLANT	
192 CR4900	
Bloomfreld NM 87413	
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Waste Water	
·	
1	
1, NELSON M JLy TD (Print Name) /	representative for:
	VII A Lova Diss. A da barabu agrifu shas
	YILA 6/20 PLANT   do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	
EVERINT - 10-14	NOTION - 1161-1-1
EXEMPT oilfield waste	MPT oilfield waste which is non-hazardous by characteristic r by product identification
unary side	by product administration
and that nothing has been added to the exempt or no	on-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following documents	mantation is attached (about appropriate items):
MSDS Information	Other (description):
X RCRA Hazardous Waste Analysis	
Chain of Custody	
$\sim$	
Name (Original Signature):	
Title: Lead MECK	
1// 100	
Date: 4/27/99	

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. Sendler C

Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.lb1/wpd



### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sample ID: Lab ID#:

Sunco Disposal Plant

Project #: Date Reported: 98065-02 10-30-98

Sample Matrix:

E120 Soil

Date Sampled: Date Received: 10-29-98 10-29-98

Preservative: Condition:

Cool Cool and Intact Date Analyzed: Chain of Custody: 10-29-98

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 Milagro Plant.

Vister of Waster



### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

	7/1	Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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	<b>99%</b> .

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 Queen

Stacy W Sendler



### EPA METHOD 8040 PHENOLS

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 L. Checco

Stacy W Sendler
Review



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

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)
Dutting	0.004	0.000	
Pyridine Hexachloroethane	0.081	0.020	5.0
	0.190	0.020	3.0
Nitrobenzene Hexachlorobutadiene	0.766	0.020	2.0
	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.

OA/OC Accomtones Criteria	D	D 10
QA/QC Acceptance Criteria	Parameter	Percent Recovery
		20.00

### 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.

Decen R. Oginan

Stacy W Sendler



# 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

		Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(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.

Alexander L. Opiera

Stacy W Sendler
Review



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



### 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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
Tetrachioroethene	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.

Arlayst Review Review Review Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865



### **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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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.

Stacy W Sendler



# 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

		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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%
Tetrachioroethene	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.

Delen R. ajuan

Stacy W Sendler



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

Client: Sample ID: QA/QC Matrix Spike Project #:
Date Reported:

N/A 11-12-98

Laboratory Number: Sample Matrix:

E120 TCLP Extract Date Sampled:
Date Received:

N/A N/A

Analysis Requested:

Condition:

TCLP

Date Analyzed:

11-11-98

N/A

Date Extracted: N/A

			Spiked			SW-846
	Sample	Spike	Sample	Det.		% Rec.
	Result	Added	Result	Limit	Percent	Accept.
Parameter	(mg/L)	(mg/L)	(mg/L)	(mg/L)	Recovery	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.

Analysi

Review

32 • 0615 • E. FOE • 600 • 4005

tacy W Sendler



# 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	
	Concentration	Limit	Limit	
Parameter	(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	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.

Allen L. Coleman

Stacy W Sendler
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 P. Ogleen

Review Stacy W Sendler



# 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
	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 E120 and E147 - E148.

Alexa R. Oferson

Stacy W Sendler
Review



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

Client: QA/QC Project #: N/A 11-12-98 Sample ID: Laboratory Blank Date Reported: Laboratory Number: 11-12-TBN-Blank Date Sampled: N/A Date Received: N/A Sample Matrix: Hexane Preservative: N/A Date Extracted: N/A Condition: 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
HexachioroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Davamatas	Domont Domont
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.

Analysi Pecer L. Ogiecen

Review Stacy W Sendler



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

N/A QA/QC Project #: Client: 11-12-98 Method Blank Date Reported: Sample ID: N/A 11-04-BN-MB Date Sampled: Laboratory Number: Date Received: N/A Sample Matrix: TCLP Extract 11-04-98 Date Extracted: 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)
Di.di		0.020	<b>5</b> 0
Pyridine	ND		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	<b>P</b> 4	Percent Recovery
I I I A // IC A CCONTORCO C'EITORIO	Daramatar	Dorcont Docovon
WAVAC ACCEDIANCE CINENA	Parameter	Leiceiii Vecovei A

### 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 Cycles

Review Stacy W Sendler



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	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
Hexachioroethane	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

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference

### 8090 Compounds

30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992. Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E120 and E147.

Der L. Cejeen

Stacy W Sendler
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		Method *	Detection	Sample	Duplicate		
Conc. (mg/L)		Blank	Limit	ND	ND	0.0%	Range
Arsenic	ND	ND	0.0001	NU	ИП	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 Coric?(mg/s)	Spike // Added	Sample			Acceptance :
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% - 12 <b>0</b> %
Chromium	0.0500	ND	0.0499	99.8%	80% - 120%
Lead	0.1000	0.0086	0.109	99.9%	80% - <b>120%</b>
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% - <b>120%</b>

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 E120 and E147.

Analyst

Review

Stacy W Sendler

	7	Cool - ice/Blue ice				9	2-0615	(505) 632-0615				
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		RAMETERS	ANALYSIS / PARAMETERS	AN				WFS MLLAERD Plant	Project Location いたら がし		<u>۲</u>	Client / Project Name

District I - (505) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 D' trict III - (505) 334-6178 Rio Brazos Road \_.c. NM 87410

District IV - (505) 827-7131

#### New Mexico Energy Minerals and Natural Resources Department IVED Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

APR 071999

Submit Original Plus 1 Čopy to appropriate District Office

Form C-138

Originated 8/8/95

Environmental Bureau Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE			
1. RCRA Exempt: Non-Exempt: X	4. Generator Ley ENERGY SOLV.			
Verbal Approval Received: Yes 🔲 No 🔯	5. Originating Site Pipe YARD			
2. Management Facility Destination Key Disposa-C	6. Transporter Ven			
3. Address of Facility Operator CR3500 #345 #Z+ec NM	8. State N.M.			
7. Location of Material (Street Address or ULSTR) #328 (とみなり Aztec Nへ				
9. Circle One:				
A. All requests for approval to accept oilfield exempt wastes will be accepted and accept of the second and the Generator's certification of testing will be approved.	ompanied by necessary chemical analysis to on of origin. No waste classified hazardous by			
All transporters must certify the wastes delivered are only those consigned for transport.				
BRIEF DESCRIPTION OF MATERIAL:				
tuesh water myed with UNUSED KCh	Fluid CRATED			
Fresh water miged with unused Keh.	PEGEIVED APR - 6 1999 OM GOAL DOW			
Estimated Volume South + cy Known Volume (to be entered by the op	perator at the end of the haul) cy			
SIGNATURE: Management Facility Authorized Agent  Waste Management Facility Authorized Agent	DATE: \$ 3-26-99			
TYPE OR PRINT NAME: MICHAEL TALOUICA TE	LEPHONE NO. 505-334-6/86			
APPROVED BY: Mandage Q Mandage TITLE: See	(09/5/ DATE: 4/6/79			

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
·	
Key ENERGY Sev.	Key ENERGY DISPOSAL
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
Key PipeyARD	328 CR. 3500
	Aztec, New Mexico
Attach list of originating sites as appropriate	
4. Source and Description of Waste	1 1111
Fresh Water mixed with	h unused KCL Fluid
Created from Frac Tank	Rivse outs
, Michael W. Church	representative for:
Hey EURIGY Sers. PIDEUM	
according to the Resource Conservation and Recover 1988, regulatory determination, the above described	do hereby certify that, by Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)
<del></del>	MPT oilfield waste which is non-hazardous by characteristic r by product identification
and that nothing has been added to the exempt or no	on-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following document of MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	mentation is attached (check appropriate items): Other (description):
Name (Original Signature):	hurch
Title: Proupost Manager	
Date: 3-26-99	<del></del>

## MATERIAL SAFETY DATA SHEET

**POTASH** 

CAUTION - MAY CAUSE SKIN AND

**EYE IRRITATION** 

MOAB SALT, Inc.

P.O. Box 1208

Moab, Utah (801) 259-771

TEXASGULF Inc.

3101 Gienwood Avenue

P.O. Box 30321

Raleigh, N.C. 27622-0321 (919) 881-2700

TRANSPORTATION EMERGENCIES: CALL (800) 424-9300 (CHEMTREC) HEALTH EMERGENICES: CONTACT YOUR LOCAL POISON CENTER

#### PRODUCT INFORMATION

CHEMICAL NAME AND SYNONYMS

POTASSIUM CHLORIDE

TRADE NAME AND SYNONYMS POTASH, POTASSIUM MURIATE,

MURIATE OF POTASH

**CHEMICAL FAMILY INORGANIC SALT** 

**FORMULA** 

KC1

**CAS NUMBER** 

7447-40-7

OSHA SUBPART Z Listed in:

ACGIH TLV LISTS:

IARC MONOGRAPH:

\_\_\_X \_\_\_\_ NONE OF THE ABOVE

TYPICAL COMPOSITION

POTASSIUM CHLORIDE

SOCIUM CHLORIDE

%

96.8

2.8 (CAS #7647-14-5)

#### PHYSICAL DATA

**BOILING POINT (°F)** 

**VAPOR PRESSURE (mm Hg.)** 

**VAPOR DENSITY (AIR-1)** 

SOLUBILITY IN WATER

APPEARANCE AND ODOR

Sublines @ 2732

N/A

N/A

7 at 1%

25% @ 68°F

White crystals or granules, odorless

MELTING POINT (°F)

**SPECIFIC GRAVITY (H20-1)** PERCENT VOLATILE

1.98 N/A

**EVAPORATION RATE** 

N/A

1423

OTHER

#### FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (METHOD USED)

NOT COMBUSTIBLE

FLAMMABLE LIMITS

LEL N/A UEL N/A

**EXTINGUISHING MEDIA** SPECIAL FIRE FIGHTING PROCEDURES N/A

NONE

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE

#### **HEATLH INFORMATION**

THRESHOLD LIMIT VALUE:

NONE ESTABLISHED. OHSA total nuisance dust limit of 15 mg/m<sup>3</sup> and a respirable faction of 5 mg/m<sup>3</sup>. The ACGIH nuisance dust TLV of 10 mg/m<sup>3</sup> for the 8 hour time.

weighted average applies.

29:01

PCS MOAB OPERATIONS + 5253275451

NO. 565

**9**23

EFFECTS OF OVEREXPOSURE EYE-Irritant, SKIN-Slightly irritating. INHALATION-Irritates trached and upper breathing passages. INGESTION-Large doses and cause G.I. irritation, purging, weakness and circulatory disturbances. Low toxicity. (Toxicity LDSO Rat=3020 mg/kg).

#### **EMERGENCY AND FIRST AID PROCEDURES**

EYE-Flush thoroughly with water. Seek medical attention if irritation persists.

SKIN-Wash thoroughly with soap and water.

INHALATION-Remove to fresh air. If discomfort continues, seek medical attention.

INGESTION-If person is conscious, give large amounts of water to drink and induce vomiting. Seek medical attention.

#### REACTIVITY DATA

STABILITY UNSTABLE CONDITIONS TO AVOID NONE

INCOMPATABILITY (Materials to Avoid) Strong acids-can cause release of toxic chloride gasses.

HAZARDOUS DECOMPOSITION PRODUCTS None

HAZARDOUS
POLYMERIZATION May Occur
Will Not Occur

#### SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Prevent large quantities from contact with water ways or vegetation.

WASTE DISPOSAL METHOD If uncontaminated, recover and reuse product. Consult State or Federal environmental regulatory agencies for acceptable disposal procedures and location.

#### PERSONAL PROTECTION INFORMATION

EYE-Tight fitting goggles should be worn in dusty areas.

SKIN-if irritation occurs, long sleeves and impervious gloves should be worn.

RESPIRATORY-A NIOSH-approved dust respirator should be used when exposure exceeds the OSHA standard of 15 mg/m³.

#### SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING NONE

OTHER PRECAUTIONS Potasin is mildly corrosive to steel when wet

urici I - (505) 393-6161 D. Box 1980 bbs, NM 88241-1980 urici II - (505) 748-1283 1 S. First csia, NM 88210 trict III - (505) 334-6178 7 Rio Brazos Road .c. NM 87410 urica IV - (505) 827-7131

### New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division RECEIVED 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

MAR 2 9 1999

Environmental Bureau

Submit Original Plus 1 Copy to appropriate District Office

Form C-138

Originated 8/8/95

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: X	4. Generator VANWATERS + Rosees
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site VALD
2. Management Facility Destination Key ENERGY DISPOSAL	6. Transporter Key
3. Address of Facility Operator Phy: CR3500 #345 AZtec Nm  May Line PO Box 900 FARMWHON NM 81499	8. State NM
7. Location of Material (Street Address or ULSTR) 15 nd 5860	·
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.  All transporters must certify the wastes delivered are only those consigner.	ompanied by necessary chemical analysis to on of origin. No waste classified hazardous by
BRIEF DESCRIPTION OF MATERIAL:	
Estimated Volume 160 36/3 cy Known Volume (to be entered by the open SIGNATURE: Management Facility Authorized Agent	MAR 1909 Decreator at the end of the haul) — cy
	, , , , , ,
APPROVED BY: Marting Title: Env. 6	

## **CERTIFICATE OF WASTE STATUS**

Generator Name and Address:	2. Destination Name:
VAN WATERS & ROGERS	KEY ENERGY
15rd.5860 Farmington New Mexico 87401	
325-3535 Tom Newman, Mike	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
VAN WATERS&ROGERS	3
15Rd 5860	4. <u></u>
Farmington N.M. 87401 325-3535 Mike Anderson, Thomas A.	Nouman
Attach list of originating sites as appropriate	Newman
4. Source and Description of Waste	
Rain water that has buil there is roughly 7000 ga	t up over the last 6 months llons of water the p.h. is 7
MSDS. METHANOL/TRIETHYLENE G	LYCOL ATTACHED TO FORM
•	
, MIKE ANDERSON/VAN WATERS&ROGER	representative for:
(Print Name) VAN WATERS & ROGERS	do hereby certify that,
	MPT oilfield waste which is non-hazardous by characteristic or by product identification
For NON-EXEMPT waste only the following docu  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	mentation is attached (check appropriate items): Other (description):
Name (Original Signature):	
Name (Original Signature): Full Control of Standler  Date: 3/18/00	

*ii* • √ → √ •

REPORT NUMBER: 971 VAN WATERS & ROGERS INC. MSDS NO: HZ216830 MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/08/99

VERSION: 001

PAGE: 001

PRODUCT: METHANOL

ORDER NO: PROD NO :

VAN WATERS & ROGERS INC. , A ROYAL PAKHOED COMPANY (425)889-3400 , WA 98033 \$100 CARILLON POINT , KIRKLAND

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

PRODUCT NAME: METHANOL

1505 #: 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)

JAPOR IS HEAVIER THAN AIR AND CAN TRAVEL CONSIDERABLE

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PRODUCT: METHANOL

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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:

BKIN, EYES, INHALATION, INGESTION.

IMMEDIATE EFFECTS

SKIN:

REPEATED OR PROLONGED CONTACT CAUSES DRYING, BRITTLENESS, CRACKING AND IRRITATION. PROLONGED AND REPEATED SKIN CONTACT 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, FEARING 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 OF TREATMENT IS NOT RECEIVED.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
31GNIFICANT EXPOSURE TO THIS CHEMICAL MAY ADVERSELY AFFECT
2EOPLE WITH CHRONIC DISEASE OF THE CENTRAL NERVOUS SYSTEM,
3KIN, GASTROINTESTINAL TRACT AND/OR EYES.

FOR FURTHER INFORMATION, SEE:

BECTION 4 - FIRST AID MEASURES

BECTION 5 - FIRE FIGHTING MEASURES

BECTION 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

#### 21/21/

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

byrg.

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:

JHEN PLASMA METHANOL CONCENTRATIONS ARE HIGHER THAN 20 MG/DECILITER, WHEN INGESTED DOSES ARE GREATER THAN 30 MILLI-LITERS, AND WHEN THERE IS EVIDENCE OF ACIDOSIS OR VISUAL ABNORMALITIES, A 10% SOLUTION OF ETHANOL IN 5% AQUEOUS DEXTROSE, ADMINISTERED INTRAVENEOUSLY, 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:

JSE CARBON DIOXIDE OR DRY CHEMICAL FOR SMALL FIRES; ALCOHOLTYPE AQUEOUS FILM-FORMING FOAM OR WATER SPRAY FOR LARGE FIRES. WATER MAY BE INEFFECTIVE BUT SHOULD BE USED TO COOLFIRE-EXPOSED STRUCTURES AND VESSELS.

FIRE FIGHTING INSTRUCTIONS:

IF POTENTIAL FOR EXPOSURE TO VAPORS OR PRODUCTS OF COMBUS-TION 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 BOURCE OF IGNITION AND FLASH BACK. MATERIAL CAN BURN WITH LITTLE OR NO VISIBLE FLAME.

5. 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:**

JSE 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 CONFACT WITH EYES, SKIN OR CLOTHING. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. DECONTAMINATE SOILED CLOTHING THOROUGHLY BEFORE RE-USE. DESTROY CONTAMINATED LEATHER CLOTHING.

PO 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".

3. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### ENGINEERING CONTROLS:

BENERAL 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, SROUNDED DUCTS) SHOULD BE USED IN MECHANICAL VENTILATION SYSTEMS.

PROTECTIVE EQUIPMENT

SAFETY SHOWER AND EYE BATH SHOULD BE READILY AVAILABLE.

SKIN:

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

BUTYL RUBBER.

JEAR 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 EVEL: USE TYPE C FULL FACEPIECE SUPPLIED-AIR RESPIRATOR DPERATED IN PRESSURE-DEMAND OR CONTINUOUS-FLOW MODE. POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS ESCAPE BYSTEM.

FOR CONCENTRATIONS >= 100 TIMES THE ACCEPTABLE LEVEL OR IDLH LEVEL OR UNKNOWN CONCENTRATION (SUCH AS IN EMERGENCIES): DSE 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 BYSTEM.

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 IOLH\*: 25,000 PPM L994 NIOSH IDLH: 6000 PPM

\*RECOGNIZED BY OSHA.

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PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : CLEAR, COLORLESS, MOBILE LIQUID.

ODOR

: MILD ALCOHOL ODOR.

PHYSICAL STATE

: LIQUID

JAPOR PRESSURE

: 96.0 HG (20 0)

JAPOR DENSITY

: 1.11

AIR = 1 AT 20 C

BOILING POINT

: 64.6 C (148.3 F)

(760 MM HG)

REEZING POINT

: ~97.8 C (~144.0 F)

BOLUBILITY

: COMPLETE IN WATER.

SPECIFIC GRAVITY : 0.792

EVAPORATION RATE : 2.0

H20 = 1 @ 20/20 C

BUAC = i

VOLATILES

: 100.0

MOLECULAR WEIGHT : 32.0

#### LO. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

STABLE.

CONDITIONS TO AVOID:

HEAT, SPARKS, FLAME.

INCOMPATIBILITY:

BULFURIC ACID: OXIDIZING AGENTS SUCH AS HYDROGEN PEROXIDE,

VITRIC ACID, PERCHLORIC ACID AND CHROMIUM TRIOXIDE.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION:

JILL NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

DRAL LD50 : 7.5 G/KG (RATS); PRACTICA\_LY NON-TOXIC TO

RATS.

: MINIMUM LETHAL DOSE, 1.6 3/KG (MONKEYS); DERMAL

LOW TOXICITY TO ANIMALS BY SKIN CONTACT.

[NHALATION LC50 : 64,000 PPM (RATS, 4 HRS) @RACTICALLY NON-FOXIC IN RATS. REPEATED EXPOSURE OF MONKEYS TO 5000 PPM,

B HRS/DAY, 5 DAYS/WK FOR 4 WEEKS CAUSED NO TOXIC RESPONSE OR

EFFECTS ON VISION.

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

INFORMATION.

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CARCINOGENICITY: NO EVIDENCE OF CARCINOGENIC POTENTIAL IN \_IMITED 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.

3. DISPOSAL CONSIDERATIONS

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

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

14. TRANSPORT INFORMATION

SHIPPING NAME : METHANOL

: 3, FLAMMABLE LIQUID : 6, POISONOUS MATERIALS HAZARD CLASS

BUBSIDIARY HAZARD UNITED NATIONS NO. : UN1230

PACKING GROUP : II NORTH AMERICAN ER GUIDE : 131

DOT REPORTABLE QUANTITY (RQ): 5000 LB/2270 KG

DANADIAN 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

J.S. FEDERAL REGULATIONS

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

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

ENVIRONMENTAL:

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

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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,
PIVISION 1, SUBDIVISION A.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE MAZ-ARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFOR-MATION REQUIRED BY THE CPR. 16. OTHER INFORMATION

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CONTACT: MSDS COORDINATOR DURING BUSINESS						
03/17/99 06:10 PRODU	CT:	CUST NO	? •	ORDER NO:		
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A PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED						
HEREIN, AND SHALL UNDER NO C	IRCUMSTANCES	BE LIABLE	E FOR INC	DENTAL OR		

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NSEQUENTIAL DAMGAGES. ★★

\* \* \* END OF MSDS \* \* \*

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PRODUCT: TRIETHYLENE GLYCOL

ORDER NO: PROD NO :

VAN WATERS & ROGERS INC. , A ROYAL PAKHOED COMPANY (425)889-3400 , WA 98033 \$100 CARILLON POINT , KIRKLAND

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

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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 IDENTIFICATION

Product Name

TRIETHYLENE GLYCOL

Effective Date: 07/23/1998

Chemical Name

Triethylene glycol

Chemical Family

Ethylene glycol

Common Name

FRIETHYLENE GLYCOL

Formula

HO(C2H4O)3H Synonym

FEG, Glycol-bis(hydroxyethyl)ether

L.2 COMPANY IDENTIFICATION

Union Carbide Corporation

89 Old Ridgebury Road

Danbury, CT 06817-0001

L.3 EMERGENCY TELEPHONE NUMBER

24 hours a day: 1-800-UCC-HELP (1-304-744-3487)

Number for non-emergency questions concerning MSDS (732) 563-5522 Additional information on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-568-4000.

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2. COMPOSITION INFORMATION Component DAS # Amount Triethylene glycol 112-27-6 99.5 % Ethylene glycol 107-21-1 0.1 %

3. HAZARDS IDENTIFICATION 3.1 EMERGENCY OVERVIEW

Appearance Fransparent colorless Physical State Liquid Odor hild Hazards of product CAUTION!

REPEATED BREATHING OF AEROSOL IN HIGH CONCENTRATIONS IS HARMFUL.

3.2 POTENTIAL HEALTH EFFECTS

Effects of Single Acute Overexposure

Inhalation Short-term harmful health effects are not expected from vapor benerated at ambient temperature. No evidence of short-term harmful affects from respirable aerosol based on available information. See "Effects of Repeated Overexposure."

Eye Contact No harmful effects expected from liquid. Vapor or mist may be irritating, experienced as discomfort, excess blinking and tear production, with excess redness of the conjunctiva.

Bkin Contact Sustained contact may cause mild local redness.

Bkin Absorption No evidence of harmful effects from available information.

Bwallowing Abdominal discomfort, nausea and vomiting may occur.

Chronic, Prolonged or Repeated Overexposure

Effects of Repeated Overexposure Exposure to high concentrations of perosol generated at room temperature may cause lung injury and liver

Dther Effects of Overexposure Overexposure to vapor generated at high kemperatures may result in eye and respiratory tract irritation, Bizziness, nausea and the inhalation of harmful amounts of material. Medical Conditions Aggravated by Exposure

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

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B.3 POTENTIAL ENVIRONMENTAL EFFECTS See Section 12 for Ecological Information.

#### 4. FIRST AID PROCEDURES

#### A.1 INHALATION

Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

A.2 EYE CONTACT

Flush eyes thoroughly with water for several minutes. Remove contact lenses, if worn.

4.3 SKIN CONTACT

Wash skin with soap and water.

4.4 SWALLOWING

Vo emergency care anticipated.

4.5 NOTES TO PHYSICIAN

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

#### 5. FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

Flash Point - Closed Cup: Pensky-Martens Closed Cup ASTM D 93 176.6

deg C 350 deg F

Flash Point - Open Cup: Cleveland Open Cup ASTM D 92 190.5 deg C

B75 deg F

Autoignition Temperature: Not currently available.

Flammable Limits In Air:

.ower

0.9 %(V) Calculated

Upper

9.2 %(V) Estimated

5.2 EXTINGUISHING MEDIA

apply alcohol-type or all-purpose-type foam by manufacturer's recommended kechniques for large fires. Use carbon dioxide or dry chemical media for small fires.

5.3 EXTINGUISHING MEDIA TO AVOID

No information currently available.

5.4 SPECIAL FIRE FIGHTING PROCEDURES

Do not direct a solid stream of water or foam into hot, burning pools;

this may cause frothing and increase fire intensity.

5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

 $\mathsf{D}\mathsf{se}$  self-contained breathing apparatus and protective clothing.

5.6 UNUSUAL FIRE AND EXPLOSION HAZARDS

Bpontaneous Combustion in Porous Insulation: Leaks into porous insulation naterial may ignite at temperatures far below published autoignition or lignition temperatures, potentially even below the normal flash point.

βee Section 8.3 - Engineering Controls

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5.7 HAZARDOUS COMBUSTION PRODUCTS Burning can produce the following combustion products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. 3. ACCIDENTAL RELEASE MEASURES Steps to be taken if Material is Released or Spilled: Small spills can be flushed with large amounts of water; larger spills should be collected for disposal. 7. HANDLING AND STORAGE 7.1 HANDLING Seneral Handling Avoid breathing aerosol. Keep container closed. Use with adequate ventilation. Vash thoroughly after handling. FOR INDUSTRY USE ONLY. Ventilation [General (mechanical) room ventilation is expected to be satisfactory. 7.2 STORAGE No information currently available. B. EXPOSURE CONTROLS AND PERSONAL PROTECTION **B.1 EXPOSURE LIMITS** Component Exposure Limits Skin IH State Ethylene glycol 100 mg/m3 CEILING ACGIH Aerosol 125 mg/m3 CEILING OSHA 50 ppm CEILING OSHA 100 mg/m3 CEILING UCC fist Triethylene glycol |LOO mg/m3 TWAS UCC **B.2 PERSONAL PROTECTION** Respiratory Protection: At ambient temperature none needed for vapor. Wear full face respirator when recurrent exposures to high aerosol concentrations may occur. Ventilation: General (mechanical) room ventilation is expected to be satisfactory. Eye Protection: Monogoggles or faceshield Protective Gloves:

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Other Protective Equipment: Eye Bath, Safety Shower B.3 ENGINEERING CONTROLS

PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists From process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe pperating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe pperating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

P. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Transparent colorless

pH: Not currently available.

Bolubility in Water (by weight): 100 %

Odor: Mild

Flash Point - Closed Cup: Pensky-Martens Closed Cup ASTM D 93 176.6 deg C

350 deg F

Flash Point - Open Cup: Cleveland Open Cup ASTM D 92 190.5 deg C

Molecular Weight: 150.17 g/mol

Boiling Point (760 mmHg): 288 deg C 550 deg F

Freezing Point: -4.3 deg C 24 deg F

Specific Gravity (H2O = 1): 1.126 20 deg C / 20 deg C

Vapor Pressure at 20 deg C: < 0.001 kPa 0.01 mmHg

Vapor Density (air = 1): 5.2

Evaporation Rate (Butyl Acetate = 1): < 0.001

Melting Point: Not determined.

#### LO. STABILITY AND REACTIVITY

NO.1 STABILITY/INSTABILITY Stable

Incompatible Materials: Explosive decomposition may occur if combined with strong acids or strong bases and subjected to elevated temperatures. Therefore, avoid strong acids and strong bases at elevated temperatures. Avoid contamination with strong oxidizing agents and materials reactive with hydroxyl compounds.

Hazardous Decomposition Products: If the fluid is heated above the temperature of the onset of initial decomposition, 206 C, thermal degradation may result in the formation of volatile organic compounds such as aldehydes including formaldehyde and acetaldehyde, dioxolanes, glycol bthers including ethylene glycol monomethyl ether, and other potentially harmful decomposition products. Respiratory protection may be required.

10.2 HAZARDOUS POLYMERIZATION Will Not Occur.

LO.3 INHIBITORS/STABILIZERS Not applicable.

VAN WATERS & ROGERS INC.

MSDS NO: UCN0262M

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11. TOXICOLOGICAL INFORMATION ACUTE TOXICITY Peroral: rat male 16 ml/kg Kill Rate: 0/5 Major Signs: sluggishness, unsteady gait Gross Pathology: None. Peroral: rat female 16 ml/kg Kill Rate: 0/5 Major Signs: sluggishness, unsteady gait Gross Pathology: None. Percutaneous: rabbit 24 hr occluded male 16 ml/kg Kill Rate: 0/5 Major Signs: emaciation and abdominal distention Gross Pathology: lungs discolored; stomach and intestines liquid-Tilled; slight vascularization of skin at application site Percutaneous: rabbit 24 hr occluded female 16 ml/kg Kill Rate: 1/5 Major Signs: emaciation and abdominal distention Gross Pathology: lungs discolored; stomach and intestines liquid-Tilled; slight vascularization of skin at application site Inhalation: Exposure Time 4 h rat male 5.2 mg/l Kill Rate: 0/5 Major Signs: periocular wetness, blepharospasm, absence of pinch reflexes, unkempt fur Bross Pathology: None. Inhalation: Exposure Time 4 h rat female 5.2 mg/l Kill Rate: 0/5 Major Signs: periocular wetness, blepharospasm, absence of pinch reflexes, unkempt fur Gross Pathology: None. Inhalation: dynamic generation Exposure Time 6 h rat male 21 dea C Kill Rate: 0/5 Major Signs: None. Gross Pathology: None. Inhalation: dynamic generation Exposure Time 6 h rat female 21 deg C Kill Rate: 0/5 Major Signs: None. Bross Pathology: None. IRRITATION

Skin: rabbit 4 hr occluded no irritation

Eye: rabbit 0.1 ml minor iritis, minor conjunctival

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irritation. No corneal injury
SENSITIZATION (ANIMAL AND HUMAN STUDIES)
guinea pig maximization procedure no reaction
CHRONIC TOXICITY AND CARCINOGENICITY

In a 9-day repeated inhalation exposure (6 hours/day) study with rats, nortality occurred at 4284 mg/m3; at 2011 mg/m3 effects included eye irritation and increased alanine aminotransferase and alkaline phosphatase activities; at 494 mg/m3 there was slightly increased alkaline phosphatase activity.

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

Triethylene glycol was given to rats by inclusion in the diet for 90 days at concentrations of 10,000, 20,000 or 50,000 ppm. At the highest dose, there were decreases in body weight. Physiologic responses to these high doses were observed in kidney weight and urinalysis. No specific organ toxicity was seen.

In a 9-day (whole body) repeated inhalation exposure (6 hr/day) study with rats, mortality occurred at 4284 mg/m3 and effects included eye irritation and increased alanine aminotransferase and alkaline phosphatase activities; at 494 mg/m3 there was slightly increased alkaline phosphatase activity. In a subsequent 9-day (nose-only) repeated aerosol study rats were exposed to concentrations up to 1036 mg/m3. The only effect noted was slight (not statistically or biologically significant) decrease in body weight gain at 517 mg/m3 and 1036 mg/m3, but not at 102 mg/m3. No indications of local or systemic target organ toxicity were noted, including effects on hematology, clinical chemistry or urinalysis. In a sensory irritation study in mice, exposure to high concentrations of triethylene glycol aerosol resulted in a decreased respiratory rate. The RD50, or concentration which produced a 50% decrease in respiratory rate, was 5.1 mg/l.

There was no evidence in developmental toxicity studies for either ambryotoxic or teratogenic effects in mice or rats given triethylene glycol by gavage. Maternal toxicity was seen as reduced body weight and food consumption, increased water consumption, and increased relative kidney weight with rats, and clinical signs and increased relative kidney weight with mice. There was no histologic evidence of damage to the kidneys in either species. The no-observable effect doses for maternal toxicity were 1125 mg/kg/day for rats and 5630 mg/kg/day for mice. Minor fetotoxicity (reduced fetal body weights and increased skeletal variations) was present with doses of 11260 mg/kg/day for rats, and 5630 and 11260 mg/kg/day for mice. The no-observable effect dose for fetotoxicity was 5630 mg/kg/day for rats and 563 mg/kg/day for mice. ADDITIONAL STUDIES

No evidence for skin sensitizing potential in a human repeated insult study

12. ECOLOGICAL INFORMATION 12.1 ENVIRONMENTAL FATE 30D (% Oxygen consumption) REPORT NUMBER: 971 MSOS NO: UCNO262M

VAN WATERS & ROGERS INC.

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Jay Day 10 Day 15 Day 20

Day 30

3 %

9 % 30 X

12.2 ECOTOXICITY

Ecotoxicity to Micro-organisms: Bacterial/NA IC50 16 h > 10000 mg/l Scotoxicity to Aquatic Invertebrates: Daphnia LC50 48 h > 10000 mg/l Ecotoxicity to Fish: Fathead Minnow LC50 96 h > 10000 mg/l

12.3 FURTHER INFORMATION

THOO (measured) 1.55 mg/mg

THOO (calculated) 1.6 mg/mg

Octanol/Water Partition Coefficient - Calculated: -2.08

#### 13. DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHOD

Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations. Dispose in accordance with all applicable federal, State, Provincial, and local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

13.2 DISPOSAL CONSIDERATIONS

See Section 13.1

Disposal methods identified are for the product as sold. For proper Hisposal of used material, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules, regulations and/or laws governing your location.

#### 14. TRANSPORT INFORMATION

14.1 U.S. D.O.T.

NON-BULK

Proper Shipping Name : NOT REGULATED

Proper Shipping Name : NOT REGULATED

This information is not intended to convey all specific regulatory or pperational requirements/information relating to this product. Additional transportation system information can be obtained through your UCC sales br customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

#### 15. REGULATORY INFORMATION

15.1 FEDERAL/NATIONAL

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 SECTION 103)

REPORT NUMBER: 971 MSDS NO: UCNO262M

DAS # Amount

112-27-6

friethylene glycol

VAN WATERS & ROGERS INC.

MATERIAL SAFETY DATA SHEET

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PRODUCT: TRIETHYLENE GLYCOL

ORDER NO: PROD NO : The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are hot identified) and are present at levels which could require reporting: Component CAS # Amount Ethylene glycol 107-21-1 \ = 0.1000 X Acetic acid 34-19-7 <= 0.0100 % 1.4-Dioxane 123-91-1 :<= 0.0001 % SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTIONS 302 AND 304 The following components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning: Vone, SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer natification under Section 313 and 40 CFR Part 372:  $\cdot$  This product does not contain toxic chemicals at levels which require reporting under the statute. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTIONS 311 AND 312 Delayed Hazard : Yes Fire Hazard : No Immediate Health Hazard: Yes Reactive Hazard : No Sudden Release of Pressure Hazard: No TOXIC SUBSTANCES CONTROL ACT (TSCA) All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements. 15.2 STATE/LOCAL PENNSYLVANIA (WORKER AND COMMUNITY RIGHT-TO-KNOW ACT) ∦his product is subject to the Worker and Community Right-to-Know Act. The following components of this product are at levels which could require identification in the MSOS: Component

REPORT NUMBER: 971 MSDS NO: UCNO262M

VAN WATERS & ROGERS INC.

MATERIAL SAFETY DATA SHEET

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PRODUCT: TRIETHYLENE GLYCOL

ORDER NO:

PROD NO : <= 99.5000 % MASSACHUSETTS (HAZARDOUS SUBSTANCES DISCLOSURE BY EMPLOYERS) The following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS: Component CAS # Amount 1,4-Dioxane 123-91-1 /<= 0.0001 % CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT This product contains trace levels of 1,4-DIOXANE known to the State of California to cause cancer. Component CAS # Amount L,4-Dioxane 123-91-1 <= 0.0001 % CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 443.1, LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS) VOC : Vapor pressure < 0.01 mmHg at 20 deg C 2 g/12 g/l of material less water and less exempted solvents. This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used. L6. OTHER INFORMATION 6.1 AVAILABLE LITERATURE AND BROCHURES ADDITIONAL INFORMATION: Additional product safety information on this product may be obtained by calling your Union Carbide Corporation Sales or Dustomer Service contact. Ask for the brochure: Product Information Bulletin on Triethylene Glycol. ↓6.2 SPECIFIC HAZARD RATING SYSTEM Additional information on this product may be obtained by calling the Jnion Carbide Corporation Customer Service Center at 1-800-568-4000. L6.3 RECOMMENDED USES AND RESTRICTIONS FOR INDUSTRY USE ONLY

REPORT NUMBER: 971 MSOS NO: UCNO262M	VAN WATERS & MATERIAL SAFET	ROGERS INC. Y OATA SHEET	PAGE:	011
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\* \* \* END OF MSDS \* \* \*

Diatrict 1 - (505) 393-6161 P. O. Box 1980 Hobbs, NM-88247-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 wict III - (505) 334-6178 Rio Brazos Road .c, NM 87410 District IY - (505) 827-7131

#### New Mexico Energy Minerals and Natural Resources Department VED Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

MAR 1 1999

Environmental Bureau Oil Conservation Division

OIL CON. DIV. Duck.

Form C-138 Originated 8/8/95

> Submit Original Plus I Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE			
1. RCRA Exempt: Non-Exempt: X	4. Generator Universal Compression			
Verbal Approval Received: Yes 🔲 No 💢	5. Originating Site YARD			
2. Management Facility Destination KEY ENERGY DISPOSAL	6. Transporter Key Energy			
3. Address of Facility Operator p. O. Box 900 file Notion, NM	8. State NM			
7. Location of Material (Street Address or ULSTR) 17で いっぱい はい 550 AZ+CC、NM 87410				
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.  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:	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s			
WASTEWATER FROM WAShinG COMPRESSORS	DECEIVED MAR 1 2 1999			

Estimated Volume 150bbls cy Known Volume	(to be entered by the operator at the en	nd of the haul) ————————————————————————————————————
SIGNATURE: Waste Management FacilityAuthorized Agent	TITLE: MOR	DATE: 3-12-99
TYPE OR PRINT NAME: MICHAEL TALOVICH	TELEPHONE NO	505-334-64 16
(This space for State Use) APPROVED BY: Deny 2 Feer	TITLE: (0-00/05/5/	DATE: 3/15/99
APPROVED BY: Martyn Mely	TITLE: Envlocologist	DATE: 3/17/99

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
Universal Compression	Sunco Disposal
	Sones signature
Aztec ,NM 87410	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
Universal Compression	
1125 U.S. 1 huy 550 -	Sano
Aztec NM 87410 Attach list of originating sites as appropriate	
Attach list of originating sites as appropriate 4. Source and Description of Waste	
Waste Water From Wa	shing Compressors,
Lacron	
1, Phillip Creel (Print Name)	representative for:
(Print Name)	
Universal Compression	do hereby certify that, ery Act (RCRA) and Environmental Protection Agency's July,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	ery Act (RCRA) and Environmental Protection Agency's July,
EXEMPT oilfield waste X NON-EXE	MPT oilfield waste which is non-hazardous by characteristic
analysis o	r by product identification
and that nothing has been added to the exempt or no	on-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following docu  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	mentation is attached (check appropriate items): Other (description):
Name (Original Signature):	Cul
Title: /+ 2 / S. · D. / - · · · /	
Title: Arca Supervisor  Date: 3-11-99	·



## SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: Universal Compressor Wash Bay Solids Project #:
Date Reported:

98059-2 09-13-98

Lab ID#:
Sample Matrix:
Preservative:

D900 Soil Cool Date Sampled:
Date Received:
Date Analyzed:

09-04-98 09-04-98 09-13-98

Condition:

Cool & Intact

Chain of Custody:

6261

**Parameter** 

Result

**IGNITABILITY:** 

**Negative** 

**CORROSIVITY:** 

Negative

pH = 6.59

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:

Flora Vista, NM.

Ceeuen

Analyst

Review Stacy W Sendler



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED **VOLATILE ORGANICS**

Client:	Universal Compressor	Project #:	98059-02
Sample ID:	Wash Bay Solids	Date Reported:	09-14-98
Laboratory Number:	D900	Date Sampled:	09-04-98
Chain of Custody:	6261	Date Received:	09-04-98
Sample Matrix:	Soil	Date Extracted:	09-13-98
Preservative:	Cool	Date Analyzed:	09-14-98
Condition:	Cool & Intact	Analysis Requested:	TCLP

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(mg/L)
Vinyl Chloride	0.0659	0.0001	0.2
1,1-Dichloroethene	0.0046	0.0001	0.7
2-Butanone (MEK)	0.107	0.0001	200
Chloroform	0.0009	0.0001	6.0
Carbon Tetrachloride	0.0021	0.0001	0.5
Benzene	0.0003	0.0001	0.5
1,2-Dichloroethane	0.0004	0.0001	0.5
Trichloroethene	8000.0	0.0003	0.5
Tetrachioroethene	0.0031	0.0005	0.7
Chlorobenzene	0.0003	0.0003	100
1,4-Dichlorobenzene	0.0042	0.0002	7.5

ND - Parameter not detected at the stated detection limit.

	QA/QC Acceptance Criteria	Parameter	Percent Recovery
--	---------------------------	-----------	------------------

**Trifluorotoluene** 98% 99% Bromofluorobenzene

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:

Flora Vista, NM.

Review Stacy W Sendler



#### EPA METHOD 8040 PHENOLS

Client:	Universal Compressor	Project #:	98059-2
Sample ID:	Wash Bay Solids	Date Reported:	09-16-98
Laboratory Number:	D900	Date Sampled:	09-04-98
Chain of Custody:	6261	Date Received:	09-04-98
Sample Matrix:	Soil	Date Extracted:	09-13-98
Preservative:	Cool	Date Analyzed:	09-16-98
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	0.125	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	0.024	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:

Flora Vista, NM.

Analyst

Review Stary W Sendler



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

Client:	Universal Compressor	Project #:	98059-2
Sample ID:	Wash Bay Solids	Date Reported:	09-15-98
Laboratory Number:	D900	Date Sampled:	09-04-98
Chain of Custody:	6261	Date Received:	09-04-98
Sample Matrix:	Soil	Date Extracted:	09-13-98
Preservative:	Cool	Date Analyzed:	09-15-98
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	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 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:

Flora Vista, NM.

Analyst Queen

Review Stacy W Sendler



# EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Universal Compressor	Project #:	98059-2
Sample ID:	Wash Bay Solids	Date Reported:	09-16-98
Laboratory Number:	D <b>900</b>	Date Sampled:	09-04-98
Chain of Custody:	6261	Date Received:	09-04-98
Sample Matrix:	Soil	Date Analyzed:	09-16-98
Preservative:	Cool	Date Extracted:	09-13-98
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
			\(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac
Arsenic	ND	0.0001	5.0
Barium	0.691	0.001	21
Cadmium	0.0748	0.0001	0.11
Chromium	ND	0.0001	0.60
Lead	0.0059	0.0001	0.75
Mercury	ND	0.0001	0.025
Selenium	ND	0.0001	5.7
Silver	ND 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:

Flora Vista, NM.

Analyst

Review

Stacy W Sendler



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-14-98
Laboratory Number:	09-14-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-14-98
Condition:	N/A	Analysis Requested:	TCLP

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Bromofluorobenzene 100% 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 D897 and D900.

Aber L. Gjeren

Stacy W Sendler
Review



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-14-98
Laboratory Number:	09-13-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-14-98
Condition:	N/A	Date Extracted:	09-13-98
	•	Analysis Requested:	TCLP

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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%	
	<b>Bromofluorobenzene</b>	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 D897 and D900.

Analyst Review Review Review Lacy W Lendler



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-14-98
Laboratory Number:	D897	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-14-98
Condition:	N/A	Date Extracted:	N/A

Duplicate				
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	Difference
Vinyl Chioride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	0.135	0.135	0.0001	0.0%
Chloroform	ND	· ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.0002	0.0002	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 D897 and D900.

Analyst

Stacy W Sendler



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

Client: QA/QC Project #: N/A Sample ID: Matrix Spike Date Reported: 09-14-98 Laboratory Number: D897 Date Sampled: N/A Sample Matrix: **TCLP Extract** Date Received: N/A TCLP **Analysis Requested:** 09-14-98 Date Analyzed: 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)	0.135	0.050	0.185	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	0.0002	. 0.050	0.0500	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 D897 and D900.

Analyst

Review Stacy W Sendler



#### Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-16-98
Laboratory Number:	09-16-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-16-98
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results	Concentration	Detection Limit	Regulatory Limit
Parameter	(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	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 D897 and D900.

Analyst P. Oferen



Client:	QA/QC	Project #:	N/A
Sample ID:	. Method Blank	Date Reported:	09-16-98
Laboratory Number:	09-13-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-13-98
Condition:	Cool & Intact	Date Analyzed:	09-16-98
		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	99%	
	2,4,6-Tribromophenol	101%	

References:

Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples D897 and D900.

Analyst . Office.



Client:	. QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-16-98
Laboratory Number:	D897	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction ,	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-13-98
Condition:	Cool & Intact	Date Analyzed:	09-16-98
		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
·	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 D897 and D900.

Analyst P. Ogeren



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

Client:	. QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-15-98
Laboratory Number:	09-15-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:	09-15-98
		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
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#### 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 D897 and D900.

Analyst Cheen

Review Stacy W Sendler



## EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-15-98
Laboratory Number:	09-13-TBN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-13-98
Condition:	Cool and Intact	Date Analyzed:	09-15-98
		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 D897 and D900.

Deen L. Quen

Review Stacy W Sendler



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

Analysis Requested:

**QA/QC** Project #: N/A Client: 09-15-98 Sample ID: **Matrix Duplicate** Date Reported: N/A **Laboratory Number:** D897 Date Sampled: N/A Sample Matrix: **TCLP Extract** Date Received: Date Extracted: N/A Preservative: N/A 09-15-98 Condition: N/A Date Analyzed:

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
Hexachiorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachloroBenzene	ND ·	ND	0.0%	0.020

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference
- areas receptance official	raidilictor	maximum Directorios

#### **8090** Compounds

30%

**TCLP** 

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 D897 and D900.

Analyst Queen

Stacy W Sendler



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

Client:		QA/QC		Project #:			N/A
Sample ID:		09-16-TCM	QA/QC	Date Repo	orted:		09-16-98
Laboratory Number:	÷	D897		Date Sam	pled:		N/A
Sample Matrix:		TCLP Extra	ct	Date Rece	eived:		N/A
Analysis Requested:		TCLP Meta	ls	Date Analy	yzed:		09-16-98
Condition:		N/A		Date Extra	cted:		09-13-98
Arsenic	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Cadmium	ND	ND	0.0001	0.282	0.282	0.2%	0% - 30%
Chromium	ND	ND	0.0001	0.0059	0.0060	1.7%	0% - 30%
Lead	ND	ND	0.0001	0.144	0.144	0.1%	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%
Participation of the second		4.00		(Salija Ropa) o			
Arsenic		0.1000	ND	0.0997	100%		80% - 120%
Barium		1.000	ND	0.999	100%	•	80% - 120%
Cadmium		0.0500	0.282	0.331	100%		80% - 120%
Chromium		0.0500	0.0059	0.0558	100%		80% - 120%
Lead		0.1000	0.144	0.244	100%		80% - 120%
Mercury		0.0250	ND	0.0249	100%		80% - 120%
Selenium		0.1000	ND	0.0999	100%		80% - 120%
Silver		0.0500	ND	0.0498	100%		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 D897 and D900.

Stacy W Sendler

	Farm		EOV	Relinquished by: (Signature)	Reinduithed by: (Signature)	1 Date of the Constitute of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution o					-	Wash Bay Solids 79/98 13:30 5900 0	Sample No./ Sample Sample Lab Number	Murph	Dompressol
(505) 632-0615	5796 U.S. Highway 64 Farmington, New Mexico 87401		ENVIROTECH	Received	Meceived	Time Received I						sòil a	Sample Z Matrix	lo. of(2)	
ပ ပ	ay 64 ico 87401		HINC.	Received by: (Signature)	Received by: (Signature)	Received by: (Signature)							Con TC +	lo. of 2) stainers LPW	ANALYSIS / PARAMETERS
Cool - Ice/Blue Ice C	Received Intact		Sample Receipt		1	Date <i>9.4.9</i> £								Remarks	
		Y N NA	≱ipt	-		o Time		•						arks	-

District [= (505) 393,6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 trict III - (505) 334-6178 7 Rio Brazos Road .c, NM 87410 District IV - (505) 827-7131

#### New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

MAR 1 1999

Submit Original Plus I Copy to appropriate District Office

Form C-138

Originated 8/8/95

Environmental Bureau Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE			
1. RCRA Exempt: Non-Exempt: X	4. Generator Key Energy Seevices Two			
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site WHEL STORKE TANK			
2. Management Facility Destination KeyEverey DisPosal	6. Transporter Key			
3. Address of Facility Operator P.O. BOX 900 FARMINGTON 87499	8. State NM			
7. Location of Material (Street Address or ULSTR) 5651 U.S. Hiway by				
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.  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:				
OIL field Beevice Equipment wish water	·			
	REGEIVED MAR 1 2 1999			
·	OIL COM. DIV.			
Estimated Volume 150 66/5 cy Known Volume (to be entered by the op	perator at the end of the haul) cy			
SIGNATURE: Make Valor TITLE: MOR	DATE: 3-/2-99			

SIGNATURE: The Management Facility Authorized Agent TELEPHONE NO. 505-384-6416 TYPE OR PRINT NAME: MICHAEL TAKOVICKA (This space for State Use)

#### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
Bey Energy Service, Inc.	Bey Energy Service, Inc
	Dis pose!
Four Corner, Division 5651 U.S. Highman 64 Farminotus, May	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
Same as above.	Farmington Yard Waste Water Storage tank
	Waste Water Storage 1 444
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Milfield Service Equipment Wash Wash	
Oil field Service Equipment Wash Wash	
1	
	·.
	en en en en en en en en en en en en en e
1, Dob James	representative for:
Sex Energy Service, Inc. Four Corners	0.44
1) ey Cherry Service, Inc. tour Corners	do hereby certify that, bry Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	ity Act (ncha) and chanoninental Protection Agency a July,
1000, 10galatory dotorilination, are above described	Treate is: follow appropriate electrications
EXEMPT oilfield waste NON-EXE	MPT oilfield waste which is non-hazardous by characteristic
analysis o	r by product identification
and that nothing has been added to the exempt or no	on-exempt non-hazardous waste defined above.
- NON PYPART	
For NON-EXEMPT waste only the following documents of the MSDS Information	mentation is attached (check appropriate items): Other (description):
RCRA Hazardous Waste Analysis	Other (description).
X Chain of Custody	
Name (Original Signature):	
	Activities of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
Title: 5 500 1994 450-	
Title:	·
Date:	· · · · · · · · · · · · · · · · · · ·

## PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

March 8, 1999

Mr. Mike Talovich Key Energy Services, Inc. P.O. Box 900

(505) 327-0416

Farmington, New Mexico 87499

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. Sendler

Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.1b2/wpd



#### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client:

**Key Energy** 

Project #:

806502

Sample ID:

Shop E755

Date Reported:

03-04-99

Lab ID#:

Water

Date Sampled:

03-01-99

Sample Matrix:

Cool

Date Received:

03-01-99

Preservative:

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.



#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

	·	Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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%
	<b>Bromofluorobenzene</b>	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.

Apleen L. Oglessen

Mary Wanden



#### EPA METHOD 8040 PHENOLS

tacy W. Sendle

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.

nalvst



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

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.

Dece L. Ojece



## EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Key Energy	Proiect #:	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

		Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(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



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



## 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

		Detection	Regulatory	
	Concentration	Limit	Limits	
Parameter	(mg/L)	(mg/L)	(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%
	<b>Bromofluorobenzene</b>	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.

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for sample E755.

Analyst L. Ofense



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	03-02-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	03-02-99
Condition:	N/A	Date Extracted:	N/A

Duplicate				
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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

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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	03-02-99
Laboratory Number:	E755	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	03-02-99
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	0.0050	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.

Alem h. Cree

Review J. Jen Ce



# EPA METHOD 8040 PHENOLS 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
	Concentration	Limit	Limit
Parameter	(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 sample E755.

Analyst P. Open

Review Sende



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.

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Comments:

QA/QC for sample E755.

Analyst



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



# 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:	03-05-99
Laboratory Number:	03-05-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:	03-05-99
		Analysis Requested:	TCLP

		Det.	Regulatory
	Concentration	Limit	Limit
Parameter	(mg/L)	(mg/L)	(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
HexachioroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Porcont Possyony
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.

Dece L. Oglecoca



## EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	03-05-99
Laboratory Number:	03-04-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:	03-05-99
		Analysis Requested:	TCLP

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

OA/OC Accontance Criteria	Doromotor	Persont Personant
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.

Dew L. Genen



## 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 Reguested:	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.

Deun L. Queuen



# 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

# CHAIN OF CUSTODY RECORD

Sampler:  M. Ke TALOVICA Sample No./ Sample Identification Shop			Project Location					ANALYSI	ANALYSIS / PARAMETERS	ETERS		
Sampler:  M. Ke TALOUICH Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sample No./ Sampl			Shop						-			
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#### New Mexico

#### Energy Minerals and Natural Resources Department FEB T Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

nvironmental Bureau Mation Division

Submit Original Plus I Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLIDIMA 1. RCRA Exempt: Non-Exempt: (X) 5. Originating Site SEGUST Verbal Approval Received: Yes No X 6. Transporter Ke 2. Management Facility Destination KEV ENERGY DISPOSAL 8. State NM 7. Location of Material (Street Address or ULSTR) 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. 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: Service WASTEWATER OFF COMPRESSOR SILES

(to be entered by the operator at the end of t	he haul) ———— cy
TITLE: MOL	DATE: 2:11-99
TELEPHONE NO. 50	75-3346186
	- (
TITLE: Geologist	DATE: 2/12/97
TITLE: Env. Geologist	DATE: 3/5/99
	TITLE: Color IST

continuation

Month of January 1999

#### **CERTIFICATE OF WASTE STATUS**

1. Colorator Change with Woold and	2. Destination Name:
PRODUCTION OPERATORS, INC.	KEY ENERGY
4000 Lomas Street	P.O. Box 900
Farmington, NM 87401	Farmington, NM 87499
3. Originating Site (name): 29-6 #2, 29-6 #3, 29-6 #4, 29-7, 30-5,	Location of the Waste (Street address &/or ULSTR): 30-6, 31-6,32-7, 32-8 #2, 32-8 #3, 32-9,
Aztec, Carracas, Cedar Hill, Coyote Sp	rings, Decker Junction, Hart Mt., Horse
Canyon, Kernaghan, La Cosa, Manzanares	, Middle Mesa, Moore, N-30, Navajo, PLA-9,
Pipkin, Pump Mesa, Simms Mesa, Trunks	A.B.C.F.L.M.T. CDPS
Attach list of originating sites as appropriate	,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-
4. Source and Description of Waste	
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RAIN WATER & WASH	WATER
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l, Buster Gaston	representative for:
(Print Name)	
Production Operators, Inc.	do hereby certify that
according to the Resource Conservation and Recove	ary Act (RCRA) and Environmental Protection Agency's July
1988, regulatory determination, the above described	W8Ste is: (Check appropriate classification)
, , , , , , , , , , , , , , , , , , , ,	
EXEMPT oiffield waste YY NON-EXE	MPT oilfield waste which is non-hazardous by characteristic
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	r by product identification
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and that nothing has been added to the exempt or ne	on-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following docu	mentation is attached Ichack appropriate items):
MSDS Information	
	Other (description):
✓ RCRA Hazardous Waste Analysis	Other (description):
RCRA Hazardous Waste Analysis Chain of Custody	Other (description):
RCRA Hazardous Waste Analysis Chain of Custody	Other (description):
RCRA Hazardous Waste Analysis Chain of Custody	Other (description):
RCRA Hazardous Waste Analysis Chain of Custody	Other (description):
Chain of Custody	Other (description):
Name (Original Signature);	_ Other (description):
Name (Original Signature): Butter	_ Other (description):
Chain of Custody	_ Other (description):
Name (Original Signature):  Title: Operations Coordinator	_ Other (description):
Name (Original Signature); Butter	Other (description):

Inter-Mountain Laboratories, Inc.

1701 Phillips Circle Gillette, Wyoming 82718

#### TOXICITY CHARACTERISTIC LEACHING PROCEDURE HSL SEMI-VOLATILE COMPOUNDS

Client:

Matrix:

WILLIAMS FIELD SERVICE

Sample ID:

29.6 #4

Water

Project ID: Lab (D)

29-6 # 4 COP

B981487

0398G01561

TO:

Date Reported:

Date Sampled:

04/21/98 04/02/98

Dato Received: Date Extracted: 04/03/98 01/01/99

Date Analyzed:

01/01/99

		Date	AUSIASO:	01/01/99
Parameter	Result	PQL	Regulatory Level	Units
1,4-Dichlorobenzene	ND	0.1	7.5	irig/L
2,4,6 Trichlarophenal	ND	0.2	400	mg/L
2,4,6-Trichlorophenal	ND	0.2	2.0	mg/L
2,4-Dinitrotakiene	ND	0.1	0.13	mg/L
Hexachtoro-1,3 butadiene	ND	0.2	0.5	mg/L
Hexachlorobenzone	ND	0.2	0.13	mg/L
Hexachloroethane	ND	0.2	3.0	mg/L
mp Cresol	ND	0.1	200	mg/L
Nitrobenzene	ND	0.1	2.0	mg/L
o-Cresol	ND	0.1	200	mg/L
Pentachlorophenol	ND	0.5	100	mg/L
Pyridine	ND	0.2	5.0	mg/L
QUALITY CONTROL - Surrogate Recovery	%		QC Limits	
2,4,6 Tribromophenol	51		10 · 123	
2-Fluorobiphenyl	45		43 - 116	
2-Fluorophenol	58		21 - 100	
Nitrobenzene-d5	57		35 114	
Phenol-d6	69		10 - 94	
Terphenyl-d14	56		33 - 121	

ND - Not Detected at Practical Quantitation Level (PQL)

Method 82703, Gas Chromatography/Mass Spectrometry for Semivolatile Organics, Test Methods for

Evaluating Solid Wastes, SW-846, United States EPA, September 1994.

Method 1311, Toxicity Characteristic Leaching Procedure, Test Methods for Evaluating Solid

Wastes, SW-846, United States EPA, September 1994.

Client Name: Inter-Mountain Labs, Inc.
Submission #: 9804000047
Project Name: 29-6 #4 CDP/IML-FARMINGTON
Report Date: 04/08/98

Client Sample #: 29-6 #4
Laboratory ID #:
Sample Container: 102821 Order Type: Normal Matrix: Liquid 2xVOA Vial 0398 G01561 04/02/98

Sampling Location: Sampling Date:

TC:

#### TCLP VOLATILES (EPA 8260)

Date analyzed: 04/03/98

			Detection	
<u>C.A.S.#</u>	<u>Analyte</u>	Results(mg/l)	<u>Limit</u>	Haz.Limit
71-43-2	Benzene	0.18	0.10	0.5
56-23-5	Carbon Tetrachloride	<0.10	0.10	0.5
108-90-7	Chlorobenzene	<0.10	0.10	100
67-66-3	Chloroform	<0.10	0.10	6.0
106-46-7	1,4-Dichlorobenzene	<0.10	0.10	7.5
107-06-2	1,2-Dichloroethane	. <0.10	0.10	0.5
75-35-4	1,1-Dichloroethylene	<0.10	0.10	0.7
78-93-3	Methyl Ethyl Ketone	<0.10	0.10	200.0
127-18-4	Tetrachloroethylene	<0.10	0.10	0.7
. 79-01-6	Trichloroethylene	<0.10	0.10	0.5
75-01-4	Vinyl Chloride	<0.10	0.10	0.2

FROM: IML-FARMINGTON, NM Inter-Mountain Laboratories, Inc.

TO:

2506 W. Mein Street Parmington, New Mexico 87401

#### TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL CONCENTRATION

Client:

Williams Field Service

Project:

29-6 #4 CDP

Sample ID: Laboratory ID: Waste Water · 0398G01561

Sample Matrix:

Water

Date Reported:

04/21/98

Date Sampled: Date Received:

04/02/98

Date Analyzed:

04/17/98

Parameter	Result	Detection Limit	Regulatory Level	Units
Arsenic	<0.005	0.005	5	mg/L
Barium	0.41	0.01	100	mg/L
Cadmium	<0.004	0.004	1	mg/L
Chromium	<0.01	0.01	5	mg/L
Lead	0.393	0.05	5	mg/L
Mercury	<0.001	0.001	0.2	mg/L
Sclenium	0.014	0.005	1	mg/L
Silver	<0.01	0.01	5	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<sup>\*</sup>

RECEIVED

MAR 0 1999

Environmental Bureau
Oil Conservation Division

March 5, 1999

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

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

Project No.: 97050 Job No. : 705004

Dear Mr. Beevers,

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

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

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

Respectfully submitted,

Envirotech, Inc.

Stacy W. Sendler

Environmental Scientist/Laboratory Manager

enclosure

\$W\$\sws\97050-04.ib2/wpd

# UTIONS FOR A BETTER TOMORROW



#### SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: Lab ID#:

Sample Matrix:

Preservative:

Williams Field Service Waste Water E696 Water

Cool

Project #: Date Reported: Date Sampled. Date Received: Date Analyzed:

Chain of Custody:

02-22-99 02-22-99 02-23-99 6615

705004

02-26-99

Parameter

Condition:

Cool and intact

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 6.87

REACTIVITY:

Negative

RCRA Hazardous Waste Criteria

Parameter

Hezardous Waste Criterion

IGNITABILITY:

Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. (i.e. Sample Ignition upon direct contact with flame or flash point < 60° C.)

CORROSIVITY:

Characteristic of Corrosivity as defined by 40 CFR, Subpart C. Sec. 261,22.

(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)

REACTIVITY:

Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. (i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)

Reference

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

Comments:

Horse Canyon.

Stacy W Lender

# EPA METHOD 1311 TOXIGITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	Williams Field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	93-03-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	9615	Date Received:	02-22-99
Sample Metrix:	Water	Date Analyzed:	03-03-99
Preservative:	Cool	Data Extracted:	N/A .
Condition:	Cool & Intact	Analysis Needed:	TCLP mateis
THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SE	e en a la respectation de la contraction del contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la contraction de la con	Det.	Regulatory
	Concentration	Limit	Level
Parameter	(mg/L)	(mg/L)	(mg/L)
Arsenic	0.0473	0.0001	5.0
Barlum	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
Sejenjum	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, Add Digestion of Aqueous Samples and Extracts for Total

Metals, SW-846, USEPA, December 1998.

Methods 7080, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by

GFAA and Cold Vapor Techniques, SW-848, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 281.24, August 24, 1998.

Comments:

Horse Canyon.

Analyst

Review

#### EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	0.637	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.303	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	0.0035	0.0003	0.5
Tetrachloroethene	0.0012	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

ND - Parameter not detected at the stated detection limit.

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

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.

Deur L. ajenen

Tacy W. sende

#### **EPA METHOD 8040** PHENOLS

Client.	Williams field Service	Project #:	705004
Sample ID:	Waste Water	Date Reported:	03-01-99
Laboratory Number:	E696	Date Sampled:	02-22-99
Chain of Custody:	6615	Date Received:	02-22-99
Sample Matrix:	Water	Date Extracted:	NA
Preservative.	Cool	Date Analyzed:	03-01-99
Condition:	Cool & Intact	Analyšis 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
Pentachiorophenol	αи	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Parcent 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, Phenois, 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.

Review W. Sende

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

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

er er er er er er er er er er er er er e	Concentration	Det. Limit	Regulatory Limit
Parameter	(mg/L)	(mg/L)	(mg/L)
Pyridine	0.236	0.020	5.0
Hexachioroethane	0.350	0.020	3.0
Nitrobenzane	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%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1892.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

Horse Canyon.

Deu P. Ogene

Review May he Senden

# CHAIN OF CUSTODY RECORD

6615

Client / Project Name  LU, II I Idam S F. ELD SERVICE  Bampies:  Sample No.   Sample Sample Identification   Date Time  LUDGITC WARTER   133 C	Sample Sample Date Time	Project Lab A Lab A Lab A	ocation  SE Garrio - O 4  97050 - O 4  Sample Mairix	No. of Containers  TCLP w/o HEP		ANALYSIS / PARAMETERS  Romada
	,					
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Relinquished by: (Signature) Relinquished by: (Signature)	ure)			Received by: (Signature)	76)	•
			ENVIROTECH IO 5798 U.S. Highway 64 Farmington, New Mexico 874		3 <b>I</b> O	Sample Receipt  Peceived Intact  Peceived Intact
			Farmington, N (505)	Farmington, New Mexico 87401 (505) <b>6</b> 32- <b>0</b> 615	_	Cod - log/Blue los



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION

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

Client.

QA/QC

Project #:

N/A

Sample ID:

Laboratory Blank

Date Reported: Date Sampled: 03-01-99

Laboratory Number: Sample Matrix. 02-26-TCV Blank TCLP Extract

Date Sampled:
Date Received:

N/A N/A

Preservative: Condition:

N/A N/A Date Analyzed: Analysis Requested: 02-26-99 TCLP

	Concentration	Detection Limit	Regulatory Limit <del>s</del>
Parameter	(mg/ <u>L</u> )	(mg/L)	(mg/L)
Vinyi Chioride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Sutanone (MEK)	ND	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachioride	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
Tetrachioroethene	ND	0.0006	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0,0002	7.6

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria

Parameter

Percent Recovery

Trifluorotojuena 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.

Den L. afeccer

Ration Kerry W. Jensten

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

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

The second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the second district the se	Concentration	Detection Limit	Regulatory Limits
Parameter	(mg/L)	(mg/L)	(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	£000.0	0.5
Tatrachioroethene	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 Bromofluorobenzene	99% <b>98%</b>	

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 5030, Purgs-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.

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REVIEW W. Jen de

# 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

	10-14-14-14-14-1-1-1-1-1-1-1-1-1-1-1-1-1	Duplicate		
	Sample	Sample	Detection	
•	Result	Result	Limits	Percent
Parameter	(mg/L)	<u>(mg/L)</u>	(mg/L)	Difference
Vinyl Chloride	ND	DИ	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	ND	NÖ	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 <b>.0</b> %
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-848, USEPA, July 1992.

Method 5030, Purge-and-Trap, SW-846, USEPA. July 1992.

Method 8010, Halogenated Volatile Organic, SW-848, USEPA, Sept. 1994. Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments:

QA/QC for samples E595 - E696.

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Review Jende

SOLUTIONS FOR A BETTER TOMORROW

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

Client:

Sample ID:

Laboratory Number:

Sample Matrix: Analysis Requested:

Condition:

QA/QC

Matrix Spike

E695

TCLP Extract

TCLP. N/A

Project #:

Date Reported:

N/A 03-01-99

Date Sampled:

N/A N/A

Cate Received: Date Analyzed:

02-26-99

Date Extracted:

NVA

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. <b>050</b>	0.0495	1000.0	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0601	98%	43-143
Benzene	ND	0.0 <del>5</del> 0	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	82%	35-146
Tetrachioroethene	ND	0.050	0.0494	0,0005	99%	26-162
Chiorobenzene	ND	0.050	0.0494	0.0003		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-848, USEPA, July 1992.

Method 8010, Halogenated Volatile Organic, SW-848, USEPA, Sept. 1994, Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments:

QA/QC for samples E695 - E696.

Mary W. Sende

HINTY YOUNG ENY HUNNENIAL

# EPA METHOD 8040 PHENOLS Quality Assurance Report Laboratory Blank

Client:	QA/QC	Project #	N/A
Sample ID:	Laboratory Blank	Data Reported:	03-01-99
Laboratory Number:	03-01-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Prupanol	Date Received	NA
Preservative:	N/A	Date Analyzed:	03-01- <del>99</del>
Condition:	N/A	Arialysis Requested	TOLD

Analytical Results	. 411	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
Pentachiorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenoi	<b>98</b> %
	2,4,6-tribromophenol	<b>99</b> %

References:

Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid

Weste, 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, Phenole, Test Methods for Evaluating Solid Waste, SW-848, 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.

Albunh: Caleur

Haly W. Sende

## EPA METHOD 8040 PHENOLS Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Methra: Blank	Date Reported:	03-01-99
Laboratory Number:	Q2-22-TCA-MB	Date Sampled.	N/A
Sample Matrix:	TCLP Extraction	Date Received:	NA
Preservetive	Cool *	Date Extracted: ,	02-22-89
Condition:	Cool & Intact	Date Analyzed:	03-01-99
	• • • • • • • • • • • • • • • • • • • •	Analysis Requested:	TCLP

:	Concentration	Det. Limit	Regulatory Limit
Parameter	(mg/L)	(mg/L)	(mg/L)
o-Cresol	NO	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichiorophenol	ND	0.020	2.0
2,4,5-Trichloropheno		0.020	400
Pentachiorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenoi	98%
	2.4.6-Tribromophenoi	99%

References:

Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid

Waste, SW-846, U\$EPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenole, 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 - E896.

Der L. Queca

Review Jan She

#### # '5 '29 '

# ENVIROTECH LABS

## EPA METHOD 8040 PHENOLS Quality Assurance Report

Client	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported	03-01-99
Laboratory Number:	<b>E89</b> 5	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)	Oetection Limit (mg/L)	Percent Difference
o-Cresol	ND	ND	0.020	0.0%
p,m-Cresoi	ND	ЯP	0.040	0.0%
2,4,6-Trichiorophenol	0.708	0.701	0.020	1.0%
2,4,5-Trichlorophenol	0.222	0.219	0.020	1.1%
Pentachlorophenol	0.091	0. <b>09</b> 0	0.020	0.8%

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Habur strands chara	Maximum Difference	<u>e</u>
	8040 Compou	ınds	30.0%	

References:

Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Furniel 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 support C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E695 - E696.

Willen L. Charles

Review

# EPA Method 8090 Nitrogramatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

NVA Project #: QA/QC Client: Date Reported: 03-01-99 Laboratory Blank Sample ID: Date Sampled: NA 03-01-TBN-Blank Laboratory Number: N/A Date Received: Sample Matrix: Hexane N/A Date Extracted: Preservative: PVA. Date Analyzed: 03-01-99 Condition: N/A TOLP Analysis Requested:

	Concentration	Det. Limit	Regulatory Limit
Parameter	(mg/L)	(mg/L)	(mg/L)
Pyridine	ND	0.020	5.0
Hexachioroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	ND	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachloroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
***************************************		

2-fluorobiphenyl

99%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments.

QA/QC for samples E695 - E696.

Acalysi P. Oflencon

Stay W. Sendle-

# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client		QA/QC	Project#:	N/A
Sample ID:		Method Blank	Date Reported:	03-01-99
Laboratory Nurriber.		02-22-8N-MB	Date Sampled:	N/A
Sample Matrix:		TCLP Extract	Date Received:	N/A
Preservative:		Çool	Date Extracted:	02-22-96
Condition:	•	Cool and Intact	Date Analyzed:	03-01-99
			Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	ND	0.020	5.0
Hexachioroethane	ND	0.020	3.0
Nitrobenzene	ND	0.020	2.0
Hexachlorobutadiene	МĎ	0.020	0.5
2,4-Dinitrotoluene	ND	0.020	0.13
HexachioroBenzene	ND	0.020	0.13

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	<b>98</b> %

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnial Liquid-Liquid Extraction, SW-848, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E695 - E696.

Alen P. Oferen

Stacy W. Sendle



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

Client:	QA/QC	Project #:	NA
Sample ID:	Matrix Duplicate	Date Reported:	03-01-99
Laboratory Number:	E695	Date Sampled:	NA
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	02-22-99
Condition:	N/A *	Date Analyzed:	03-01-99
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	ND	ND	0.0%	0.020
Hexachloroethane	0.056	0.055	1.0%	0.020
Nitrobenzene	ND	ND	0.0%	0.020
Hexachlorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachioroBenzene	ND	ND	0.0%	0.020

ND - Parameter not detected at the stated detection limit.

8090 Compounds

30%

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-848, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Katones, 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.

Asken L. Quecen



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

Client:		QAVQC		Project #:		•	l/A
Sample ID		03-03-TCM Q	AVQC	Date Report	red:	C	3-03-99
Laboratory Number:		E695		Date Sampl	ed:	ř	N/A
Sample Matrix:		TCLP Extract		Data Receiv	red:		wA
Analysis Requested:		TCLP Metals		Date Analyz	ed	(	)3 <b>-</b> 03- <del>9</del> 9
Candition:		N/A		Date Extrac	ted:	1	AIA
Blank & Duplicate	Instrument	Method	Detection	elqms	Duplicate		Acceptance
Conc (mg/L)	- Blenk 🖖	* Blank	Limit	i Andro Land	- असी व्यक्ति ।	DHT.	Rainge
Arsenic	ND	ND	0.0001	0.0437	0.0435	0.5%	<b>0% - 3</b> 0%
Barlum	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	מא	П	0.0001	0.0149	0.0150	0.7%	0% - 30%
Mercury	ND	ND	0.0001	ΝĎ	ND	0.0%	0% - 30%
Selenium	ND	ND	0.0001	0.0315	0.0312	1.0%	0% - 30%
	ND	ND	0.0001	ND	ND	0.0%	0% - 30%

Solid		Semple		Percent	Acceptance
Core (mg/L)			Samole	EDOCUMENT OF	N. S. J. L. L. L. L. L. L. L. L. L. L. L. L. L.
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% - 1 <b>20</b> %
Chromium	0.0500	ND	D.0498	99.6%	80% - 120%
Lead	0.1000	0.0149	0.115	99.9%	80% - 120%
Mercury	0.0260	ND	0.0249	99.6%	80% - 120%
Selenium	0.1000	0.0315	0.131	99.6%	80% - 12 <b>0</b> %
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. 1985

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals,

SW-848, 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.

strict I - (\$05) 393-6161

D. Box 1980 . {
bbs, NM 88241-1980
strict II - (\$05) 748-1283

S. First
esia, NM 88210
trict III - (\$05) 334-6178

Rio Brazos Road
.c., NM 87410

uria IY - (505) 827-7131

# New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division RECEIVED

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

FEB 1 1998

Environmental Bureau

Oil Conservation Division

Form C-138 Originated 8/8/95

> Submit Original Plus 1 Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: 🔀	4. Generator WFS
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site Lybrook Plant
2. Management Facility Destination KEY EXPROY DISPOSAL	6. Transporter Key Everby
3. Address of Facility Operator Physical: CR 3500 # 345 Aztec, NM	8. State NM
7. Location of Material (Street Address or ULSTR) CVB4 NM 87013	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.  All transporters must certify the wastes delivered are only those consigned.	companied by necessary chemical analysis to on of origin. No waste classified hazardous by
Estimated Volume 500 bb/s + cy Known Volume (to be entered by the of type OR PRINT NAME: MICHAEL TALOUICH  THE PROPERTY OF MATERIAL:  Product Service  LAST FILED  ON 12-29-98  SCILL  SCILL  TITLE: MGK  TYPE OR PRINT NAME: MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMATE OF MICHAEL TALOUICH  TESTIMAT	PEGENED 1 2 1999  ON DIVO  perator at the end of the haul) — cy
APPROVED BY: Martine Title: Geo!  APPROVED BY: Martine The TITLE: Gro. G.	

#### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
295 CHIPETA WAY	key Excecy DISPOSAL
SALT LAKE CITY, UT 84158	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
11100 1 1 1 00 1 A	mile post 103 HIWAY 44
was Lybrock Plant	CUBA NM 87013
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Plant WASTEWATER FROM	NATIONAL GAS DIDICESSING
OPERATIONS	processing processing
OPERATION S	
1, CARLOS D. ADAIR	representative for:
	representative for:
(Print Name)	
according to the Resource Conservation and Recove	do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July,
Wintervalley	do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described	do hereby certify that, bry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic r by product identification
according to the Resource Conservation and Recover 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT analysis of	do hereby certify that, any Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic r by product identification  on-exempt non-hazardous waste defined above.
according to the Resource Conservation and Recover 1988, regulatory determination, the above described  EXEMPT oilfield waste  EXEMPT oilfield waste  ANON-EXEMPT analysis of an and that nothing has been added to the exempt or not an another than the second of the exempt of the following documents of the exempt of the following documents of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt of the exempt	do hereby certify that, any Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic r by product identification  on-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):
according to the Resource Conservation and Recover 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT analysis of and that nothing has been added to the exempt or not and that nothing has been added to the exempt or not analysis of the NON-EXEMPT waste only the following documents of the exempt of the RCRA Hazardous Waste Analysis Chain of Custody	do hereby certify that, bry Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification)  MPT oilfield waste which is non-hazardous by characteristic r by product identification  on-exempt non-hazardous waste defined above.  mentation is attached (check appropriate items):

#### Q WAL LABORATORIES, INC.

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

REFERENCE #:

9812755

SENT WILLIAMS GAS PIPELINE

LABORATORY REPORT:

TO:

295 CHIPETA WAY

DATE REPORTED: DATE COLLECTED: 12/28/98 12/21/98

SALT LAKE CITY, UT 84108

801-584-6543 FAX 584-7760

DATE RECEIVED:

12/22/98

DUAME ADAIR

P.O. #:

PROJECT: WASTEWATER POND

Sample ID: LYB-WW POND

Sample Matrix: WATER

Sample Date Collected: 12/21/98

TEST	KETEOD	RESULT	UNITS	DL	<b>YNYTARED</b>	BY
TCLP EXTRACTION	EPA 1311	DONE				RH
SILVER, TCLP	SW 846 6010	0.020	MG/L	0.01	12/28/98	
ARSENIC, TCLP	SW 846 7060	0.003	NG/L	0.001		
BARIUM, TCLP	SW 846 6010	0.610	MG/L	0.005		
CADMIUM, TCLP	SW 846 6010	<0.005	NG/L	0.005		
CHROMIUM, TCLP	SW 846 6010	0.167	MG/L	0.01	12/28/98	
MERCURY, TCLP	SW 846 7470	<0.0002	MG/L	0.0002	12/28/98	
LEAD, TLCP	SW 846 6010	<0.050	MG/L	0.05	•	
SELENIUM, TCLP	SW 846 7740	0.0039	MG/L	0.002	12/23/98	

Sample ID: LYB-WW POND MS

Sample Date Collected: 12/21/98

Sample Matrix: WATER

METHOD	RESULT	UNITS	DL	ANALYSED	BY
EPA 1311	DONE				RH
SW 846 6010	96.5	% REC	•	12/28/98	MS2
SW 846 7060	104.7	* REC	!		
SW 846 6010	118,9	₹ REC	i ī		
SW 846 6010	124.8	% REC			
SW 846 6010	99.9	% REC	!		
SW 846 7470	101.4	* REC			
SW 846 6010	81.8	% REC	)		
SW 846 7740	92.0	% REC	;	12/23/98	
	EPA 1311 SW 846 6010 SW 846 7060 SW 846 6010 SW 846 6010 SW 846 7470 SW 846 6010	EPA 1311 DONE SW 846 6010 96.5 SW 846 7060 104.7 SW 846 6010 118.9 SW 846 6010 124.8 SW 846 6010 99.9 SW 846 7470 101.4 SW 846 6010 81.8	EPA 1311 DONE SW 846 6010 96.5 % REC SW 846 7060 104.7 % REC SW 846 6010 118.9 % REC SW 846 6010 124.8 % REC SW 846 6010 99.9 % REC SW 846 7470 101.4 % REC SW 846 6010 81.8 % REC	EPA 1311 DONE SW 846 6010 96.5 % REC SW 846 7060 104.7 % REC SW 846 6010 118.9 % REC SW 846 6010 124.8 % REC SW 846 6010 99.9 % REC SW 846 7470 101.4 % REC SW 846 6010 81.8 % REC	EPA 1311 DONE  SW 846 6010 96.5 % REC 12/28/98  SW 846 7060 104.7 % REC 12/23/98  SW 846 6010 118.9 % REC 12/28/98  SW 846 6010 124.8 % REC 12/28/98  SW 846 6010 99.9 % REC 12/28/98  SW 846 7470 101.4 % REC 12/28/98  SW 846 6010 81.8 % REC 12/28/98

Sample ID: LYB-WW POND

Sample Date Collected: 12/21/98 Sample Matrix: WATER

TEST METHOD RESULT UNITS DL AMALYSED BY TCLP EXTRACTION **EPA 1311** DONE RH

**REFERENCE #**: 9812755

PAGE: 1

Sample ID: LYB-WW POND

a. 1 3 ► .

Sample Matrix: WATER

Sample Date Collected: 12/21/98

TRAT	Kelhod	RESULT	DRIJE	DL	THITARD	DY
TCLP SEMI-VOLATILES	SW 846 8270					
O-CRESOL		ND	NG/L	0.10	12/23/98	SKV
P-CRESOL		ND	KG/L	0.10	12/23/98	
M-CRESOL		ND	NG/L	0.10	12/23/98	SKV
1,4-DICHLOROBENZENE	•	ND	MG/L	0.10		
2,4-dinitrotoluene		ND	MG/L	0.10		
HEXACHLOROBENZENE		ND	NG/L	0.10		
<b>HEXACHLOROBUTADIENE</b>		ND	MG/L	0.10	12/23/98	SKV
HEXACHLOROETHANE		ND	MG/L	0.10		
nitrobenzene	:	מא	MG/L	0.10		
PENTACHLOROPHENOL	<del>.</del> .	ND	MG/L	0.50		
PYRIDINE	20 M	ND	NG/L	0,10		
2,4,5-TRICHLOROPHENC	<b>L</b>	ND	KG/L	0.10		
2,4,6-TRICHLOROPHENC	L "F"	ND	MG/L	0.10		SKV
TCLP EXTRACTION	EPA 1311	DONE	•		•	RH
TCLP VOLATILES	SW 846 8260					
Benzene		ND	MG/L	0.015	12/22/98	TK
CARBON TETRACHLORIDE		ND	MG/L	0.015	12/22/98	
CHLOROBENZENE		ND	MG/L	0.015		
CHLOROPORM		ND	MG/L	0.015	12/22/98	
1,2-DICHLOROFTHANE		ND	MG/L	0.015	12/22/98	
1,1-DICHLOROETHYLENE	2	ND	MG/L	0.015	12/22/98	
METHYL ETHYL KETONE		ND	MG/L	0.015	12/22/98	
TETRACHLOROETHYLENE		ND	MG/L	0.015	12/22/98	
TRICHLOROETHYLENE		ND	MG/L	0.015		
VINYL CHLORIDE		ND	MG/L	0.015	12/22/98	TK

ND=NONE DETECTED DL=DETECTION LIMIT SU=STANDARD UNITS B-DETECTED IN METHOD BLANK

APPROVED BY:-

\*FAX COPY TO INGRID AT 801-584-7760 ALSO.

LABORATORY DIRECTOR

REFERENCE #: 9812755 PAGE: 2

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

Established 1976
2911 Rotary Terrace • Pittsburg, Kansas 66762
TO ORDER: FAX 1-316-232-7730 OR PHONE 1-316-232-1970

	(3) TURNAROUND TIME REQUESTED (Additional Charges May Apply)  C) Standard C) 72 Hours C) 48 Hours C) 24 Hours C) SameDay  * Note - Please contact lab for availability of priority service.	© ANALYSIS REQUEST (Write Tests Here)	2/0 23/11 5/1/10/0		MARTYNE Denny Go Fam sen help sp	this pains eed constraints	•	,	Send Invoice to:	Company billiams (habrach Plant)	17, Box 360	City/State: Flow 44, Mile post 103 ( Phone: Sos-632-4826	Fax: SoS: 633 - 7845	LURE TO COMPLETE THIS FORM MAY DELAY LABORATORY RESULTS.
<del></del>	505-639-48ac	n na a transport de la compansión de la compansión de la compansión de la compansión de la compansión de la co	)rder #:	Sampling Personnel (print name)	HCL Ager Mater Soil Agree Soil Agree Soil Agree Soil Agree Soil Agree Soil Agree Sindge	<b>&gt;</b>			Send Report to:	l <sub>g</sub>	Attn: Anglic Address: 295 (h)	State: Selt ha	Fax: 801-584-7760	*FAILURE TO COMPL
	4) Phone #	(DFax #: 163	(S) Purchase Order #:	Samplif	© Method # of Con- tainers HXSO4  WAOH HCL	8			Time (S)	1.98 4:00 Pm	Time	Time 7% 1200		Time
	O Company Name: ( hybrook Plant Attention: Dugne Arter	HCR #17	nber	Sampling Personnel Signature(s)	(a) Sample Date Time (b) (c) (c) (d) (d) (d) (d) (e) (d) (d) (e) (d) (e) (e) (e) (e) (e) (e) (e) (e) (e) (e	LyB-ww Pond Alpha 1:00m / 3			(1) Relinquished By: Date	Received By: FED EX 12.21.98		Received By: Date	Relinquished By: Date	°d By: Date

MAR C

Environmental Bureau Oil Conservation Division

(505) 324-7210

Fax (505) 632-4845

Project No.: 97073 Job No.: 707304

Mr. Duane Adair Williams Field Services, Inc. WFS-Lybrook HCR 17 Box 360

Cuba, NM 87013

February 28, 1999

Dear Mr. Adair,

Enclosed are the analytical results for one water sample collected from the location designated as "Lybrook - North Pond. One water sample identified as Water-Grab' " was collected by WFS designated personnel on 02/22/99, and delivered to the Envirotech laboratory on 02/22/99 for RCRA Characterization analysis (Ignitability, Reactivity, and Corrosivity).

The sample was documented on Envirotech Chain of Custody No. 6617 and assigned Laboratory No. E705 for tracking purposes. The sample was analyzed on 02/23/99 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. Sender

Environmental Scientist/Laboratory Manager

cu W Lendler

enclosure

SWS\sws\97073-04.lb1/wpd

#### SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:

Williams Field Service

707304

Sample ID:

Water - Grab

Project #: Date Reported:

Lab ID#:

E705

02-24-99

Sample Matrix:

Water

02-22-99 Date Sampled: 02-22-99

Stacy W Sendler

Preservative:

Cool

Date Received:

Condition:

Cool and Intact

Date Analyzed: Chain of Custody: 02-23-99 6617

Parameter

Result

IGNITABILITY:

Negative

**CORROSIVITY:** 

Negative

pH = 9.78

REACTIVITY:

Negative

Cyanide = <0.001 mg/L

Sulfide = 0.052 mg/L

RCRA Hazardous Waste Criteria

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:

Lybrook - North Pond.

6617

strict I · (505) 393-6161

D. Box 1980 ... (
bbs, NM 88241-1980

strict II · (505) 748-1283

J. S. First
lesia, NM 88210

trict III · (505) 334-6178

Rio Brazos Road

.cc, NM 87410

urici 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

REGUEST FORTAL TO AGGET I	00215 117.012
1. RCRA Exempt: Non-Exempt:	4. Generator ENRON TRANSPORTATion
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site Bloomfield + GHlup
2. Management Facility Destination REYENERGY SERVICES  DISPOSAL	6. Transporter Key
3. Address of Facility Operator # 345 AZIEC NM	8. State VM
7. Location of Material (Street Address or ULSTR)	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	ed for transport.
BRIEF DESCRIPTION OF MATERIAL:	
WATER + SOAP USED PIG PIPELINE	between.
Bloomfield and Gallup	PEG 2 2 1999 D
	DIL CON. DIV.
Estimated Volume 500+ 66/5 cy Known Volume (to be entered by the o	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Waste Management FacilityAuthorized Agent  TITLE: MGR	DATE: 2-22 99
	LEPHONE NO. 505-334-6/86
(This space for State Use)	• (
APPROVED BY: Jerry 2. Foury TITLE: Geold	/ / / / /
APPROVED BY: Martyn Phy TITLE: Env. (	Scolog ,5+ DATE: 2/26/99

**CERTIFICATE OF WASTE STATUS** 

Generator Name and Address:	2. Destinat	tion Name:	Revellation
ENRON TRANSPORTATION & STOR	AGEEY EN	ERGY DISPOSAL	FEB 2 2 1000
			ON GOD: -
Originating Site (name):	Location of th	ne Waste (Street address &/	THE COM DIV
3. Originating Site (name).	Location of th	le vvaste (Street address oz	OI OF SIKE IS IN SIGNATURE SI
TRANSWESTERN GALLUP SAN JUA	AN INTERO	CONNECT	
4MI EAST OF GALLUP NEW MEXION Attach list of originating sites as appropriate	co		
Source and Description of Waste			
WATER AND SOAP USED TO CLE			,
BLOOMFIELD N.M. TO THE GALLUP			SALLUP. THE WATER
WAS INJECTED INTO THE PIPE AT	BLOOMFI	ELD.	
1. JAMES R. RUSSEL	1	representa	tive for:
ENRON TRANSPORTATION & S.	STORAGE	do hereby	certify that, according
to the Resource Conservation and Recovery Act (Retermination, the above-described waste is: (Chec	TURM) and En	virorimental Protection Age	ncy's July, 1998, regulatory
•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	
		ollfield waste which is non-hoduct identification	azardous by characteristic
and that nothing has been added to the exempt or	non-exempt n	on-hazardous waste define	d above.
For NON-EXEMPT waste only the following docum	nentation is att	ached (check annountiate if	ame).
1.	ionadon io an		•
MSDS Information			: ANALYTICAL OF THE
RCRA Hazardous Waste A	Analysis	WATER	
Chain of Custody			
	<del>-/)</del>		
Name (Original Signature):	Luse		
Title: ENVIRON MENTAL S.	PERM	157	
Date: 0/47/00			

#### NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

February 10, 1999

#### CERTIFIED MAIL RETURN RECEIPT NO. Z-357-870-065

Mr. James R. Russell Enron Transportation and Storage Summit Office Building 4001 Indian School Road, NE, Suite 250 Albuquerque, New Mexico 87110

RE: Waste Water Disposal
Transwestern Pipeline Company
San Juan-Gallup Interconnect
Gallup, New Mexico

Dear Mr. Russell:

The New Mexico Oil Conservation Division (OCD) has received the Enron Transportation & Storage (Enron) letter dated January 22, 1999 requesting that Enron be allowed to dispose of twenty two thousand (22000) gallons of wastewater generated from oil and gas activities. Based on the information provided, and the certification by Enron that this waste is non-hazardous and acceptable by the Key Energy, Farmington, New Mexico Class I disposal well facility, the request is approved.

Note, that OCD approval does not relieve Enron of liability should disposal of this material result in contamination of surface water, ground water or the environment. Also, OCD approval does not relieve Enron from compliance or reporting requirements that may apply from other federal, state, and local rules/regulations.

If you have any questions please feel free to call me at (505)-827-7156.

Sincerely,

W. Jack Ford, C.P.G.

Geologist

Environmental Bureau-OCD

cc: Aztec OCD District Office

#### **Material Safety Data Sheet**

Common Name	NSPEC 105 Cleaner	Code	10259	
0 11:	COASTAL FLUID TECHNOLOGIES INC	MSDS#	Not available.	
Supplier	COASTAL FLUID TECHNOLOGIES, INC. 3520 Veterans Memorial Drive	Validation Date	3/17/97	
ABBEVILLE, LA 70510 318-893-1952		Print Date	3/17/97	
Synonym	Not available.	In case of		
Trade name	Not available.	Emergency	TRANSPORTATION EMERGENCY: CHEM-TEL, INC. 1-800-255-3924	
Material Uses	Not available.			
Manufacturer	COASTAL FLUID TECHNOLOGIES, INC. 3520 Veterans Memorial Drive ABBEVILLE, LA 70510 318-893-1952			

Section 2. Composition and Information on Ingredients						
Name	CAS#	% by Weight	TLV/PEL	LC <sub>50</sub> /LD <sub>50</sub>		
Confidential Infomation						

#### Section 3. Hazards Identification CAUTION! Emergency Overview MAY CAUSE E 'E IRRITATION. MAY CAUSE SKIN IRRITATION. Routes of Entry Eye contact. Ingestion. Potential Acute Health Slightly dangerous to dangerous in case of skin contact (irritant), of eye contact (irritant). Very slightly to slightly dangerous in case of skin contact (permeator), of ingestion, of inhalation. This **Effects** product may irritate eyes and skin upon contact. Potential Chronic Health CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. Toxicity of the product to the reproductive system: **Effects** Not available. There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.

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.

Continued on Next Page

NSPEC 105 Clea	nner Page Number: 2
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.
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.

Section 5. Fire an	d Explosion Data
Flammability of the Product	Combustible.
Auto-Ignition Temperatur	e Not available.
Flash Points	CLOSED CUP: >93.333°C (201.8°F)
Flammable Limits	Not available.
Products of Combustion	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2).
Fire Hazards in Presence of Various Substances	of 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, CO2, 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 toxics fumes. (Diethanolamine)
Special Remarks on Explosion Hazards	No additional remark.

	cidental Release Measures
Small Spill	The concentrated form of this material is a cleaner and is not considered hazardous. During application, hazardous material on the apparatus or structure being cleaned may become part of the cleaning solution. Check with all applicable regulations before disposing of the material created during application.
Large Spill	The concentrated form of this material is a cleaner and is not considered hazardous. During application, hazardous material on the apparatus or structure being cleaned may become part of the cleaning solution. Check with all applicable regulations before disposing of the material created during application.

Section 7. H	landling and Storage	
Handling	Not available.	
Storage	Keep container tighltly closed in a co	ool, well-ventilated place.

		eir respective	threshold lin	ering controls to keep the airborne concentrations of nit value. Ensure that eyewash stations and safety ation.
Personal Protection	Safety glasses.	Lab coat. Glov	es (impervio	us).
	Splash goggles. consult a special			Suggested protective clothing might not be sufficient; roduct.
Chemical Name or Product	Name	CAS#	Exposur	e Limits

Physical state and	Liquid.	Odor	Slight.	
appearance		<u> </u>		
Molecular Weight	Not applicable.	Taste	Not available.	
pH (1% soln/water)	7 to 8 [Basic.]	Color	Brown. (Dark.)	
Boiling Point	The lowest known value is >275°C	C (528.8°F)		
Melting Point	Not available			
Critical Temperature	Not available.			
Specific Gravity	0.85 (Water = 1)			
Vapor Pressure	Not available.			
Vapor Density	Not available.			
Volatility	Not available.			
Odor Threshold	Not available.			-
Evaporation rate	Not available.			
Viscosity	Not available.			
Water/Oil Dist. Coeff.	The product is much more soluble	e in water.		
Ionicity (in Water)	Not available.			
Dispersion Properties	See solubility in water, methanol.			
Solubility	Easily soluble in cold water, hot water in soluble in diethyl ether, n-octan			
Physical Chemical Comments	Not available.			

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

Section 11. Toxic	cological Information
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Huma	us 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), of eye contact (irritant). Very slightly to slightly dangerous in case of skin contact (permeator), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on	Can cause dastrointestinal disturbances. (1.2-Propylene glycol)

Chronic Effects on Humans

Special Remarks on other
Toxic Effects on Humans

Section 12. Ecolog	ical 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.

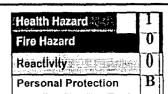
## Section 13. Disposal Considerations Waste Disposal Recycle, if possible. Consult your local or regional authorities.

Section 14. Trans	port Information		- 13
Propper Shipping Name	Not Regulated		
DOT Classification	Not a DOT controlled material (United Sta	ates).	<del></del>
DOT Identification Number	Not applicable (PIN and PG).		
Packing Group	NONE		
Hazardous Substances Reportable Quantity	Not available.		
Special Provisions for Transport	Not Regulated		

Federal and State Regulations	The following product(s) is (are) listed by the State of Massachusetts: <b>Diethanolamine</b> The following product(s) is (are) listed on TSCA: <b>Diethanolamine</b> , 1,2-Propylene glycol
Other Classifications	WHMIS (Canada) Not controlled under WHMIS (Canada).

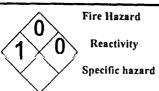
#### Section 16. Other Information

HMIS (U.S.A.)



National Fire Protection Association (U.S.A.)

Health



References

Not available.

Other Special

No additional remark.

Considerations

Validated by Charles Toups on 3/17/97.

Verified by Charles Toups.

Printed 3/17/97.

**Emegency Contact** 

CHEM-TEL, INC. - 1-800-255-3924

#### 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 "he only hazards that exist.



January 22, 1999

#### Enron Transportation & Storage

Services Provided by Northern
Natural Gas Company and
Transwestern Pipeline Company
Summit Office Building
4001 Indian School Road, NE, Suite 250
Albuquerque, NM 87110
(505) 260-4000
Fax (505) 254-1437

Mr. Roger Anderson
Oil Conservation Division
P. O. Box 2040
South Pacheco Street
Santa Fe, New Mexico 87505

Re: Disposal of Wastewater at San Juan – Gallup interconnects Gallup New Mexico:

Dear Mr. Anderson:

Transwestern Pipeline Company, owner and operator of the San Juan – Gallup interconnect, request approval from your agency to dispose of waste generated from oil and gas activities at the above reference facility. This request address disposal of twenty two thousand gallons (22000 gal) that was used to clean the pipeline from our San Juan facility to the Gallup interconnects. The analytical for this water is attached. Key Energy, Farmington New Mexico, will dispose of this waste into a deep well class 1. Approval of this request will allow Transwestern Pipeline Company to complete this project and will not create any adverse impact to the facilities environment.

If you should have any question or need additional information please give me a call at our Albuquerque office (505) 260-4011.

Sincerely:
Lormes R. Russell

James R. Russell

Xc: Rich Jolly
PT Foster
Rick Smith
Gallup Team





December 8, 1998

Charlie Allen Enron Transwestern Pipeline P.O. Box 1019 Thoreau, NM 87323

Phone: (505) 862-7443

FAX: (505) 862-7826

Re: Laboratory Sample Analysis

Project: Enron Transport & Storage

Station 1-8 PCB Sampling

Project Manager: Charlie Allen

### Dear Charlie Allen:

On Thursday, December 3, 1998, OAL received six (6) samples for analysis: four waste oil samples; and two water samples. The samples were analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L9103.

Sincerely,

Deborah Griffiths

Project Manager

cc: Butch Russell, Charlie Allen, Larry Campbell

314 P02





		Sample Summary		
Sample ID	Lab#	Description	Sampled	Received
NFT BOTTOM H20 PH	ASL9103-1	water	12/02/98 12:10	12/03/98
NFT TOP OIL PHASE	L9103-2	waste oil	12/02/98 12:15	12/03/98
NFT MIDDLE OIL PHAS	SEL9103-3	waste oil	12/02/98 12:20	12/03/98
SFT BOTTOM H2O PH	ASL9103-4	water	12/02/98 12:25	12/03/98
SFT TOP OIL PHASE	L9103-5	waste oil	12/02/98 12:30	12/03/98
SFT MIDDLE OIL PHAS	SE L9103-6	waste oil	12/02/98 12:35	12/03/98

### **Definition of Terms**

Analytical result was below the reporting limit. ND

		Analysts
Initials	Analyst	Title
CN	Cedric Neel	Analyst
DMC <sup>2</sup>	Debbie McBreen-McKenzie	Chemist /Supervisor
GCK	Bill Kernion	Chemist

	Method Summary
Analysis	Method
Arsenic	EPA 200.9
Flash Point (PMCC)	EPA 1010/ASTM D93
Lead	EPA 200.7/6010



Client: Enron Transport & Storage Contact: Charlie Allen

Project: Station 1-8 PCB Sampling

### Oil Analyses

Sample ID	Mutrix					Lab Number
Analyte	Result	Reporting Limit	Units	Date Analyzed	Method	Comment Analyst
NFT BOTTOM H20 PHAS	SE; NORTH FRAC TANK	Water			Sampled: 12/02/98	L9103-1
Flash Point (PMCC)	>200		°۴	12/04/98	EPA 1010/ASTM D93	CN
Flash Point (PMCC)	>93.		°C	12/04/98	EPA 1010/ASTM D93	CN
NFT TOP OIL PHASE; N	ORTH FRAC TANK Waste	Oil			Sampled; 12/02/98	L9103-2
Flash Point (PMCC)	>200		°F	12/04/98	EPA 1010/ASTM D83	CN
•	>93		*C	12/04/98	EPA 1010/ASTM D93	CN
NFT MIDDLE OIL PHAS	E; NORTH FRAC TANK H	Vaște Oil			Sampled: 12/02/98	L9103-3
Flash Point (PMCC)	>200		°F	12/04/98	EPA 1010/ASTM D93	CN
1 '	>93		°C	12/04/98	EPA 1010/ASTM D93	CN
SFT BOTTOM H2O PHA	SE; SOUTH FRAC TANK	Vater			Sampled: 12/02/98	L9103-4
Flash Point (PMCC)	>200.		°F	12/04/98	EPA 1010/ASTM D93	CN
	>93.		*C	12/04/98	EPA 1010/ASTM D93	CN
SFT TOP OIL PHASE; SO	OUTH FRAC TANK Waste	Oil .			Sampled: 12/02/98	L9103-5
Flash Point (PMCC)	>200.		°F	12/04/98	EPA 1010/ASTM D93	CN
' '	>93.		°C	12/04/98	EPA 1010/ASTM D93	CN
SFT MIDDLE OIL PHAS	E; SOUTH FRAC TANK W	aste Oil	,		Sampled: 12/02/98	1,9103-6
Flash Point (PMCC)	>200.		°F	12/04/98	EPA 1010/ASTM D93	CN
	>93.		°C	12/04/98	EPA 1010/ASTM D93	CN

### OREGON ANALYTICAL LABORATORY





Client: Enron Transport & Storage

Contact: Charlie Allen

Project: Station 1-8 PCB Sampling

### **TCLP Metals**

Sample ID	Matrix						Lab !	Number
Analyte		Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analys
	<del></del>		······			Sampled: 12/02/98		
NFT BOTTOM H20	PHASE; NORTH FRAC	CTANK W	'ater	Mic	· ·	CLP EPA 1311: <i>12/03/</i> 98 tion EPA 3015: <i>12/04/</i> 98	ı	L9103-1
Arsenic		ND	0.20	mg/L	12/08/98	EPA 200,9		GCK
			2.5	mg/L		EPA 200.7/6010		DMC²
						Sampled: 12/02/98		
SFT BOTTOM H2O	PHASE; SOUTH FRAC	TANK W	aler	Mic	-	CLP EPA 1311: <i>12/04/98</i> tion EPA 3015: <i>12/04/</i> 98	1	L9103-4
Arsenic	•	ND	0.20	mg/L	12/08/98	EPA 200.9		GCK
Lead		ND	2.5	mg/L	12/08/98	EPA 200,7/6010		DMC²
<del></del>						Sampled:12/02/98	<del></del>	
SFT TOP OIL PHAS	E; SOUTH FRAC TAN	K Waste O	il	Mic		CLP EPA 1311: <i>12/04/98</i> tion EPA 3016: <i>12/04/98</i>	1	L9103 <u>-5</u>
Arsenic		ND	0.20	mg/L	12/08/98	EPA 200.9		GCK
Lead		ND	2.5	mg/L	12/08/98	EPA 200.7/8010		DMC <sup>2</sup>
						Sampled:12/02/98		
SFT MIDDLE OIL P	HASE; SOUTH FRAC	TANK Wa	ste Oil	Mic		CLP EPA 1311: <i>12/04/98</i> tion EPA 3015: <i>12/04/98</i>	1	L9103-6
						EPA 200.9		GCK
Arsenic		ND	0.20	mg/L	12/08/98	EFA 200.3		GON



Client: Enron Transport & Storage

Contact: Charlie Allen

Project: Station 1-8 PCB Sampling

### **Total Metals**

Sample ID	Matrix						Lab Number
Analyte		Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment Analyst
NFT TOP OIL PHASE; N	ORTH FRAC TANK	Waste (	oit	Mic	crowave Dige:	Sampled: <i>[2/02/98</i> stion EPA 3051: <i>12/04/98</i>	L9103-2
Arsenic		0.21	0.20	mg/kg	12/08/98	EPA 200.9	gcк
Lead		ND	2.5	mg/kg	12/08/98	EPA 200.7/6010	DMC²
			· · · · · · · · · · · · · · · · · · ·			Sampled: 12/02/98	
NFT MIDDLE OIL PHAS	E; NORTH FRAC T	ANK W	aste Oil	Mic	rowave Dige	stion EPA 3051:12/04/98	L9103-3
Arsenic		0.22	0.20	mg/kg	12/08/98	EPA 200.9	GCK
Lead		ND	2.5	mg/kg	12/08/98	EPA 200.7/6010	DMC <sup>2</sup>

503 590 1404:

01/14/99 18:32; Jeffax #785; Page 2



L9591

January 14, 1999

Charlie Allen Enron Transwestern Pipeline P.O. Box 1019 Thoreau, NM 87323

Phone: (505) 862-7443

FAX: (505) 862-7826

Re: Laboratory Sample Analysis

Project: San Juan Frac Tanks Project Manager: Charlie Allen

Dear Charlie Allen:

On Monday, January 11, 1999, OAL received one (1) liquid sample for analysis. The sample was analyzed utilizing EPA, ASTM, or equivalent methodology.

Should you have any questions concerning the results in this report, please contact us at (503) 590-5300. Refer to OAL login number L9591.

Sincerely,

Kami Morrow Project Manager

cc: Butch Russell, Charlie Allen, Larry Campbell

Bent by: OREGON ANALYTICAL LAB

503 590 1404;

01/14/89 18:32; Jetfax #785; Page 1

Oregon Analytical Laboratory 14855 S.W. Scholls Ferry Road Beaverton, Oregon 97007

### **Facsimile Transmission Cover Sheet**

Date: Thursday, January 14, 1999

Fax #: (505) 862-7826

To: Charlie Allen

Company: Enron Transwestern Pipeline

From: Doug McKenzie

Phone: (503) 590-5300

Total Number of Pages (including cover sheet): 16

Project: San Juan Frac Tanks

Re: Results for one liquid sample (L9591).

Thank you for choosing OAL for your testing needs!

Thanks,

Doug McKenzie
Technician

The information contained in this faceimite transmission is confidential and is intended only for the use of the individual or entity to whom it is addressed. If the reader of this message is not the intended receiver, you are hereby notified that any disclosure, copyling, distribution or the taking of any action in reliance on the contents of this communication is strictly prohibited. If you have received this faceimile transmission in error, please immediately notify us by a collect telephone cell to (503)590-5300, and return the original faceimile to us at the address above via the U.S. Postal Service.



		S	ample Summary		
Sar	nple ID	Lab#	Description	Sampled	Received
SAI	N JUAN FRAC TANKS	L9591-1	liquid	01/08/99 13:30	01/11/99

### **Definition of Terms**

D1 Reported value is based on a dilution due to matrix interference.

ND Analytical result was below the reporting limit.

		Analysts
Initials	Analyst	Title
CN	Cedric Neel	Analyst
CV	Cheryl Vezzani	Chemist
DM	Dan Miller	Organics Chemist
JD	Jason Davendonis	Technician
РВ	Pat Buddrus	Organics Chemist

Me	thod Summary	
Analysis	Method	
Barium	EPA 200.7/6010	
Cadmium	EPA 200.7/6010	
Chromium	EPA 200.7/6010	
Flash Point (PMCC)	<b>EPA 1010/ASTM</b> D93	
Мегсигу	EPA 245.1/7470A	
Selenium	EPA 200.7/6010	1
Silver	EPA 200.7/8010	
TCLP Semivolatiles	EPA 8270	
Volatile Organic Compounds (VOC)	EPA 8260	



Client: Enron Transwestern Pipeline Contact: Charlie Allen

Project: San Juan Frac Tanks

### Oil Analyses

Sample ID Mairix			and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	Lab Number
Analyte	Result Lim	_ IIUW	Date Analyzed Method	Comment Analyst
SAN JUAN FRAC TANKS Liquid			Sampled:01/08/99	L9591-1
Flash Point (PMCC)	>200.	<b>'</b> F	01/11/99 EPA 1010/ASTM D93	CN
Flash Point (PMCC)	>93.	'C	01/11/99 EPA 1010/ASTM D93	CN



Client: Enron Transwestern Pipeline

Contact: Charlie Allen

Project: San Juan Frac Tanks

### **TCLP Metals**

Sample ID	Matrix						l.ab	Vumber
Analyte		Result	Reporting Limit	Units (ppm)	Date Analyzed	Method	Comment	Analysi
					т	Sampled: <i>01/08/99</i> GLP EPA 1311: <i>01/11/99</i>		
SAN JUAN FRAC TANKS	Liquid	m a «««»	·ut-	Hot Plate	_	A 200.2/3005A:01/12/99 cury Digestion:01/12/99		L9591-1
Barium		1.06	1.0	mg/L	01/13/99	EPA 200.7/6010	D1	ÇV
Cadmium		ND	0.10	mg/L	01/13/99	EPA 200.7/8010	D1	CV
Chromium	• .	0.12	0.10	mg/L	01/13/99	EPA 200.7/6010	<b>D</b> 1	CV
Mercury		ND	0.010	mg/L	01/13/99	EPA 245.1/7470A	<b>D1</b>	JD
Selenium		ND	1.0	mg/L	01/13/99	EPA 200.7/6010	D1	CV
Silver		ND	0.10	mg/L	01/13/99	EPA 200.7/6010	D1	CV

503 590 1404; 01/14/99 18:34; Jeffax #785; Page 6/16



L9591

Client. Enron Transwestern Pipeline

Contact: Charlie Allen

Project: San Juan Frac Tanks

### **TCLP Semivolatiles** by EPA 8270

Sumple ID Matrix				Lab Number
Analyte	Result Limit	Units	Comment	
		Sa	mpled: 01/08/99	
			impled: <i>01/08/</i> 99 A 1311: <i>01/51/</i> 99	-
		TOLP EP	•	



Client: Enron Transwestern Pipeline

Contact: Charlie Allen

Project: San Juan Frac Tanks

# TCLP Semivolatiles (Totals\*) by EPA Method 8270

	Analyte	Results	Blank Result	Reporting Limit	Regulatory Limit	Units	COMMENT.	<del></del>	
IN JUAN FRAC	TANKS LIQUID		MB01175				Sampled: Analyzed:		1.959/-
CASE	CALL SANDOMER AND AND AND AND AND AND AND AND AND AND						. Gridik eart	W174 D 77	
110-85-1	Pyridine	nd	nd	506.00	5.0	mg/L	<b>D</b> 1		
106-45-7	1,4-Dichlorobenzene	nd	nd	100.00	7.5	mg/L	D1		
	Total Cresol	nd	nd	100.00	200	mg/L	D1		
67-72-1	Hexachloroethane	nd	nd	100,00	3.0	mg/L	D1		
98-95-3	Nitrobenzena	nd	nd	100.00	2.0	mg/L	Di		
87-68-3	Hexachiorobutadiene	nd	nd	100.0G	0.5	mg/L	D1		
88-06-2	2,4,6-Trichlarophenol	nd	nd	100.00	2,0	mg/L	D1	•	
85-95-4	2,4,5-Trichlorophenol	nd	nd	100.00	400	mg/L	Ď1		
121-14-2	2.4-Dinitrotoluene	nd	nd	100.00	0.13	mg/L	D1		
118-74-1	Hexachlorobenzene	пd	nd	100,00	0.13	ma/L	D1		
<b>87-8</b> 6-5	Pantachlorophenol	nd	nd	500,00	100	mg/L	D1		,
							Racovery	Recovery	
		Acid Surro	jatos:				L9591-1	SCR01 / 2.V	
		2-Fluorophe	nol				103%	107%	
		Phenol-46					98%	194%	
		2.4,6•1'ribro	mophenal				103%	92%	
		Başe / Nout	nai Surrogat	les:					
		1,2-Dichloro	benzerie d-4			* * · · · · · · · · · · · · · · · · · ·	103%	104%	
		Nitrobenzen	e-d5				99%	96%	
		2-Fluorobipt	enyl				103%	103%	

none detected = nd 2-Methylphenol + 4-Methylphenol = Total Cresol Elevated Reporting Limit due to sample matrix = 01

Samples containing less than half a percent solid are analyzed as totals # \*

503 590 1404; 01/14/99 18:35; Jeffex #785; Page 8/16



L9591

Client: Enron Transwestern Pipeline Contact: Charlie Allen

Project: San Juan Frac Tanks

### **Volatile Organic Compounds (VOC)** by EPA 8260

Sample ID Matrix						Lab Number
Analyte	Result	Reporting Limit	Units	Comment		
				mpled: 01/08/99	····	
SAN JUAN FRAC TANKS LIQUID	•			racted: 01/11/99 plyzed: 01/12/99 by £	)A	1.9591-1
See Attached Data Sheet			An	alyzad: 01/12/99 by £	)}}	

OREGON ANALYTICAL LABORATORY



Client: Enron Transwestern Pipeline

Contact: Charlie Allen

Project: San Juan Frac Tanks

### **TCLP Volatiles (Totals)** by EPA Method 8260

Suniple ID	Analyte	Result	Blank Result	Reporting Limit	Regulatory Limit	Unita	Comment	Lah Nunt
SAN JUAN FI	RAC TANKS		MB0112				Sampled: 01/08/ Analyzed: 01/12/	
CAS#			(11201)				Allelyzed . Dirio	77 177371-1
75-01-4	Vinyl chloride	nd	nd	1	0.2	mg/L	D1	
75-35-4	1,1-Dichloroethene	nd	nd	1	0.7	mg/L	D1	
78-93-3	2-Butanone	nd	hd	20	200	mg/L	D1	
67-66-3	Chloraform	nd	nd	1	б	mg/L	D1	
58-23-5	Carbon tetrachloride,	nd	nd	1	0.5	mg/L	D1	
71-43-2	Benzene	nd	nd	1	0.5	mg/L	D1	
107-06-2	1,2-Dichloroethane	nd	nd	1	0.5	mg/L	<b>D</b> 1	
79-01-6	Trichloroethene	nd	nd	1	0.5	mg/L	D1	
127-18-4	Tetrachloroethene	nd	nd	1	0.7	mg/L	D1	
108-90-7	Chlorobenzene	nd	nd	1	100	mg/L	<b>D</b> 1	
					Recovery	Re	COASIA	
		ntrogates			L9591-1	M	B0112	
		-	oethana-d4		98%	1	100%	
		oluene-d8			98%	1	100%	
	4	-Bromoflu	onobenzene	<b>:</b>	89%	7	100%	

none detected - nd Samples containing less than half percent sollds are analyzed as totals. Elevated reporting limits due to sample matrix = D1



Client Enron Transwestern Pipeline Contact: Charile Alian

Project: San Juan Frac Tanks

### Semivolatiles LCS & LCSD by EPA Method 8270

Sample ID		Lab Humber	Lab Number				
	Analyte	Recovery	Recovery	RPD	COMMENT		
			<del></del>		Sampled		
PATER	***	LCS0111S	LCNDOINS		Analyzed	: 01/11/99	
CAS#	~	<b></b>					
108-95-2	Phenol	50%	51%	1%			
95-57-8	2-Chlorophenol	98%	94%	4%			
106-46-7	1,4-Dichlorobenzene ,	105%	98%	7%			
621-64-7	N-Nitroso-di-n-propylamine ,	97%	B2%	5%			
120-82-1	1,2,4-Trichlorobehzene	104%	97%	7%			
59-50-7	4-Chloro-3-methylphenel	90%	85%	6 <b>%</b>			
83-32-8	Acenaphthene	116%	108%	7%			
121-14-2	2.4-Dinitrotoluans	90%	91%	1%			
100-02-7	4-Nitrophenol	35%	39%	11%			
87-86-5	Pentachlorophenol	89%	86%	4%			
129-00-0	Pyrene	110%	102%	8%			
					Flecovery	Recovery	
		Acid Surrogates:			LC961118	LCS041115	
		2-Fluorophenol			78%	83%	
•		Phenol-d8			58%	60%	
		2.4.6-Tribromophe	erral		105%	108%	
		Base / Neutral Su	rrogates:				
		1.2-Dichlarabenze	ne d-4	•	81%	80%	
		Nitrobenzene-d5			98%	103%	
		2-Fluorobiphony:			95%	96%	

none detected = nd



Client: Enron Transwestern Pipeline

Contact: Charlie Allen

Project San Juan Frac Tanks

### **Volatiles LCS** by EPA Method 8260

							Lab Numbe
	Analyte	Rosulte	Amount Spiked	Units	Recovery		
Analyzed	: 01/12/99		***************************************				LCS0112
CAS#							
75-35-4	1,1-Dichloroethane	19.5	20.0	ug/L	98%		
71-43-2	Benzens.,,,,,,,,,,	21.3	20.0	սց/Լ	106%		
79-01-6	Trichloroethene	20.9	20.0	ug/L	104%		
108-88-3	Toluene		20.0	ug/L	104%		
108-90-7	Chlorobenzene	20.8	20.0	ug/L	104%		
						Recovery	
	:	Surragate	38			LCS0112	
		1.2-Dichlor	oethane-d4			99%	
	•	Tolyene-d8	3			97%	
	•	4-Bromoflu	probenzene	ì		97%	

none detected = nd

urict. I - (505) 393-6161 D. Box 1980 ... bbs, NM 88241-1980 strict II - (505) 748-1283 1 S. First csia, NM 88210 trict III - (505) 334-6178 Rio Brazos Road .cc, NM 87410 urici 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

Submit Original Plus 1 Copy to appropriate

Form C-138

Originated 8/8/95

Environmental Bureau

FEB 1 1998 District Office

	Off Conservation Division
REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt:	4. Generator BURINGTON
Verbal Approval Received: Yes No 🗓	5. Originating Site Compressor
2. Management Facility Destination KEY EVERGY DISPOSA C	6. Transporter Cley
3. Address of Facility Operator Physical: CR 3500 #3(5 AZ+ec NM	8. State NM
7. Location of Material (Street Address or ULSTR) See LIST	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigne	ed for transport.
BRIEF DESCRIPTION OF MATERIAL:	
DRAINED WATER FROM COMPRESSOR OIL TA	OIL GONS DIV
Estimated Volume 50066/15 + cy Known Volume (to be entered by the o	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: MGR TITLE: MGR Waste Management FacilityAuthorized Agent	DATE: 2 = 12-99
TYPE OR PRINT NAME ! MICHAEL TALOUICM TE	LEPHONE NO. 565-334-6186
(This space for State Use)	
APPROVED BY: Deny 2, Keny TITLE: Geolo	913/ DATE: 2/12/99
APPROVED BY: Martine Fil- TITLE: Znu. 6	Decles is L DATE: 2 /19/99

### **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
Burlington Resources 3535 East 30 th Street Farmington NM 87401	Sunco Disposal
6. Originating Site (name):	Location of the Waste (Street address /or ULSTR):
All Compressor Stations	See Attached. Sampled under project CC-51816 (non-haz).
Unit:	Section: Township: Range:
. Source and Description of Waste:	
Drained water from oil tank.	
I, Jeff Schoenbacher	representative for:
Burlington Resources	do hereby certify that
according to the Resource Conservation and Recovery Act (R	
1988, regulatory determination, the above described waste is	(Check the appropriate classification)
- Lilling vaste	lfield waste which is non-hazardous by characteristic duct identification.
and that nothing has been added to the exempt or non-exempt i	non-hazardous waste defined above.
For NON-EXEMPT waste only the following documentation is	attached (chech appropriate items):
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	Other (description):
MSDS Information RCRA Hazardous Waste Analysis	

### 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
<b>15</b> .	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

### BURLINGTON RESOURCES

SAN JUAN DIVISION

February 9, 1999

Sunco Trucking P.O. Box 900 5651 U.S. Highway 64 Farmington, NM 87499

Attention: Mike Talovich, Manager

Re: Drained Water from Used Oil Tank Annual Non-Exempt Certification

Dear Mr. Talovich:

The purpose of this correspondence is to submit to your department the attached Certificate of Waste Status form for water generated from draining the used oil tank at the compressor stations. This waste stream was analyzed to comply with 40 CFR 262.11 waste determination requirements contained in the Resource Conservation and Recovery Act (RCRA). The parameters that were chosen for characterizing this waste stream was determined through "generators knowledge" defined under 40 CFR 262.11 (c)(2).) The analysis for this waste stream exhibits this waste as being a non-hazardous waste. As required, the analysis was sent to you November 17, 1998 and was identified as Sample Project CC-51816.

Should you have any questions concerning the content or need additional information please feel free to contact me at 505-326-9537. Thank you for your time and consideration.

Sincerel

Jeffery T. Schoenbacher

Environmental Representative

CC:

Bruce Gantner

Ed Hasely

Greg Kardos

Gaza Seabolt Ken Johnson

Correspondence

Compressor Files

JTS:

### BURLINGTON RESOURCES

SAN JUAN DIVISION November 11, 1998

Sunco Trucking P.O. Box 900 5651 U.S. Highway 64 Farmington, NM 87499

Attention: Mike Talovich, Manager

Re: Characterization of Drained Water from Used Oil Tank

Dear Mr. Talovich:

The purpose of this correspondence is to submit to your department the attached wastewater analysis for water generated from draining the used oil tank.

Per your request, I have enclosed the waste analysis (CC#51816) for your records and for submitting to OCD under the C-138 Non-Exempt Waste approval form. The main purpose for analyzing this particular waste streams was to comply with 40 CFR 262.11 waste determination requirements contained in the Resource Conservation and Recovery Act (RCRA). As a result, the water was analyzed for hazardous characteristics focusing on TCLP metals, TCLP VOA, TCLP Semi-VOA, and flash point. Upon evaluating the analysis for this waste, it appears the material does not exhibit the characteristics of a hazardous waste. The pH, herbicides, and pesticides were not analyzed since the liquid is wash-down water, which is not characteristically corrosive and herbicide/pesticide do not come in contact with this waste.

Regarding the generation rates, the material will be generated periodically at all the compressor units' (13) Burlington Resources currently operates. The plans for draining the waste oil tanks of water component would proceed by a company representative contacting Sunco when a waste oil shipment is warranted. The intention of removing the water component from the waste oil tank is a direct waste minimization practice to eliminate the oil/water from mixture Burlington Resources operations.

Should you have any questions concerning the content or need additional information please feel free to contact me at 505-326-9537. Thank you for your time and consideration.

Sincerely

leffery Ty Schoenbacher

**Environmental Representative** 

Enc.

Sample Project CC-51816

CC:

Bruce Gantner

Ed Hasely Greg Kardo

Gaza Scabolt

Ken Johnson

Correspondence

Compressor Files

JTS:

NOV 11'98

11:22 No.002 P.03

2606 W. Main Street Fermington, New Mezico 874Q1

# PRELIMINARY

### **VOLATILE ORGANIC TOXICITY CHARACTERISTIC LIST**

**TCLP** Leachate Method 8260

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID:

DW #11298

Laboratory ID: Sample Matrix: 0398G06445 Water/Oil Mix Date Reported:

11/10/98

Date Sampled: Date Received: 11/02/98

11/02/98

Date Analyzed:

11/09/98

Carrello-(K)				Sign.
Benzene	0.20	0.10	0.5	mg/L
2-Butanone (MEK)	ND	0.10	0.5	mg/L
Carbon tetrachloride	ND	0.10	100	mg/L
Chlorobenzene	ND	0.10	6.0	mg/L
Chloroform	ND	0,10	7.5	mg/L
1,2-Dichloroethane	ND	0.10	0.5	mg/L
1,1-Dichloroethene	ND	0.10	0.7	mg/L
1,4 Dichlorobenzene	ND	0.10	200	mg/L
Tetrachloroethene	ND	0.10	0.7	mg/L
Trichloroethene	ND	0.10	0,5	mg/L
Vinyi chloride	ND	0.10	0.2	mg/L

ND- Analyte not detected at stated detection level.

Reported By

Reviewed:

ID:505-326-9725

NOV 11'98

11:23 No.002 P.04

Farmington, New Mexico 87401

# PRELIMINARY

### SEMIVOLATILE ORGANICS /TCLP TCLP Leachate Method 8270

Client

**Burlington Resources** 

Project:

Oll Tank Water / Compressor Stations

Sample ID: Laboratory IO: DW # 11298

Sample Matrix:

0398G06445 Oil / Water Mix Date Reported:

11/10/98

Date Sampled:

11/02/98

Date Received:

11/02/98

Date Analyzed:

11/09/98

Car section				e e e e e e e e e e e e e e e e e e e
Cresol(Total)	ND	1.0	200.0	mg/L
2,4-Dinitrotoluene	ND	0.10	0.13	mg/L
Hexachlorobenzene	ND	0.10	0.13	mg/L
Hexachiorobutadiene	ND	0.20	0.5	mg/L
Hexachloroethane	ND	0.10	3.0	mg/L
Nitrobenzene	ND	Q.50	2.0	mg/L
Pentachlorophenol	ND	0.20	100	mg/L
Pyridine	ND	0.50	5.0	mg/L
2,4,5-Trichlorophenol	ND	0.50	400.0	mg/L
2,4,6-Trichlorophenoi	ND	0.50	<b>2</b> .0	mg/L

ND - Analyte not detected at stated detection level.

Reported By:

Reviewed:\_

NOV 11'98

11:24 No.002 P.05

Inter-Mountain Laboratories, Inc.

Farmington, New Mexico 07401

### TOXICITY CHARACTERISTIC LEACHING PROCEDURE PRELIMINARY TRACE METAL CONCENTRATION

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID:

DW #11298

Laboratory ID: Sample Matrix: 0398G06445

Oil / Water Mix

Date Reported:

11/10/98

Date Sampled:

11/02/98

Pate Received:

11/02/98

Date Analyzed:

11/10/98

Curavacas				
Arsenic	<0.061	0.061	8	mg/L
Barium	0.21	0.001	100	mg/L
Cadmium	<0.008	0.008	1	mg/L
Chromium	0.084	0.008	5	mg/L
Lead	<0.04	0.04	5	mg/L
Mercury	<0.0004	0.0004	0.2	mg/L
Selenium,	<0.05	0.05	1	mg/L
Silver	<0.03	0.03	5	ma/L

References:

Method 1311: Toxicity Characteristic Leaching Procedure,

SW-846 "Test Methods for Evaluating Solid Waste:

Physical/Chemical Methods" 3rd Edition, Final Update III, December, 1996.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-845 "Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods" 3rd Edition, Final Update III, December, 1998.

Comments:

Reviewed:

ID:505-326-9725

NOV 11'98

11:24 No.002 P.06

Inter-Mountain Laboratories, Inc.

2508 W. Muin Street Farmington, New Mexico 87401

### Flash Point

PRELIMINARY

Client:

F ...

**Burlington Resources** 

**Project**:

Oil Water Tank / Compressor Stations

Sample ID: Laboratory ID: DW #11298 0398G06445 Oil / Water Mix

Sample Matrix: Condition:

Intact

Date Reported:

11/10/98

Date Sampled: Date Received: 11/02/98

Date Analyzed:

11/02/98 11/05/98

Flash Point >140

### 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 D58.

Reviewed by:

2506 W. Main Street Farmington, New Mexico 87401

### **QUALITY CONTROL / QUALITY ASSURANCE**

2506 W. Main Street Farmington, New Mexico 87401

### **Quality Control / Quality Assurance**

# Volatile Organics by GC/MS Spike Analysis

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Oil Tank Water / Compressor Stations

Date Analyzed:

11/09/98

Sample Matrix:

Oil / Water Mix

Date Received:

11/02/98

**Concentration Units:** 

mg/L

				Accu	racy %
Analyte	Spike Amount	% Recovery 1	% Recovery 2	Var.	Limits
1,1-Dichoroethene	20ppb	114	120	5.6	20-234
Trichloroethene	20ppb	112	110	1.8	71-157
Benzene	20ppb	122	122	0.33	37-151
Toluene	20ppb	130	128	1.8	47-150
Chlorobenzene	20ppb	102	108	5.9	37-160

Reported by

Reviewed by

2506 W. Main Street Farmington, New Mexico 87401

### **Quality Control / Quality Assurance**

### Semivolatile Organics by GC/MS Spike Analysis

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample Matrix:

Oil / Water Mix

Concentration Units:

mg/L

Date Reported:

11/10/98

Date Analyzed:

11/09/98

Date Received:

11/02/98

				Accu	racy %
Analyte	Spike	%	_ %	Var.	Limits
	Amount	Recovery 1	Recovery 2		
Phenol	200 ppb	103	94.1	8.6	10-120
2-Chlorophenol	200 ppb	100	77.9	22	23-134
Acenaphthene	100 ppb	85.0	71.2	16	47-145
Pyrene	100 ppb	95.9	86.6	9.7	52-125

Reported by

Reviewed by

2506 W. Main Street Farmington, New Mexico 87401

### **Quality Control / Quality Assurance**

# Toxicity Characteristic Leaching Procedure Metals Spike Analysis

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Oil Tank Water / Compressor Stations

Date Analyzed:

11/09/98

Sample Matrix:

Oil / Water Mix

Date Received:

11/02/98

Concentration Units:

mg/L

Analyte	Spike Amount	% Recovery 1	% Recovery 2
Arsenic	4.0	93.3	94.1
Barium	4.0	74.6	77.9
Cadmium	4.0	85.8	71.2
Chromium	4.0	98.0	86.6
Lead	4.0	75.4	76.0
Mercury	N/A	N/A	N/A
Selenium	4.0	104.5	104.5
Silver	4.0	97.1	97.3

Comments:

Data not available.

Reported by

Reviewed by US

2506 W. Main Street Farmington, New Mexico 87401

### **Quality Control / Quality Assurance**

## Known Analysis FLASH POINT

Client: Project: **Burlington Resources** 

Oil Water Tank / Compressor Stations

Sample Matrix:

Oil / Water Mix

Date Reported:

11/10/98

Date Analyzed:

11/05/98

Date Received:

11/02/98

Parameter	Found Result	Known Result	
p-Xylene	77°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 D56.

Comments:

Reported by

Reviewed by\_



# CHAIN OF CUSTODY RECORD

Client/Project Name			Proje	Project Location									
The Contract		C. 1251.			तं	Stot11.12.	<u></u>	_	ANAL	ANALYSES / PARAMETERS	AMETER	S	
Sampler: (Signature)	-		Chain of Cus	Chain of Custody Tape No.		ļ.	<b>S</b>		97 3		Remarks	arks	
Sample No./ Identification	Date	Time	Lab Number		Matrix		No. of Container	10 C K	1257 1257	15 3/J			
86511 H. VIO	11/02/18	7.0 2.07		4)6.42	(3/	14.	<u> </u>	>	>	>		-	
/			-								LUE	715.A1V	·
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Relinquished by: (Signature)				Date	Time	Received by: (Signature)	y: (Signa	lture)				Date	Time
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Relinquished by: (Signature)				Date	Time	Received by: (Signature)	y: (Signa	iture)	· · ·		,	Date	Time
Relinquished by: (Signature)	:			Date	Time	Redeived by laboratory: (Signature	y labora	tory: (SIg	nature)	1 Cans		Date	Time // C 2: C
		,	Inter-Mounta	tain Laboratories, Inc.	ratorie	S. Inc.							
1633 Terra Avenue Sheridan, Wyoming 82801		1701 Phillips Circle Gillette, Wyoming 82718	<b>5</b> 85 <b>5</b>	[년] 2506 West Main Street Farmington, NM 87401		1160 Research Drive Bozeman, Montana 59718	irch Driv Jontana	e 59718	118   College	11183 State Hwy. 30 College Station, TX 77845	77845	<b>518</b> 18	9
Telephone (307) 672-8945		Telephone (307) 682-8945		Telephone (505) 326-4737		Telenhone (406) 586-8450	406) 58¢	3-8450	Tala	Telephone (409) 776-8945	3.804E		



# CHAIN OF CUSTODY RECORD

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	,	ļ	Inter-Mountain Laboratories, Inc.	in Labo	oratorie	is. Inc.		*					
1633 Terra Avenue Sheridan, Wyoming 82801 Telephone (307) 672-8945	Gilletta Teleph	1701 Phillips Circle Gillette, Wyoming 82718 Telephone (307) 682-8945	면 9 2506 \ 82718 Farmii 82-8945 Teleph	도 2506 West Main Street Farmington, NM 87401 Telephone (505) 326-4737	reet 7401 :6-4737	1160 Resegich Drive Bozeman, Montana 59718 Telephone (406) 586-8450	th Drive Intana 5 )6) 586-1	9718 8450	1118; Colle	11183 State Hwy 30 College Station, TX 7 Telephone (409) 776	11183 State Hwy. 30 College Station, TX 77845 Telephone (409) 776-8945	<u>છ</u>	<b>518</b> 16

strict I - (505) 393-6161 D. Box 1980 D. Box 1980 . 1 bbs, NM 882 11980 strict II - (505) 748-1283 1 S. First .csia, NM 88210 ·trict III - (505) 334-6178 7 Rio Brazos Road .cc, NM 87410

### New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

Submit Original Plus I Copy to appropriate District Office

Form C-138

Originated 8/8/95

FEB 1

strict IV - (505) 827-7131	Environmental Bureau
REQUEST FOR APPROVAL TO ACCEP	T SOLID WASTE
1. RCRA Exempt: Non-Exempt: X	4. Generator WFS
Verbal Approval Received: Yes No M	5. Originating Site MILAGEO Plant
2. Management Facility Destination Key DISPOSAL	6. Transporter
3. Address of Facility Operator Physical: CR3500 #345 Aztec NA	8. State
7. Location of Material (Street Address or ULSTR) Bloomfield, NM 874	113
9. <u>Circle One</u> :	
Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes must be accept non-exempt wastes wastes delivered are only those consignations.  All transporters must certify the wastes delivered are only those consignations.	tion of origin. No waste classified hazardous by
WASTE WATER FROM EVAPORATION PON	D at the NATURAL
Estimated Volume 1000+661s cy Known Volume (to be entered by the	FEB 1 2 1999 L  OIL CONDIV.  DISTO 3TCLP  operator at the end of the haul)————————————————————————————————————
SIGNATURE: Management FacilityAuthorized Agent TYPE OR PRINT NAME: MCHAEL TALOVICH  T	DATE: 2-10-99 ELEPHONE NO. 505-334-6186
(This space for State Use) APPROVED BY: Derry S. Zent TITLE: G-CO.	log 15) DATE: 2/12/99

TITLE: Env. Geologist

## **CERTIFICATE OF WASTE STATUS**

1. Generator Name and Address:	2. Destination Name:
Williams Field Services	
295 Chipeta WAY	SUNCO DISPOSAL
SALT LAKE CAY UT 84158	3 0,000 0 13 1/2
3. Originating Site (namé):	Location of the Waste (Street address &/or ULSTR):
MilAGRO PLANT	192 CR 4900
	Bloomfield, NM 87413
Attach list of originating sites as appropriate	
4. Source and Description of Waste  WAS TENATOR FROM EVAPONATION	n ponts
at naxinal GAS breechnen	HPANT
$\Omega$ : $I$	
1. Kick Wooten	representative for:
William Field Service	(milale Day)
	es (MILAMO PIANT) do hereby certify that, bry Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	
EXEMPT oilfield waste NON-EXEM analysis of	MPT oilfield waste which is non-hazardous by characteristic r by product identification
and that nothing has been added to the exempt or no	on-exempt non-hazardous waste defined above.
For NON-EXEMPT waste only the following documents of MSDS Information  MSDS Information  RCRA Hazardous Waste Analysis  Chain of Custody	mentation is attached (check appropriate items): Other (description):
Name (Original Signature):	· .
Title: Plant & Uterin known	· .
Date: 2-9-99	

# ENVIROTECH LABS PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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. Sendler

Environmental Scientist/Laboratory Manager

enclosure

SWS/sws

98065-02.lb1/wpd

## ENVIROTECH LABS PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

### SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sunco Disposal Project #: 98065-02 Sample ID: **Plant** 10-30-98 Date Reported: Lab ID#: E120 Date Sampled: 10-29-98 Soil Date Received: 10-29-98 Sample Matrix: 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 Mllagro Plant.

Analyst Maeter

rey W. Sende



# EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	,	(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.

Aben L. Gener

# ENVIROTECH LABS

# EPA METHOD 8040 PHENOLS

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 L. Cherry

Stacy W Sendler
Review



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

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.

Dew P. Que

Stacy W Sendler
Review



# EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

		Det.	Regulatory
Condition:	Cool & Intact	Analysis Needed:	TCLP metals
Preservative:	Cool	Date Extracted:	N/A
Sample Matrix:	Water	Date Analyzed:	11-12-98
Chain of Custody:	6371	Date Received:	10-29-98
Laboratory Number:	E120	Date Sampled:	10-29-98
Sample ID:	Plant	Date Reported:	11-13-98
Client:	Sunco Disposal	Project #:	98065-02

Parameter	Concentration (mg/L)	Limit (mg/L)	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.

Alexand, Comerce

Review

Stacy W Sendler



# QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

Oli a – tr	0.4/0.0	Design of the	N/A
Client:	QA/QC	Project #:	IN/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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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
	Triflerenetelerene	4000/

Trifluorotoluene Bromofluorobenzene 100% 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.

Analyst R. Gleeen

Stacy W Sendler
Review



# 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

		Detection	Regulatory
	Concentration	Limit	Limits
Parameter	(mg/L)	(mg/L)	(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 Bromofluorobenzene 99% 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.

Analyst Queen



# 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

<del></del>		Duplicate		
	Sample	Sample	Detection	
	Result	Result	Limits	Percent
Parameter	(mg/L)	(mg/L)	(mg/L)	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.

Allen A. Guar

Stacy W Sendler



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

Client: Sample ID: QA/QC Matrix Spike Project #:
Date Reported:
Date Sampled:

N/A 11-12-98

Laboratory Number:
Sample Matrix:
Analysis Requested:

E120 TCLP Extract

Date Received:
Date Analyzed:

N/A N/A 11-11-98

Condition:

TCLP N/A

Date Extracted: N/A

Stacy W Sendler

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.

police . Green

Review



# 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 Date Analyzed: 11-12-98 Preservative: N/A Condition: Analysis Requested: **TCLP** N/A

Analytical Results		Detection	Regulatory
-	Concentration	Limit	Limit
Parameter	(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
Pentachiorophenol	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.

Alexan R. Oglewen

Stacy W Sendler
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 P. Ogiceen



# EPA METHOD 8040 PHENOLS Quality Assurance Report

Analysis Requested:

Client: QA/QC Project #: N/A 11-12-98 **Matrix Duplicate** Date Reported: Sample ID: Date Sampled: N/A **Laboratory Number:** E120 **TCLP Extraction** N/A Date Received: Sample Matrix: Date Extracted: 11-04-98 Preservative: Cool 11-12-98 Condition: Cool & Intact Date Analyzed:

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%

**TCLP** 

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.

Den L. Ogicum Review Stacy W Sendler

# ENVIROTECH LABS PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics Quality Assurance Report

**QA/QC** Client: Project #: N/A Sample ID: Laboratory Blank Date Reported: 11-12-98 11-12-TBN-Blank Date Sampled: N/A **Laboratory Number:** Sample Matrix: Hexane Date Received: N/A N/A Preservative: N/A Date Extracted: Condition: 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
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# 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 Cylinse



# EPA Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	11-12-98
Laboratory Number:	11-04-BN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	11-04-98
Condition:	Cool and Intact	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



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	11-12-98
Laboratory Number:	E120	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	11-12-98
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)		Percent Difference	Det. Limit (mg/L)	
1 didiliotoi	(mg/2)	(mg/L)		(g.=/	
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	

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference

# 8090 Compounds

30%

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

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.

Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note:

Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments:

QA/QC for samples E120 and E147.

Allen L. Cyleen

# 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	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 Corrc. (mg/L-)	Spike	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%

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 E120 and E147.

Allen L. Cerenn

Stacy W Sendler
Review

  -	<u>8</u>	Cool - Ice/Blue Ice	15	(505) 632-0615				
1	200	Received Intact	/ay 64 xico 87401	5796 U.S. Highway 64 Farmington, New Mexico 87401				
A N NA								
ipt	Sample Receipt	San	HINC	<b>ENVIROTECH INC</b>				
			Received by: (Signature)	Received			ure)	Relinquished by: (Signature)
			Acceived by: (Signature)	Aeceived			ure)	Relinquished by: (Signature)
	1025.50		Mont Wast	10-7-57 1115 Necesived			A September 1	Heimquished by Signetare
Time			the (Cippotic)		_	)		
			10 1	water 11	Elao	1030	102997	FLAN+
			1	Sample Z Matrix	Lab Number	Sample Time	Sample Date	Sample No./ Identification
			tainer P	98065-02	980		3	MIRETACOUICA
ढ	Remarks		s		Client No.			Sampler:
		AMETERS	ANALYSIS / PARAMETERS	WFS MLLAGED Plant	Project Location WFS ML		3	Client / Project Name

# New Mexico Energy Minerals and Natural Resources Department VED Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

JAN 06 1999

Submit Original Plus 1 Copy to appropriate District Office

Form C-138

Originated 8/8/95

Environmental Bureau
Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: Non-Exempt: X	4. Generator WFS
Verbal Approval Received: Yes 🔲 No 🔀	5. Originating Site Lybrook Plant
2. Management Facility Destination KEYENERGYSERVICES DISPOSAL	6. Transporter Key ENERGY
3. Address of Facility Operator CR 3500 # 345 AZFCC, NM	8. State NM
7. Location of Material (Street Address or ULSTR) MM 103 H1 W44 44  CUBA NM 87013	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  Generator; one certificate per job.  All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those consigned	d for transport.
BRIEF DESCRIPTION OF MATERIAL:	
Plant waste water from NATURAL GA	s processing
DECEI	1998
	DIVo wait on 19
Estimated Volume 300 bbls cy Known Volume (to be entered by the op	
SIGNATURE: Michael Sacility Authorized Agent  Waste Management Facility Authorized Agent	DATE: 12-29-98
and the Tale	LEPHONE NO.
(This space for State Use)	
APPROVED BY: Deny ege found TITLE: GOO	9/5/ DATE: 1/4/99
APPROVED BY: Martyner & Title: Env. Go	Cologus + DATE: 1/7/99

# CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:	
WILLIAMS FIELD SERVICES CO	Key Energy	
295 CHIPETA WAY	10 ( 3.0.8%	
SALT LAKE CITY, UT 84168		
3. Originating Site (name):	Location of the Waste (Street address	&/or ULSTR);
WFS Lybrook Plant	Hilepost 103 Higheran 44	
Two y choices took	Rilepost 103 Higheray 44 Cuba NM 87013	Ţ
Attach list of originating sites as appropriate 4. Source and Description of Waste		
plant wasterviter from natural gas	, processing operations	
	2 vien	
	·	
1 , 5 .		
1. Ingrid Deklan	represe	ntative for:
(Print Name)		
Williams Feld Services	do h	ereby certify that,
(Print Name)	do hory Act (RCRA) and Environmental Protect	ereby certify that,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT	do hory Act (RCRA) and Environmental Protect	ereby certify that, ction Agency's July,
according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT	do hory Act (RCRA) and Environmental Protection waste is: (Check appropriate dessification)  MPT oilfield waste which is non-hazardour by product identification	ereby certify that, ction Agency's July, us by characteristic
(Print Name)  Williams Feld Sevices  according to the Resource Conservation and Recove 1988, regulatory determination, the above described  EXEMPT oilfield waste  NON-EXEMPT analysis of	do he have the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of the description of th	ereby certify that, ction Agency's July, is by characteristic above.

### QUAL LABORATORI IMC.

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

LABORATORY REPORT:

REFERENCE #:

9812755

SENT

WILLIAMS GAS PIPELINE

DATE REPORTED:

12/28/98

TO:

295 CHIPETA WAY

DATE COLLECTED:

12/21/98

SALT LAKE CITY, UT 84108

DATE RECEIVED:

12/22/98

DUAME ADAIR

801-584-6543 FAX 584-7760

P.O. #:

PROJECT: WASTEWATER POND

Sample ID: LYB-WW POND

Sample Matrix: WATER

Sample Date Collected: 12/21/98

TRAT	METHOD	RESULT	UNITS	DL	ANALYSED	DY
TCLP EXTRACTION	EPA 1311	DONE				RH
SILVER, TCLP	SW 846 6010	0.020	MG/L	0.01	12/28/98	MS2
ARSENIC, TCLP	SW 846 7060	0.003	MG/L	0.001	12/23/98	KS
BARIUM, TCLP	SW 846 6010	0.610	MG/L	0.005	12/28/98	MS2
CADMIUM, TCLP	SW 846 6010	<0.005	MG/L	0.005	12/28/98	MS2
CHROMIUM, TCLP	SW 846 6010	0.167	MG/L	0.01	12/28/98	MS2
MERCURY, TCLP	SW 846 7470	<0.0002	MG/L	0.0002	12/28/98	JM
LEAD, TLCP	SW 846 6010	<0.050	MG/L	0.05	12/28/98	NS2
SELENIUM, TCLP	SW 846 7740	0.0039	MG/L	0.002	12/23/98	

Sample ID: LYB-WW POND MS

Sample Date Collected: 12/21/98

Sample Matrix: WATER

Test	METHOD	result	UNITS	DL	ANALYSED	BY
TCLP EXTRACTION	EPA 1311	DONE			· · · · · · · · · · · · · · · · · · ·	RH
SILVER, TCLP	SW 846 6010	96.5	* REC		12/28/98	MS
ARSENIC, TCLP	SW 846 7060	104.7	% REC	*	12/23/98	MS
BARIUM, TCLP	SW 846 6010	118.9	* REC		12/28/98	
CADMIUM, TCLP	SW 846 6010	124.8	* REC		12/28/98	MS:
CHROMIUM, TCLP	SW 846 6010	99.9	* REC		12/28/98	
MERCURY, TCLP	SW 846 7470	101.4	% REC		12/28/98	JM
LEAD, TLCP	SW 846 6010	81.8	* REC		12/28/98	MS
SELENIUM, TCLP	SW 846 7740	92.0	* REC		12/23/98	

Sample ID: LYB-WW POND

Sample Matrix: WATER

Sample Date Collected: 12/21/98

TEST	METHOD	RESULT 1	units of	ANALYSED BY
TCLP EXTRACTION	EPA 1311	DONE		RH

REPERENCE #: 9812755 PAGE:

Sample ID: LYB-WW POND
Sample Date Collected: 12/21/98

Sample Matrix: WATER

Teat	METEOD	RESULT	unite	DL	ANALYSED	BY
TCLP SEMI-VOLATILES	SW 846 8270					
O-CRESOL		ND	MG/L	0.10		
P-CRESOL		ND	MG/L	0.10		
M-CRESOL		ND	NG/L	0.10		
1,4-DICHLOROBENZENE		ND	MG/L	0.10		
2,4-DINITROTOLUENE		ND	MG/L	0.10	12/23/98	SKW
HEXACHLOROBENZENE		ND	MG/L	0.10	12/23/98	sky
HEXACHLOROBUTADIENE		ND	MG/L	0.10	12/23/98	SKW
HEXACHLOROETHANE		ND	MG/L	0.10	12/23/98	SKW
NITROBENZENE		ND	MG/L	0.10	12/23/98	SKV
PENTACHLOROPHENOL		ND	MG/L	0.50	12/23/98	skv
PYRIDINE		DIA	MG/L	0.10	12/23/98	SKW
2,4,5-TRICHLOROPHENO	L	ND	MG/L	0.10	12/23/98	SKV
2,4,6-TRICHLOROPHENO		ND	MG/L	0.10	12/23/98	SKK
TCLP EXTRACTION	EPA 1311	DONE				RH
TCLP VOLATILES	SW 846 8260		,			
BENZENE		ND	MG/L	0.015	12/22/98	TK
CARBON TETRACHLORIDE		ND	MG/L	0.015	12/22/98	
CHLOROBENZENE		ND	MG/L	0.015	12/22/98	
CHLOROFORM		ND	MG/L	0.015		
1,2-DICHLOROETHANE		ND	MG/L	0.015	12/22/98	
1,1-DICHLOROETHYLENE		ND	NG/L	0.015		
METHYL ETHYL KETONE		ND	MG/L	0.015		
TETRACHLOROETHYLENE		ND	MG/L	0.015		
TRICHLOROETHYLENE	•	ND	MG/L	0.015	12/22/98	
VINYL CHLORIDE		ND	MG/L	0.015	12/22/98	

ND=NONE DETECTED DL=DETECTION LIMIT SU=STANDARD UNITS B-DETECTED IN METHOD BLANK

\*FAX COPY TO INGRID AT 801-584-7760 ALSO.

LABORATORY DIRECTOR

District I - (505) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First - . Artesia, NM 88210

Ti trict III - (505) 334-6178 Rio Brazos Road ~\_c, NM 87410 District IV - (505) 827-7131

New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131

RECEIVED

NOV 2 4 1998

Form C-138 Originated 8/8/95

> Submit Original Plus I Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOCID-WAS-FEDIT DIVISION
1. RCRA Exempt: Non-Exempt: X	4. Generator Bueling to
Verbal Approval Received: Yes No 💟	5. Originating Site Compressor STATIONS
2. Management Facility Destination KEY DISPOSAL	6. Transporter SUNCO
3. Address of Facility Operator Physical: #345 CR 3500 AZTEC N.M.	8. State NM
7. Location of Material (Street Address or ULSTR) SELLIST	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accepted.  B. All requests for approval to accept non-exempt wastes must be accepted.  PROVE the material is not-hazardous and the Generator's certification listing or testing will be approved.	ompanied by necessary chemical analysis to on of origin. No waste classified hazardous by
All transporters must certify the wastes delivered are only those consigne	u for transport.
BRIEF DESCRIPTION OF MATERIAL:	
DRAINED WATER FROM UNDER COMPLESSOR	DIC TANK OIL
OIL COM. DIV. DIST. 3	or Tank oil  or good will follow  men peculiar  when peculiar
Estimated Volume 40066/s cy Known Volume (to be entered by the op	perator at the end of the haul) ————————————————————————————————————
SIGNATURE: Masté Management FacilityAuthorized Agent TITLE: MGL	DATE: 11-12-98
TYPE OR PRINT NAME: MICHAEL TALOVICA TE	LEPHONE NO. <u>505-334-6186</u>
(This space for State Use)	
APPROVED BY: Deny S. Four TITLE: Geo!	05 15 DATE: 11/23/98
APPROVED BY: Martin Shi TITLE: Enu 6	/ .*

		FIMER
Generator Name and Address:	2. Destination Name:	
Burlington Resources	Sunco Disposal	MOV 1 9 1932 1
3535 East 30 th Street	Sunce Bispessi	⇔ 19:as Im
Farmingto NM 87401		L GOING THAT !
		L GOM. DIA.
		- 1010 @
Originating Site (name):	Location of the Waste (Stre	et address./or
	ULSTR):	•
All Compressor Stations	See Attached. Sampled under project CC-51816 (non	
	haz).	
Unit:	Section: Townshi	p: Range:
Source and Description of Waste:		
Drained water from oil tank.		
Jeff Schoenbacher		representative for:
Burlington Resources		do hereby certify that
according to the Resource Conservation and Recovery Act (RC	CRA) and Environmental Protection	on Agency's July,
1988, regulatory determination, the above described waste is:	·	
1700, regulatory determination, the doore described waste is.	,	
Ell Elli I dilliela waste	ïeld waste which is non-hazardous	by characteristic
analysis or by prod	uct identification.	
and that nothing has been added to the exempt or non-exempt no	on-hazardous waste defined above.	
For NON-EXEMPT waste only the following documentation is a	attached (chech annronriate items	١٠
To the total and the following documentation is	truened (eneen appropriate nems	, <b>.</b>
MSDS Information		
— /	Other (description):	
RCRA Hazardous Waste Analysis	Other (description):	
<del></del> /	Other (description):	
RCRA Hazardous Waste Analysis	Other (description):	
RCRA Hazardous Waste Analysis Chain of Custody	1	
RCRA Hazardous Waste Analysis Chain of Custody	1	
RCRA Hazardous Waste Analysis Chain of Custody  Same (Original Signature):	1	
RCRA Hazardous Waste Analysis Chain of Custody	1	

# 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
<b>15</b> .	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

# BURLINGTON RESOURCES

SAN JUAN DIVISION

November 17, 1998

Sunco Trucking P.O. Box 900 5651 U.S. Highway 64 Farmington, NM 87499

Attention: Mike Talovich, Manager

NOV 2 0 1998 U

OIL COM. DIV.

Re: Characterization of Drained Water from Used Oil Tank

Dear Mr. Talovich:

The purpose of this correspondence is to submit to your department the attached final 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). The parameters that were chosen for characterizing these waste streams were determined through "generators knowledge" defined under 40 CFR 262.11 (c)(2).) Upon evaluating the analysis for this waste stream it appears the water does <u>not</u> exhibit the characteristics of a hazardous waste.

Should you have any questions concerning the content or need additional information please feel free to contact me at 505-326-9537. Thank you for your time and consideration.

Sincerely

Jeffery T. Schoenbacher

Environmental Representative

Enc.

Sample Project CC-51816

CC:

Bruce Gantner

Ed Hasely

Greg Kardos Gaza Seabolt

Ken Johnson

Correspondence

Compressor Files

JTS:

Jeff Schoenbacher Burlington Resources 3535 E. 30th St. Farmington, NM 87402 November 10, 1998

Mr. Schoenbacher:

Enclosed, please find the reports for the sample received by our laboratory for analysis on November 2, 1998.

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

We appreciate your business!

Sharon Williams`

Organics Lab Supervisor

**Enclosure** 

xc: File

# **BURLINGTON RESOURCES**

# Case Narrative

On November 2, 1998, one sample was submitted to Inter-Mountain Laboratories - Farmington for rush analysis. The sample was identified by project "Oil Tank Water / Compressor Stations". The sample was analyzed for the parameters indicated on the accompanying Chain of Custody form # 51816.

Digestion of the extracted sample for metals was performed by "Acid Digestion of Aqueous Samples and Extracts for Total Metals", SW-846, Rev. 1, July 1992.

Trace metals was performed on the sample by "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods", SW-846, U.S.E.P.A., November, 1986.

Analysis for the Volatiles was performed by Method 8260A, Gas Chromatography/Mass Spectrometry for Volatile Organics, <u>Test Methods for Evaluating Solid Waste</u>, SW-846, U.S.E.P.A., September, 1994.

Semi-Volatile analysis was perfored by Method 8270, Gas Chromatography/Mass Spectrometry for Semi-Volatile Organics, <u>Test Methods for Evaluating Solid Wastes</u>, SW-846, U.S.E.P.A., November, 1990.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies.

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 at your convenience.

Sharon Williams

Organics Lab Supervisor

# **VOLATILE ORGANIC TOXICITY CHARACTERISTIC LIST**

# TCLP Leachate Method 8260

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID: Laboratory ID: DW #11298

0398G06445

Sample Matrix:

Water/Oil Mix

Date Reported: 11
Date Sampled: 11

11/10/98 11/02/98

Date Received:
Date Analyzed:

11/02/98 11/09/98

Parameter	Result	Reporting Limit	Hazardous Limit	Units
Benzene	0.20	. 0.10	0.5	mg/L
2-Butanone (MEK)	ND	0.10	0.5	mg/L
Carbon tetrachloride	ND	0.10	100	mg/L
Chlorobenzene	ND	0.10	6.0	mg/L
Chloroform	ND	0.10	7.5	mg/L
1,2-Dichloroethane	ND	0.10	0.5	mg/L
1,1-Dichloroethene	ND	0.10	0.7	mg/L
1,4 Dichlorobenzene	ND	0.10	200	mg/L
Tetrachloroethene	ND	0.10	0.7	mg/L
Trichloroethene	ND	0.10	0.5	mg/L
Vinyl chloride	ND	0.10	0.2	mg/L

ND- Analyte not detected at stated detection level.

Reported By

Reviewed:

# **SEMIVOLATILE ORGANICS /TCLP**

# TCLP Leachate Method 8270

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID:

DW # 11298

Laboratory ID:

0398G06445

Sample Matrix:

Oil / Water Mix

Date Reported:

11/10/98

Date Sampled:

11/02/98

Date Received:

11/02/98

Date Analyzed:

11/09/98

Parameter	Result	Reporting Limit	Hazardous Limits	Units
Cresol(Total)	ND /	1.0	200.0	mg/L
2,4-Dinitrotoluene	ND	0.10	0.13	mg/L
Hexachlorobenzene	ND	0.10	0.13	mg/L
Hexachlorobutadiene	ND	0.20	0.5	mg/L
Hexachloroethane	ND	0.10	3.0	mg/L
Nitrobenzene	ND	0.50	2.0	mg/L
Pentachlorophenol	ND	0.20	100	mg/L
Pyridine	ND	0.50	5.0	mg/L
2,4,5-Trichlorophenol	ND	0.50	400.0	mg/L
2,4,6-Trichlorophenol	ND	0.50	2.0	mg/L

ND - Analyte not detected at stated detection level.

Reported By:

Reviewed: 10

# TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL CONCENTRATION

Client:

**Burlington Resources** 

Project:

Oil Tank Water / Compressor Stations

Sample ID: Laboratory ID: Sample Matrix: DW #11298 0398G06445 Oil / Water Mix Date Reported:
Date Sampled:

11/10/98

Date Received:

11/02/98 11/02/98

Date Analyzed:

11/10/98

Parameter	Result	Detection Limit	Regulatory Level	Units
Arsenic	<0.061	0.061	5	mg/L
Barium	0.21	0.001	100	mg/L
Cadmium	<0.008	0.008	1	mg/L
Chromium	0.084	0.008	5	mg/L
Lead	<0.04	0.04	5	mg/L
Mercury	<0.0004	0.0004	0.2	mg/L
Selenium	<0.05	0.05	1	mg/L
Silver	<0.03	0.03	5	mg/L

References:

Method 1311: Toxicity Characteristic Leaching Procedure,

SW-846 "Test Methods for Evaluating Solid Waste:

Physical/Chemical Methods" 3rd Edition, Final Update III, December, 1996.

Method 3010A: Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846 "Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods" 3rd Edition, Final Update III, December, 1996.

Comments:

Reported By:

Reviewed:

11/10/98

11/02/98

11/02/98

11/05/98

Date Reported:

Date Sampled:

Date Received:

Date Analyzed:

# **Flash Point**

Client:

**Burlington Resources** 

Project:

Oil Water Tank / Compressor Stations

Sample ID:

DW #11298 0398G06445

Laboratory ID: Sample Matrix:

Oil / Water Mix

Condition:

Intact

Result	Units
• • • • • • • • • • • • • • • • • • • •	
>140	°F
	Result >140

## 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:



# **QUALITY CONTROL / QUALITY ASSURANCE**

# **Quality Control / Quality Assurance**

# Volatile Organics by GC/MS Spike Analysis

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Oil Tank Water / Compressor Stations

Date Analyzed:

11/09/98

Sample Matrix:

Oil / Water Mix

Date Received:

11/02/98

Concentration Units:

mg/L

-				Accui	гасу %
Analyte	Spike Amount	% Recovery 1	% Recovery 2	Var.	Limits
1,1-Dichoroethene	20ppb	114	120	5.6	20-234
Trichloroethene	20ppb	112	110	1.8	71-157
Benzene	20ppb	122	122	0.33	37-151
Toluene	20ppb	130	128	1.8	47-150
Chlorobenzene	20ppb	102	108	5.9	37-160

Reported by

Reviewed by 161

# **Quality Control / Quality Assurance**

# Semivolatile Organics by GC/MS Spike Analysis

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Oil Tank Water / Compressor Stations

Date Analyzed:

11/09/98

Sample Matrix:

Oil / Water Mix

Date Received:

11/02/98

Concentration Units:

mg/L

				Accui	acy %
Analyte	Spike	%	%	Var.	Limits
	Amount	Recovery 1	Recovery 2		
Phenol	200 ppb	103	94.1	8.6	10-120
2-Chlorophenol	200 ppb	100	77.9	22	23-134
Acenaphthene	100 ppb	85.0	71.2	16	47-145
Pyrene	100 ppb	95.9	86.6	9.7	52-125

Reported by

Reviewed by

# **Quality Control / Quality Assurance**

# **Toxicity Characteristic Leaching Procedure Metals Spike Analysis**

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Date Analyzed:

11/09/98

Sample Matrix:

Oil Tank Water / Compressor Stations

Oil / Water Mix

Date Received:

11/02/98

Concentration Units:

mg/L

Analyte	Spike	%	%	
	Amount	Recovery 1	Recovery 2	
Arsenic	4.0	93.3	94.1	
Barium	4.0	74.6	77.9	
Cadmium	4.0	85.8	71.2	
Chromium	4.0	98.0	86.6	
Lead	4.0	75.4	76.0	
Mercury	N/A	N/A	N/A	
Selenium	4.0	104.5	104.5	
Silver	4.0	97.1	97.3	

Comments:

Data not available.

Reviewed by

# **Quality Control / Quality Assurance**

**Known Analysis FLASH POINT** 

Client:

**Burlington Resources** 

Date Reported:

11/10/98

Project:

Oil Water Tank / Compressor Stations

Date Analyzed:

11/05/98

Sample Matrix:

Oil / Water Mix

Date Received:

11/02/98

Parameter	Found Result	Known Result
p-Xylene	77°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 D56.

Comments:

Reviewed by\_



# CHAIN OF CUSTODY RECORD

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# CHAIN OF CUSTODY RECORD

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