NM1 - 9

C-138 LAND FARM

Date: 2000

KEY ENERGY SERVICES

FOUR CORNERS DIVISION PIPEYARD/DISPOSAL

P O BOX 900 5651 US HWY 64 FARMINGTON, NEW MEXCIO 87499 OFFICE (505) 334-6416 FAX (505) 334-5413



	aut
DATE: <u>//- 2</u>	9-2000 TIME: 10:50 Am
ro:	COMPANY NMOCD
	FERSON MARLYNE Kieling
	PHONE FAX (505) 827-8177
FROM:	M. TALOUICH Key Disposal
MESSAGE:	Martyne, Please include this Info with the WFS MITAGRO Plont Analysis, previous pocumentation was nowe with incorrect method. If this Doesn't Fap good I can sens you plittle better copy. Mike
	TOTAL NUMBER OF PAGES

(INCLUDING COVER SHEET)



То:	Mike Talovich	From:	Mark J. Bareta
Fax:	334-5413	Pages	
Phone:	334-6186	Date:	November 29, 2000
Re:	Milagro Analysis	CC:	Denny Foust / OCD,/ 334-6170
□ Urge	nt 🛘 For Review	☐ Please Comment [☐ Please Reply ☐ Please Recycle

Comments:

Attached is an amended analytical report and cover letter from QWAL labs for the recent Milagro pond analysis. The report was amended by QWAL to correct the analytical method reported on the analytical sheet. Per the cover letter and a telephone conversation with Matthew Sheffield at QWAL, the report now correctly references the method used, and that total metals were analyzed. If you have any questions, please don't hesitate to call me at (505) 632-4634.

G.W.A.L. LABORATORIES, INC.

Nov 29, 2000

Mark Bareta Williams Field Services 187 CR4980 Bloomfield NM 87413

Dear Mark,

Thank you for you call today. As per you request I investigated the Chromium results for Sample ID: MIL-POND-C-01. All of the quality control was acceptable and the sample was analyzed at multiple dilutions with the same result. This sample was analyzed for total metals. They were analyzed utilizing the SW846 methods. The mercury was analyzed by SW846 7470, and the other metals were analyzed by SW846 6010. The samples were inadvertently reported referencing the incorrect methods. The report has been amended and is enclosed. Thank you for your business. If I can be of any further assitance or you have any questions, please call me at (316) 232-1970.

Sincerely,

Matthew Sheffield QWAL Laboratories, Inc.

P 2

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: REFERENCE #: 0011535 SENT WILLIAMS FIELD SERVICE DATE REPORTED: 11/29/00 TO: 295 CHIPETA WAY DATE COLLECTED: 11/17/00 SALT LAKE CITY, UTAH 84158 DATE RECEIVED: 11/21/00 MARK HARVEY P,Q. #: PROJECT: MILAGRO PONDS

Sample ID: MIL-POND-C-01

Sample Matrix: WATER

Collection Date: 11/17/00 05:05:00

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED EXTRACTED
METAL PREPARATION	EPA 3010	IL001121C			11/21/00ЈН
SILVER, TOTAL	SW 846 6010B	<0.01	MG/L	0.01	11/22/00RDC
ARSENIC, TOTAL	SW 845 6010B	0.12	MG/L	0.05	11/22/00RDC
BARIUM, TOTAL	SW 846 6010B	0.12	MG/L	0.005	11/22/00RDC
CADMIUM, TOTAL	SW 846 601.0B	0.019	MG/L	0.005	11/22/00RDC
CHROMIUM, TOTAL	SW 846 6010E	10.0	MG/L	0.01	11/22/00RDC
MERCURY, TOTAL	SW 845 7470	<0.0002	·	0.0002	11/22/00XM
LEAD, TOTAL	SW 845 5010B	0.10	MG/L	0.01	13./22/00RDC
SELENIUM, TOTAL	GW 84.5 5010E	0.29	MG/L	0.05	11/22/00RDC
REACTIVE CYANIDE	SW846 SEC7.3	<0.001	MG/L	0.001	11/22/00MS2
REACTIVE SULFIDE	SEC.7.3.4.1	<0.05		0.05	11/22/00MS2
HALOGENS, TOTAL ORGA	SW 845 9020	362.4	UG/L	5.0	11/22/00MB
TPH GRO	3015G/QA1	107	UG/L	50.0	11/21/00MB
BTEX	OA1/8021B			3.0	,
Benzene	71-43-2	ND	UG/L	. 1.0	11/21/00MB
TOLUENE	108-88-3	2.81		1.0	11/21/00MB
BTHYLBENZENE	100-41-4	ND		1.0	11/21/00MB
TOTAL XYLENES	1330-20-7	3. 1 6	UG/L	1.0	11/21/00MB
BFB (SURROGATE)	ent.	114	•	75	, ,

ND=NONE DETECTED PQL=PRACTICAL QUANTITATION LIMIT SUmSTANDARD UNITS *BACKGROUND CONTAMINATION SUR=SURROGATE Q=OUTSIDE LIMITS B=DETECTED IN METHOD BLANK

TERRY KOESTER

LABORATORY DIRECTOR

REPORT AMENDED TO REFERENCE APPROPRIATE METHODS FOR METALS M

ANALYSIS. MS2

REFERENCE #: .0011535 PAGE: 1

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

District IV - (505) 827-7131

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

partment RECEIVE

OCT 0 5 2000

Environmental Bureau Oil Conservation Division Form C-138 Originated 8/8/95

> Submit Origina Plus 1 Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT	SOLID WASTE
1. RCRA Exempt: Non-Exempt: M	4. Generator 17 Paso Field Service
Verbal Approval Received: Yes No X	5. Originating SiteChteo Plan +
2. Management Facility Destination (DISPORT)	6. Transporter Key
3. Address of Facility Operator #345 AZIEC Nm Cl 3500	8. State NM
7. Location of Material (Street Address or ULSTR) Sec 16, T26N, R 12W SHUM Co. N.M.	
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	of or transport.
Contact wisterner from Plant OCT 2000 History OLD CONTACT WITH	OCT 2000 M. CON. 37 DIST. 3
Estimated Volume At LEAST 2500bhls cy Known Volume (to be entered by the op	perator at the end of the haul) ————————————————————————————————————
SIGNATURE Maste Management Facility Authorized Agent Waste Management Facility Authorized Agent	DATE: 10-3-2000
	LEPHONE NO. <u>505-334-6/85</u>
(This space for State Use)	
APPROVED BY: Demy Jan TITLE: Geola	09/5/ DATE: 10/3/2000
APPROVED BY: Minty Thul TITLE: Environ	untel Geologist DATE: 10/5/00

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

District IV - (505) 827-7131

New Mexico Energy inerals and Natural Resources Oil Conservation Division 2040 South Pacheco Street

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

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: V	4. Generator A. Raso field Sorvice
Verbal Approval Received: Yes No 🔏	5. Originating Site Chitec Plan +
2. Management Facility Destination Key Disposal	6. Transporter Key
3. Address of Facility Operator #345 AZtec N/M C2 3500	8. State NM
7. Location of Material (Street Address or ULSTR) Set 16, TZ6N, K	(12W)
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes wing Generator; one certificate per job. All requests for approval to accept non-exempt wastes must prove the material is not-hazardous and the Generator's collisting or testing will be approved.	t be accompanied by necessary chemical analysis to
All transporters must certify the wastes delivered are only those of	consigned for transport.
CONTACT LUSTEWATER FROM Plant 123	And the second of the second o
OCT 2 PECE ONLOOP DIST	IVED 를
Estimated Volume At LEAST 2500bhls cy Known Volume (to be entered	by the operator at the end of the haul) ————————————————————————————————————
SIGNATURE: Masse Management Facility Authorized Agent	MO2 DATE: 10-3-2000
TYPE OR PRINT NAME: MICHAEL TACOVICAL	TELEPHONE NO. 505-334-6185
(This space for State Use)	
APPROVED BY: Denny four TITLE:	-colog/s/ DATE: 19/3/2000
APPROVED BY: TITLE:	DATE:

CERTIFICATE OF WASTE STATUS

Generator Name and Address:	2. Destination Name:
El Proofield Services	KEY ENERGY DISPOSAL
614 Reilly Avenue	The state of the s
FARMINETON N.M 87401	
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
chiec Plant	Sec. 16, TZEN, RIZW BAN JUNG CE. N.M.
Attach list of originating sites as appropriate	
Source and Description of Waste	
Contact intereliated from 2/4	かナ
; ;	
to the Resource Conservation and Recovery Act (Figure 1) determination, the above-described waste is: (Che	representative for: S CHACO PCANT do hereby certify that, according RCRA) and Environmental Protection Agency's July, 1998, regulatory ck appropriate classification) ON-EXEMPT oilfield waste which is non-hazardous by characteristic
a	nalysis 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 document	nentation is attached (check appropriate items):
MSDS Information	Other (description):
RCRA Hazardous Waste	Analysis
Chain of Custody	
11/1 / /	
Name (Original Signature): Wichwest & A	ance
Name (Original Signature): Muchicul & A Title: SERIIOR OPERATIONS SPECI	TUNIO



SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client:

EPFS

Project #:

705729

Sample ID:

2000 bbl Waste Water

Lab ID#:

H881

08-10-00

Date Reported: Date Sampled:

-08-09-00

Sample Matrix:

Water

Date Received:

08-09-00

Preservative:

Cool

Date Analyzed:

08-10-00

Condition:

Cool and Intact

Chain of Custody:

8108

Parameter

Result

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 4.58

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.

hristini my Walters



EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

		•	
Client:	EPFS	Project #:	705729
Sample ID:	2000 bbl Waste Water	Date Reported:	08-11-00
Laboratory Number:	H881	Date Sampled:	08-09-00
Chain of Custody:	8108	Date Received:	08-09-00
Sample Matrix:	<u>81</u> 08 Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-11-00
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)	0.0444	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.165	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.

Den L. Ofenne Analyst

Review Misting Walters



L. A METHOD 8040 PHENOLS

Client:	EPFS	Project #:	705729
Sample ID:	2000 bbl Waste Water	Date Reported:	08-11-00
- Laboratory-Number:	H881	Date Sampled:	08-09-00
Chain of Custody:	8108	Date Received:	08-09-00
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-11-00
Condition:	Cool & Intact	Analysis Requested:	TCLP

	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
Pentachiorophenol	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.

Δnalvst

Review Misteri M Watters



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

Client:	EPFS	Project #:	705729
Sample ID:	2000 bbl Waste Water	Date Reported:	08-11-00
Laboratory Number:	H881	Date Sampled:	08-09-00
Chain of Custody:	8108	Date Received:	08-09-00
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-11-00
, 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

97%

References:

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

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

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

Note:

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

Comments:

Chaco Plant.

Analyst L. Oyleven

Priotin M Walters



EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

Client:	EPFS	Project #:	705729
Sample ID:	2000 bbl Waste Water	Date Reported:	08-10-00
Laboratory Number:	H881	Date Sampled:	08-09-00
Chain of Custody:	8108	Date Received:	00-90-80
Sample Matrix:	Water	Date Analyzed:	08-10-00
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	0.130	0.001	5.0	
Barium	ND	0.001	100	
Cadmium	0.118	0.001	1.0	
Chromium	0.167	0.001	5.0	
Lead	0.190	0.001	5.0	
Mercury	ND	0.001	0.2	
Selenium	0.021	0.001	1.0	
Silver	0.007	0.001	5.0	

ND - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA,

December 1996.

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

Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission

SW-846, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Chaco Plant.

Analyst

Review Masters



QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-11-00
Laboratory Number:	08-11-TCV	Date Sampled:	N/A
Sample Matrix:	08-11-TCV Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-11-00
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.

Parameter	Percent Recovery
Trifluorotoluene	100%
Bromofluorobenzene	100%
	Trifluorotoluene 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:

QA/QC for sample H881.

Analyst P. Office

Review Misting Walters



Client: Sample ID: Laboratory Number: Sample Matrix: Analysis Requested:	QA/QC Matrix Duplicate H881 Water TCLP	Project #: Date Reported: Date Sampled: Date Received: Date Analyzed:	N/A 08-11-00 N/A N/A 08-11-00
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)	0.0444	0.0444	0.0001	0.0%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	0.165	0.165	0.0001	0.0%
1,2-Dichloroethane	ND	ND	0.0001	0.0%
Trichloroethene	ND	ND	0.0003	0.0%
Tetrachloroethene	ND	ND	0.0005	0.0%
Chlorobenzene	ND	ND	0.0003	0.0%
1,4-Dichlorobenzene	ND	ND	0.0002	0.0%

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample H881.

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:	08-11-00
Laboratory Number:	H881	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	08-11-00
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)	0.0444	0.050	0.0939	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	0.165	0.050	0.215	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	42-143

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample H881.

Analyst

Review Musters



EPA METHOD 8040 PHENOLS

Quality Assurance Report Laboratory Blank

Client:	QA/QC	Project #:	N/A
_ Sample ID:	Laboratory Blank	Date Reported:	08-11-00
Laboratory Number	08-11-TCA	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-11-00
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 H881.

Analyst L. Officer

Review Mristini M Watters



EPA METHOD 8040 PHENOLS Quality Assurance Report

- Client:	QA/QC	Project #:	·. N/A _
Sample ID:		Date Reported:	08-11-00
Laboratory Number:	08-11-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A
Condition:	Cool & Intact .	Date Analyzed:	08-11-00
		Analysis Requested:	TCLP

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

ND - Parameter not detected at the stated detection limit.

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

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

QA/QC for sample H881.

Den P. Officer

Review Mosters



EPA METHOD 8040 PHENOLS Quality Assurance Report

	Tr. 1997 1997 1997 1997 1997 1997 1997 199	'	
Client:	QA/QC	Project #:-	N/A
Sample ID:	Matrix Duplicate	Date Reported:	08-11-00
Laboratory Number:	H881	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Extracted:	N/A .
Condition:	Cool & Intact	Date Analyzed:	08-11-00
		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	NĎ	ND	0.020	0.0%

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8040 Compounds	30.0%

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

QA/QC for sample H881.

Analyst R. Oglecom

Review



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

·			
Client:	QA/QC	Project#:	N/A
Sample ID:	Laboratory Blank	Date Reported:	08-11-00
Laboratory Number:	08-11-TBN	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	08-11-00
		Analysis Requested:	TCLP

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

ND - Parameter not detected at the stated detection limit.

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

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

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

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

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

Comments: QA/QC for sample H881.

Analyst Ceferen

Priotini M Walters



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:	08-11-00
Laboratory Number:	08-11-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:	08-11-00
		Analysis Requested:	TCLP

Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)	!
ND	0.020	5.0	
ND	0.020	3.0	
ND	0.020	2.0	
ND	0.020	0.5	
ND	0.020	0.13	
ND	0.020	0.13	
	(mg/L) ND ND ND ND ND ND ND	Concentration (mg/L) Limit (mg/L) ND 0.020 ND 0.020	Concentration Limit (mg/L) Limit (mg/L) ND 0.020 5.0 ND 0.020 3.0 ND 0.020 2.0 ND 0.020 0.5 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:		SW-846, USEPA, July 1992.				
		ry Funnel Liquid-Liquid Extraction, S natics and Cyclic Ketones, SW-846,				
Note:	Regulatory Limits based	mits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.				

Comments:

QA/QC for sample H881.

Analyst Ceferen

Review Mustin My Walter



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:		08-11-00
Laboratory Number:	H881	Date Sampled:		N/A
Sample Matrix:	Water	Date Received:		N/A
Preservative:	N/A	Date Extracted:		N/A
Condition:	N/A ·	Date Analyzed:		08-11-00
		Analysis Requested:		TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	ND	ND	0.0%	0.020
Hexachloroethane	ND	ND	0.0%	0.020
Nitrobenzene	ND	ND	0.0%	0.020
Hexachlorobutadiene	ND	ND	0.0%	0.020
2,4-Dinitrotoluene	ND	ND	0.0%	0.020
HexachioroBenzene	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, SV	W-846, USEPA, July 1992.		
	Method 3510, Separat	ory Funnel Liquid-Liquid Extraction, SV	W-846, USEPA, July 1992.		
	Method 8090, Nitroard	matics and Cyclic Ketones, SW-846, L	JSEPA, Sept. 1986.		

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

Comments: QA/QC for sample H881.

Analyst L. afleren

Review Musters



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	Pate Reported:	08-10-00
Laboratory Number:	H881	Date Sam pled ;	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	08-10-00
Condition:	N/A	Date Extracted:	N/A

Blank & Duplicate	the second of th	Method	Detection		Duplicate		
Conc. (mg/L) Arsenic	Blank ND	∷ Blank ∶ ND	0.001	0.130	0.131	Diff. 0.8%	Range 0% - 30%
Barium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Cadmium	ND.	ND	0.001	0.118	0.117	0.8%	0% - 30%
Chromium	ND	ND	0.001	0.167	0.169	1.2%	0% - 30%
Lead	ND	ND	0.001	0.190	0.193	1.6%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	0.021	0.021	0.0%	0% - 30%
Silver	ND	ND	0.001	0.007	0.007	0.0%	0% - 30%

Spike Conc. (mg/L)	A A STATE OF THE S	Sample	Team The Children and the second	to the second of the first of the second of the second	Acceptance Range:
Arsenic	0.500	0.130	0.629	99.8%	80% - 120%
Barium	0.500	ND	0.499	99.8%	80% - 120%
Cadmium	0.500	0.118	0.616	99.7%	80% - 120%
Chromium	0.500	0.167	0.668	100.1%	80% - 120%
Lead	0.500	0.190	0.691	100.1%	80% - 120%
Mercury	0.050	ND	0.049	98.0%	80% - 120%
Selenium	0.500	0.021	0.520	99.8%	80% - 120%
Silver	0.500	0.007	0.506	99.8%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References:

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

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

SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission,

SW-846, USEPA, December 1996.

Comments:

QA/QC for sample H881.

Analyst

Review ... Misting Water

08108

Client / Project Name			Project Location	Ploit	ANALYSIS / PARAMETERS			ANALYSIS / PARAMETERS													
Sampler: HANZLIAN M. ?	Row.J		Client No.	057-29		Client No. 97057 - 29			No. of Containers		. of uiners		Y KA					Re	emarks	5	
Sample No./ Identification	Sample Date	Sample Time	Lab Number		Sample Matrix		Cont	F3				,									
2000 bliwatevate	\$ 9.00	11:00	14881	W	oter	,	5_														
Relinquished by: (Signatur Relinquished by: (Signatur	Brown	حب	,	Date 8.9.00	Time 11:50	Receive	L		2	Q	Le	<u>u</u>			Date	//:3					
Relinquished by: (Signatur	.e)					Песеіуе	d by: ((Signatu	re)												
				ENY					<u>S</u> .					Sample R	1	<u> </u>					
				5	796 U.S ngton, N	S. Highv	vay 6	64	ત્રું ક ું				Receive	ed Intact	Y	N	N/A				
,				, aiiiii		632-06		2	•				Cool - Ic	e/Blue Ice							

1625 N. French Dr., Hobbs, NM 88240
Statist II.
811 South Fast, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe. NM 87505

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505 orm Revised March 17, 1999

> Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT S	SOLID WASTE
1. RCRA Exempt: Non-Exempt: 💢	4. Generator Burling ton
Verbal Approval Received: Yes No	5. Originating Site See List
2. Management Facility Destination VEY DISPOSAL	6. Transporter KEY
3. Address of Facility Operator #345 CL 3500 AZteC. Nm	8. State NM 15 16 17 18 19 30
7. Location of Material (Street Address or ULSTR) SEE LIST	JAN 2001
9. Circle One:	E DECEIVED E
A. All requests for approval to accept oilfield exempt wastes will be accompanied by a one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary material is not-hazardous and the Generator's certification of origin. No waste class approved	essary chemical analysis to PRONE the
All transporters must certify the wastes delivered are only those consigned for transpo	rt.
BRIEF DESCRIPTION OF MATERIAL:	
Analytical Sample Analysis is Good For 2 years From Sample Date 11/23/99 Must Re Sample 4 Characterized 12/1/2001 Matyn 25-	JAN 2001 BOOM DIE ONLOSET S
Estimated Volume < 1000 bb/cs Known Volume (to be entered by the operation)	ator at the end of the haul)cy
SIGNATURE Maste Management Facility Authorized Agent TITLE: Management	DATE: 12-29-200
TYPE OR PRINT NAME: MICKIGEL TALOUICE TELEP	HONE NO. 305 -334-6186
(This are a Constitute)	
APPROVED BY: Denny Fear TITLE: Goolog	15T DATE: 1/2/00
	hal Goodey of DATE: 1/11/01

1625 N. French Dr., Hobbs, NM 88240
District B
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
Fistrict IV
2040 South Pacheco, Santa Fe, NM 87505

Energy Miners 3 and atura esource 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 APPROVAL TO ACCEPT S	SOLID WASTE
1. RCRA Exempt: Non-Exempt: Verbal Approval Received: Yes No	4. Generator Explination for See List
2. Management Facility Destination KEY DISPOSAL	6. Transporter KEY
3. Address of Facility Operator #345 CL 3500 AZHEC. NM	8. State NM -
7. Location of Material (Street Address or ULSTR) SEE LIST	
9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by new material is not-hazardous and the Generator's certification of origin. No waste class approved All transporters must certify the wastes delivered are only those consigned for transporters.	eessary chemical analysis to PROVE the sified hazardous by listing or testing will be
BRIEF DESCRIPTION OF MATERIAL: WASTRUSHED OFF COMPRESSOR CIL Hanks JAN 2001 OIL COM DIV OIL COM DIV OIL COM DIV	
Estimated Volume 1000 bbks Known Volume to be entered by the oper	ator at the end of the haul)cy
SIGNATURE Management Facility Authorized Agent TITLE: Mining	DATE: 12-29-200
TYPE OR PRINT NAME: MICKIGEL TALOURGE TELEF	PHONE NO. 305-334-6186
APPROVED BY: TITLE: TEE TITLE:	DATE: 1/2/00 DATE:

BURLINGTON RESOURCES

SAN JUAN DIVISION

December 27, 2000

Oil Conservation Division Attn: Martyne Keiling 2040 South Pacheco Street Santa Fe. New Mexico 87505

Re: Characterization of Drained Water from Used Oil Tank

Dear Ms. Keeling:

Attached is a 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 two years from the date of sample collection and analysis. 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 326-9537. Thank you for your time and consideration.

Sincerely,

Gregg Wurtz

Environmental Representative

Drogg Winty

Enc.

Certificate of Waste Status

Sample Project CC-59463

CC:

Bruce Gantner Greg Kardos Ken Johnson Correspondence Compressor Files Mike Talovichl

1. Generator Name and Address:	2. Destination Name:		
Burlington Resources 3535 East 30 th Street Farmington NM 87401	Key Energy Services		
The state of the s			
3. Originating Site (name):	Location of the Waste (Street address /or ULSTR):		
All Compressor Stations Unit:	See Attached.		
Unit.	Section: Township: Range:		
4. Source and Description of Waste:			
Drained water from oil tank.			
I, Gregg Wurtz	representative for:		
Burlington Resources	do hereby certify that,		
according to the Resource Conservation and Recovery Act (RC	RA) 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 analysis or by produ	eld waste which is non-hazardous by characteristic uct identification.		
and that nothing has been added to the exempt or non-exempt no	n-hazardous waste defined above.		
For NON-EXEMPT waste only the following documentation is at	ttached (chech appropriate items):		
MSDS Information RCRA Hazardous Waste Analysis Chain of Custody	Other (description):		
Name (Original Signature): Sugy Winty Title: Env. Representative			

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	7 W
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 8740

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.

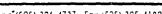
Sinceren

Sharon Williams

Organics Lab Supervisor

Enclosures

xc: file



326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

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.

Si der

c Williams Organic Analyst/Farmington

Inter-Mountain Laboratories, Inc.

ne (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

Parameter	Analytical Result	PQL	MCL	Units
TCLP Metals - EPA Method 1311	resuit			
Arsenic	<0.1	0.1	5.0	mg/L
Barium	. <0.5	0.5	100	mg/L
admium	< 0.01	0.01	1.0	mg/L
thromium	0.05	0.02	5.0	mg/L
ead	<0.1	0.1	5.0	mg/L
1ercury	<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:



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

Flash Point

2506 West Main Street, Farmington, NM 87401

Client:

Burlington Resources

Project:

Compressor Stations

Sample ID:

Water From Used Oil Tank

Laboratory ID:

0399W05762

Sample Matrix:

Liquid

Date Reported:

12/13/99

Date Sampled:

11/23/99

Date Received:

11/23/99

Date Analyzed:

12/07/99

Condition:

Intact

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 COXICITY CHARACTERISTIC LEACHING PROCEDURE 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: 0399W05762

Sample Matrix: Water

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

Date Analyzed: 12/01/99

Parameter	Analytical Result	Detection Limit	Regulatory Level	Units
Benzene	ND	0.05	0.5	ma/l
Carbon Tetrachloride	ND	0.05	0.5	mg/L 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.

Surregate Beautiens	9/	Limits
Surrogate Recovery	%	Limits
Dibromofluoromethane	97	86 - 118
Dichloroethane-d4	91	80 - 120
Toluene-d8	90	88 - 110
4-Bromofiuorobenzene	92	86 - 116

Reference: Test Methods for Evaluating Water, Wastewater and Solid Waste, SW-846, U.S.E.P.A., Volume 18. Revision 2, December 1996.

De lun des

Reviewed

2506 West Main Street, Farmington, NM 8740

QUALITY CONTROL / QUALITY ASSURANCE



one (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

Date Reported:

12/13/99

Project:

Compressor Stations

Date Analyzed:

2/03/99

Sample Matrix:

Liquid

Date Received:

11/23/99

Spike Analysis

		pine 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

S	P14	Detection	11-14-
Parameter	Result	Limit	Units
Arsenic	ND	0.1	mg/L
Barium [.]	ND	0.5	mg/L
Cadmium	ND	0.01	mg/L
Chromium	ND	0.02	mg/L
Lead	ND	0.1	mg/L
Mercury	ND	0.001	mg/L
Selenium	ND	0.1	mg/L
Silver	ND	0.05	mg/L

References:

Method 1311: Toxicity Characteristic Leaching Procedure,

SW-846, Rev. 0, July 1992.

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

Comments:

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

Reported by

Reviewed by_



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

Inter-Montain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Known Analysis TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

Burlington Resources

Date Reported:

12/13/99

Project:

Compressor Stations

Date Analyzed:

12/03/99

Sample Matrix:

Liquid

Date Received:

11/23/99

Known Analysis

Parameter	Found Result	Known	Percent	
r aranneter	Resuit	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:

Reported by

Reviewed by Why



Inter-Mountain Laboratories, Inc.

one (505) 326-4737 Fax (505) 325-4132

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
1,2-Dichloroethane	ND	0.01	0.5	mg/L
1,1-Dichloroethylene	ND	0.01	0.7	mg/L
Methyl Ethyl Ketone (2-Butanone)	ND	0.25	200	mg/L
Tetrachloroethylene	ND	0.01	0.7	mg/L
Trichloroethylene	ND	0.01	0.5	mg/L
Vinyl Chloride	ND	0.01	0.2	mg/L

ND - Compound not detected at stated Detection Limit.

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

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

TOXICITY CHARACTERISTIC LEACHING PROCEDURE 2506 West Main Street, Farmington, NM 11 (1) 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:

Date Extracted:

Date Analyzed:

12/02/99

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

ND - Compound not detected at stated Detection Limit.

	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) 325-4122 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	Spike	Spike	Spike
	Result	Added	Results	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.

inané (505) 326-4737 | Fax (505) 325-4132

2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Known Analysis **FLASH POINT**

Client:

Burlington Resources

Project:

Compressor Stations

Sample Matrix:

Liquid

Date Reported:

12/13/99

Date Analyzed:

12/07/99

Date Received:

11/23/99

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

Reference:

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

Annual Book of ASTM Standards, Method D93-80.

Comments:



CHAIN OF CUSTODY RECORD

Client/Project Name				oject Location		(7	7						
Builington Roscu	(ces:/0.	Tankle	xdec (cmpressa	c Static	3~2			ANAL	YSES	/ PAF	RAMET	ERS	
Sampler: (Signature)				Custody Tape	No.		<u> </u>		/;				Remarks	
Sample No./ Identification	Date	Time	Lab Numbe	r	Matrix		No. of Containers	TCLP Metals	JCLP Benzer	Flesh				
Water from Used O.I Tank	11/23		W0576Z	· Liqui	ال.		3	V					ML to me	,k.
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1-10													XX	
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, (ulshed by: (Signature)				Date	Time	Received b	y: (Sign	ature)) ·]	i	·		Date	Time
Hasay				11/23/99	12 Nach			3/1	11/6	6110		•.		
Relinquished by: (Signature)	Mar	Jun	<u>ت</u> · · ·	Date 11/03/99	Time (14/15)	Received b	y:/(Sign	ature)				-	Date	Time
Relinquished by (Signature)	-1-(-	 		Date	Time	Received b	y labora	atory: (S	ignature	١		:	Date	Time
							\$125 x)					,	1 bothey	14:10
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(T)						□ □						;		
1633 Terra Avenue Sheridan, Wyoming 8280 Telephone (307) 672-894	1701 01 Gillet	Phillips Circ te, Wyoming hone (307) 6	82718 Far	6 West Main St mington, NM 87 ephone (505) 32	7401	1160 Resea Bozeman, M Telephone (Montana	i 59718	111 Col	83 State lege Sta	ition, TX	77845		.53
relephone (307) 072-034			JOE 0040 1616	.p.10110 (303) 02										

District I 1625 N. French Dr., Hobbs, NM 88240 District II 9 811 South First, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resource 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

DECLIEST FOR ADDROVAL TO ACCEPT SOLID WASTE

REQUEST FUR APPROVAL TO ACCEPTS	SOLID WASTE
1. RCRA Exempt: Non-Exempt:	4. Generator WFS
Verbal Approval Received: Yes No	5. Originating Site El CED & O
2. Management Facility Destination Key DISPOSAL	6. Transporter Vey
3. Address of Facility Operator #345 CL 3500 AZHC NM	8. State UM
7. Location of Material (Street Address or ULSTR) Hwy 64 MM 100.5 Blanca NM 87412	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by ne material is not-hazardous and the Generator's certification of origin. No waste class approved	cessary chemical analysis to PROVE the
All transporters must certify the wastes delivered are only those consigned for transporters	ort.
BRIEF DESCRIPTION OF MATERIAL:	
WASH DOWN WATER FROM Processing AN	0 COMPRESSION
DEC 2000	AN 2001 DE LAN CENTRAL DE LAN CENTRAL DE LA CONTRAL DE LA
Estimated Volume 50-500 bb S Known Volume (to be entered by the open	rator at the end of the haul a cy
SIGNATURE Make Management Facility Authorized Agent TITLE:	DATE: /2-27-00
TYPE OR PRINT NAME: MICHAEL TALOVICH TELES	PHONE NO. <u>505 - 334-6186</u>
APPROVED BY: Muntan & Munitary Muly. TITLE: Environments	DATE: 1/11/01

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Biszos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resource 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 APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: Non-Exempt:	4. Generator WFS
Verbal Approval Received: Yes No	5. Originating Site EL CEDRO
2. Management Facility Destination KEY DISPOSAL	6. Transporter Wey
3. Address of Facility Operator #345 CR 3500 AZICC NM	8. State UM
7. Location of Material (Street Address or ULSTR) Huy 64 MM 100.5 Blanca NM 87412	
9. <u>Circle One</u> :	
A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by material is not-hazardous and the Generator's certification of origin. No waste clapproved	necessary chemical analysis to PROVE the
All transporters must certify the wastes delivered are only those consigned for trans	роп.
BRIEF DESCRIPTION OF MATERIAL:	
DEC 2000 DEC	
ELECTION & STATE OF S	
	erator at the end of the hau!cy
Estimated Volume 50-500 bblys Known Volume (to be entered by the op SIGNATURE Waste Management Facility Authorized Agent TITLE: MGR.	DATE: /2-27-00
Estimated Volume 50-50 0 bblys Known Volume (to be entered by the op	DATE: /2-27-00
SIGNATURE Maste Management Facility Authorized Agent TYPE OR PRINT NAME: MICHAEL TALOUICH TEL	DATE: /2-27-00
Estimated Volume 50-500 bbys Known Volume (to be entered by the op SIGNATURE Waste Management Facility Authorized Agent TITLE: MGR.	DATE: <u>/2-27-00</u> EPHONE NO. <u>505-334-6/86</u>

Hobbs, NM 88240 <u>District 11</u> - (505) 748-1283 811 S. First -

Artesia, NM 88210

District III - (505) 334-6178

1000 Rio Brazos Road

Aztec, NM 87410

District IV - (505) 827-7131

2040 S. Pacheco Santa Fe, NM 87505

Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131 Submit to OCD Permitted Surface Waste Management Facility

3/15-00

GENERATOR CERTIFICATE OF WASTE STATUS

1. Waste Generator Name and Address: WILLIAMS FIELD SERVICES 187 CR # 4980	2.Permit Number (if waste generated at an OCD permitted facility)
BLOOMFIELD, NM 87413	
3. Description of Waste and Generating Process:	4. Location of Waste (Street address &/or ULSTR):
NATURAL GAS PROCESSING AND COMPRESSION	HWY 64, MILE MARKER 100.5
WASH DOWN WATER CONTAINING DIMINIMUS QUANTITES OF OIL AND GLYCOL	BLANCO, NM 87412
40.110 V/ 53 01 010 1140 00 (CDC	
5. Destination (Surface Waste Management Facility):	6. Transporter: VARIOUS, TO BE DETERMINED
key duposal	
7. Estimated Volume cy/bbls 50-500 BBLS/MO	
For NON-EXEMPT waste only, the following documentation is	s attached (check appropriate items):
MSDS Information	RCRA Hazardous Waste Analysis (With Chain of Custody).
Other (Description)	-
Generator certifies that, according to the Resource Conservat Agency's July 1988 regulatory determination, the above descr	tion and Recovery Act (RCRA) and the Environmental Protection ribed waste is: (check appropriate classification)
EXEMPT oilfield waste.	NON-EXEMPT oilfield waste that is non-hazardous pursuant to 40 CFR Part 261. (Attach appropriate documentation)
n addition, Generator certifies that nothing has been added to vaste does not contain Naturally Occurring Radioactive Mater Subpart 1403.	o this exempt or non-exempt non-hazardous waste and that this rial (NORM) regulated pursuant to 20 NMAC 3.1
Generator Signature: MA Long Bedauf	FOF WILLIAMS Date: 12-20-00
Print Name: MARK HARVEY FOR WFS	
Title: PROTECT COORDINATOR	·
-	

12/21/00

12/14/00

QWAL LABORATORIES, INC.

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

LABORATORY REPORT:

REFERENCE #: 0012382

DATE COLLECTED: 12/12/00

DATE REPORTED:

DATE RECEIVED:

SENT WILLIAMS GAS PIPELINE

187 COUNTY ROAD # 4980

BLOOMFIELD, NM 87413

JIM STRUHS

PROJECT: ELCEDRO WASTE WATER

Reference Fraction:0012382-01A

Sample ID: EL CEDRO-N-WW TANK

Sample Matrix: WATER Sample Date Collected: 12/12/0012:40:00

TEST	METHOD	RESULT	UNITS	PQI	, .	ANALYZED	B¥
РH	EPA 150.1	7.2	su			12/14/00	SLI
REACTIVITY	SW 846SEE	ATTAC	HED REPOR	i ii		12/20/00	KW
METAL PREPARATION	EPA 3050I	S001215A		•		12/15/00	RDO
SILVER, TOTAL	SW 846 60	10B <0.25	MG/L		0.25	12/15/00	RDO
ARSENIC, TOTAL	SW 846 60	10B <0.25	MG/L		0.25	12/15/00	RD(
BARIUM, TOTAL	SW 846 60	10B 1.75	MG/L	1	0.125	12/15/00	RDO
CADMIUM, TOTAL	SW 846 601	10B 0.48	MG/L	<i>:</i> .	0.125		
CHROMIUM, TOTAL	SW 846 60		MG/L	٠.	0.25	12/15/00	
MERCURY, TOTAL	SW 846 74	70 0.0605	MG/L	: 0	.0002		
LEAD, TOTAL	SW 846 60:	10B 1.75	MG/L	٠.	0.25		
SELENIUM, TOTAL	SW 846 60	10B 0.25	MG/L	• :		12/15/00	
SAMPLE RECEIVED EMPT	N/A **	***	N/A		7.7		
TPH GRO	8015G/OA1		UG/L		5000	12/14/00	KKI
BTEX	OA1/8021B		,	•	3.0	,,	
BENZENE	•	665	UG/L		100	12/14/00	KKI
TOLUENE		6940	UG/L		100	12/14/00	
ETHYLBENZENE		906	UG/L		100	12/14/00	
TOTAL XYLENES		9850	UG/L		100	12/14/00	
BFB (SURROGATE)		103	125		75	,,	

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

APPROVED BY:

TEKRY KOBSTER

RATORY DIRECTOR

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

LABORATORY REPORT:

REFERENCE #: 0012382

DATE REPORTED:

SENT WILLIAMS GAS PIPELINE
TO: 187 COUNTY ROAD # 4980

BLOOMFIELD, NM 87413

JIM STRUHS

PROJECT: ELCEDRO WASTE WATER

Reference Fraction: 0012382-02A Sample ID: EL CEDRO-S-WW TANK

Sample Date Collected: 12/12/0012:05:00

DATE RECEIVED: 12/14/00

DATE COLLECTED: 12/12/00

12/21/00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
PH	EPA 150.1	8.6	SU	,	12/14/00	SLR
REACTIVITY	SW 846SEE	ATTAC	HED REPOR		12/20/00	KW
METAL PREPARATION	EPA 3010	IL001214			12/14/00	JН
SILVER, TOTAL	SW 846 60	10B < 0.01	MG/L	0.0	1 12/15/00	RDC
ARSENIC, TOTAL	SW 846 60	10B ; 0.10	MG/L	,0.0	1 12/15/00	RDC
BARIUM, TOTAL	SW 846 60	10B 0.028	MG/L	0.00	5 12/15/00	RDC
CADMIUM, TOTAL	SW 846 60	10B 0.02	MG/L	0.00	5 12/15/00	RDC
CHROMIUM, TOTAL	SW 846 60	10B 4.49	MG/L	0.0	1 12/15/00	RDC
MERCURY, TOTAL	SW 846 74	70 0.0002	MG/L	0.000	2 12/15/00	XM
LEAD, TOTAL	SW 846 60	10B 0.05	MG/L	0.0	1 12/15/00	RDC
SELENIUM, TOTAL	SW 846 60	10B 0.31	MG/L		1 12/15/00	
TOTAL CHLORINE/HALOG	SW 846 90	20M 65.4	MG/KG		0 12/21/00	
TPH GRO	8015G/OA1	2170	UG/L		0 12/14/00	
BTEX	OA1/8021B			3,	0	
BENZENE	·	45. 1	UG/L	1	0 12/14/00	KKL
TOLUENE		79. 7	UG/L		0 12/14/00	
ETHYLBENZENE		9.16	UG/I		0 12/14/00	
TOTAL XYLENES		74.7	UG/L		0 12/14/00	
BFB (SURROGATE)		103	125		'5	-

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

APPROVED BY:

ÆERRÝ KOESTER LABORATORY DIRECTOR

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

LABORATORY REPORT:	REFERENCE #: 0012382-01
SENT: WILLIAMS TO: 187 CR. 4980 BLOOMFIELD NM 87413 ATTN: JIM STRUHS	DATE REPORTED: 12/19/00 DATE COLLECTED: 12/12/00 DATE RECEIVED: 12/14/00
SAMPLE ID: EL CEDRO-N-WW TANK SAMPLE MATRIX: LIQUID	
REACTIVITY EPA SW846 VOLUME 1C	THAPTER SEVEN SECTION 3
	YES NO
1. DID SAMPLE EXPLODE AT ROOM TEN	PERATURE? X
2. DID SAMPLE REACT WITH DISTILLED	WATER? X
3. IS SAMPLE FORBIDDEN EXPLOSIVE W	ITH DOT?
4. DID SAMPLE REACT WITH STRONG BA	ASE? X
5. DID SAMPLE REACT WITH STRONG A	CID?
6. CONCENTRATION OF REACTIVE SULF	TDE (EPA 9030) <1.0 MG/KG
7. CONCENTRATION OF REACTIVE CYA	VIDE (EPA 9012) <0.001 MG/KG
APPROVE	D BY: TERRY KOESTER LABORATORY DIRECTOR

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

LABORATORY REPORT:	REFERENCE #: 0012382-02
SENT: WILLIAMS TO: 187 CR. 4980 BLOOMFIELD NM 87413	DATE REPORTED: 12/19/00 DATE COLLECTED: 12/12/00 DATE RECEIVED: 12/14/00
ATTN: JIM STRUHS	
SAMPLE ID: EL CEDRO-S-WW TANK SAMPLE MATRIX: LIQUID	
REACTIVITY EPA SW846 VOLUME IC CHAPTER S	SEVEN SECTION 3
	YES NO
1. DID SAMPLE EXPLODE AT ROOM TEMPERATURE	E7 : X
2. DID SAMPLE REACT WITH DISTILLED WATER?	x
3. IS SAMPLE FOREIDDEN EXPLOSIVE WITH DOT?	\mathbf{x}
4. DID SAMPLE REACT WITH STRONG BASE?	x
5. DID SAMPLE REACT WITH STRONG ACID?	·. · · · · · · · · · · · · · · · · · ·
6. CONCENTRATION OF REACTIVE SULFIDE (EPA 9	<1.0 MG/KG
7. CONCENTRATION OF REACTIVE CYANIDE (EPA	9012) <0.001 MG/KG
APPROVED BY:TERR LABO	XY KOESTER OKATORY DIRECTOR

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

LABORATORY REPORT:

REFERENCE #:

DATE REPORTED:

DATE RECEIVED:

0012429

12/21/00

12/16/00

TERRY KOESTER

LABORATORY DIRECTOR

WILLIAMS GAS PIPELINE SENT

187 COUNTY ROAD # 4980 TO:

BLOOMFIELD, NM 87413

JIM STRUHS

PROJECT: TAA PITS/EL CEDRO WW

DATE COLLECTED: 12/14/00

Reference Fraction: 0012429-01A Sample ID: EL CEDRO-N-WW TANK

Sample Matrix: WATER Sample Date Collected: 12/14/0012:47:00

ANALYZED BY UNITS PQL TEST METHOD RESULT TOTAL CHLORINE/HALOG SW 846 9020M 257.7 MG/KG 5.0 12/21/00 MS2

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

APPROVED BY:

1625 N. French Dr., Hobbs, NM 88240

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

Energy

s and a

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505

esources

Form C-138 Revised March 17, 1999

> Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

ALQUEST TOKAT HOVAL TO ACCEST	NOME WILL
1. RCRA Exempt: Non-Exempt: X	4. Generator Halliburton
Verbal Approval Received: Yes X No	5. Originating Site YALD
2. Management Facility Destination KEY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #345 CR3500 AZEC N	8. State NM
7. Location of Material (Street Address or ULSTR) 409 E. MINST.	
9. Circle One:	
A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by no material is not-hazardous and the Generator's certification of origin. No waste cla approved	ecessary chemical analysis to PROVE the ssified hazardous by listing or testing will be
All transporters must certify the wastes delivered are only those consigned for transp	ort.
BRIEF DESCRIPTION OF MATERIAL:	
NEUTRALIZED HCL Solution DEC RECTOR	JAN 2001 RECEIVED OLCON. DIV DIST. S 2000
Estimated Volume 4 5006613cy Known Volume (to be entered by the ope	rator at the end of the haul)cy
SIGNATURE Waste Management Facility Authorized Agent TITLE: MG/	DATE: <u>/2 - 2/-00</u>
TYPE OR PRINT NAME: MICHAEL TALOUICK TELE	PHONE NO. 505-334-6186
(This space for State Use)	
APPROVED BY: Deny 12, teny TITLE: Geola	DATE: 12/21/00
APPROVED BY: Manhon Johny' TITLE: Environ	ms to / Geologo LDATE: 1-/11/01

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 Resour 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

RECUIEST FOR APPROVAL TO ACCEPT SOLID WASTE

AVOIT I TON ATTROVA	L IU ACCEPT SOLID WASTE
1. RCRA Exempt: Non-Exempt: 💢	4. Generator Halliburto.
Verbal Approval Received: Yes X No	5. Originating Site YALD
2. Management Facility Destination KEY DISPOSAL	6. Transporter Key
3. Address of Facility Operator #345 CR3500 AZ	ec N ~ 8. State NM
7. Location of Material (Street Address or ULSTR) 409 E.	MHRST.
9. Circle One:	
one certificate per job. B. All requests for approval to accept non-exempt wastes mu	will be accompanied by a certification of waste from the Generator; st be accompanied by necessary chemical analysis to PROVE the of origin. No waste classified hazardous by listing or testing will be
All transporters must certify the wastes delivered are only the	ose consigned for transport.
BRIEF DESCRIPTION OF MATERIAL:	
	DEC 2000 RECEIVED OIL COM. DIV DIST. 3
Estimated Volume 4 500661scy Known Volume (to be entered by the operator at the end of the haul)cy
SIGNATURE Waste Management Facility Authorized Agent	TITLE: MGL DATE: 12-21-00
TYPE OR PRINT NAME: MICHAEL TALOUT	TELEPHONE NO. 505-334-6186
(This space for State Use)	
APPROVED BY: Deny G. Teens	TITLE: <u>Geologist</u> DATE: 12/21/00
APPROVED BY:	TITLE: DATE:



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE 1000 RIO BRAZOS ROAD AZTEC, NEW MEXICO 87410 [506] 334-6178 Fax (506)334-6170

GARY E. JOHNSON GOVERNOR

JENNIFER A. SALISBURY CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

	•
1. Generator Name and Address:	2. Destination Name:
Hall, buton Evergy Services	Key Energy Services
4100 i Hain Sheeth	328 5009 3200
Farmington INM 37401	Aztec, NM 87410
3. Originating Site (name):	Location of the Waste (Street address &/or ULSTR):
Hall burton Energy services	
4109 E. Main Street	
Formington, MM 87401	
Attach list of originating sites as appropriate	
4. Source and Description of Waste	
Ph adjusted Hydrochlaric Bring Solution. DH & S.	Acid Solution Kesulting in
Bring Solution DH & S.	2
The world with the service of the se	
0	
1/2 Harris	
(Print Nameh	representative for:
	SUSCHILLS do hereby certify that,
according to the Resource Conservation and Recover	ry Act (RCRA) and Environmental Protection Agency's July,
1988, regulatory determination, the above described	waste is: (Check appropriate classification)
EXEMPT oilfield waste NON-EXEM	APT oilfield waste which is non-hazardous by characteristic
analysis of	MPT oilfield waste which is non-hazardous by characteristic 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 the following documents	ation is attached (check appropriate items):
MSDS Information	Other (description):
RCRA Hazardous Waste Analysis	
Chain of Custody	
This waste is in compliance with Regulated Levels of	Naturally Occurring Radioactive Material (NORM) pursuant
to 20 NMAC 3.1 subpart 1403.C and D.	
1	
Name (Original Signatural)	Hm
Name (Original Signature): ACHUE ALL	
Title: <u>HSE aduson</u>	
	·
Date: 12/09/00	

PAGE 1

MATERIAL SAFETY DATA SHEET HALLIBURTON ENERGY SERVICES DUNCAN, OKLAHOMA 73536

DATE: 12-09-00 REVISED DATE 04-07-99

EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359 EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359

CHEMICAL CODE: WATER - BRINE SOLUTION - BULK PART NUMBER: NIS1312 0

PKG QTY: CARGO TANK APPLICATION: FLUSH

SERVICE USED: ALL

COMPONENT+ + + + + + + + + + PERCENT TLV PEL

SODIUM CHLORIDE 1-10 % 10 MG/M3 15 MG/M3 * * * * * * * * * * * * * SECTION II! - PHYSICAL DATA * * * * * * * * * * * * * *

> PROPERTY MEASUREMENT

CLEAR LIQUID APPEARANCE

ODORLESS SPECIFIC GRAVITY (H20=1)

1.165 BULK DENSITY 9.70 LB/GAL

5.2 FOR SAT SOL

SOLUBILITY IN WATER AT

20 DEG C. GMS/100ML H20 MISCIBLE

BIODEGRADABILITY N/D PERCENT VOLATILES

EVAPORATION RATE(BUTYL ACETATE=1) N/D VAPOR DENSITY

VAPOR PRESSURE (MMHG) N/D BOILING POINT (760 MMHG) N/D

POUR POINT N/D FREEZE POINT N/D

SOLUBILITY IN SEAWATER NOT EVALUATED PARTITION COEF (OCTANOL IN WATER) NOT EVALUATED

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

NFPA(704) RATING:

HEALTH FLAMMABILITY REACTIVITY SPECIAL NONE

FLASH POINT NONE

FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER ND UP UPPER

EXTINGUISHING MEDIA:

USE MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.

SPECIAL FIRE FIGHTING PROCEDURES:

NOT APPLICABLE.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NOT APPLICABLE.

CALIFORNIA PROPOSITION 65:

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

PAGE 2 PN: NIS1312 0

```
PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
                  "NTP, IARC, OSHA, OR, ACIGH".
ACCORDING TO :
PRODUCT TOXICITY DATA: IRR SKN-RBT 50 MG/24H MLD
                       IRR EYE-RBT 100 MG/34H SEV
                       TOX ORL-HMN TDLO: 12357 MG/KG/23D-C
                           ORL-RAT LD50: 3000 MG/KG
                       TOX
               - AQU
                           TLM96:0VER 1000 PPM
PRODUCT TLV: NOT ESTABLISHED
------ EFFECTS OF EXPOSURE
ROUTES OF EXPOSURE:
   EYE OR SKIN CONTACT, INHALATION.
EYE:
  DUST OR MIST MAY CAUSE IRRITATION.
SKIN:
  CONTACT MAY CAUSE SKIN IRRITATION.
INHALATION:
  DUST OR MIST MAY CAUSE IRRITATION.
INGESTION:
  NO DATA AVAILABLE
CHRONIC EFFECTS:
  NO CHRONIC EFFECTS EXPECTED.
OTHER SYMPTOMS AFFECTED:
   A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENED BY
   EXPOSURE TO THIS PRODUCT.
----- EMERGENCY AND FIRST AID PROCEDURES ------
EYE:
   IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
   IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.
SKIN:
  PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.
   IF IRRITAION DEVELOPS, SEEK PROMPT MEDICAL ATTENTION.
INHALATION:
  REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,
INGESTION:
  DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
  QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.
* * * * * * * * * * * * * * SECTION VI - REACTIVITY DATA * * * * * * * * * * * * * * *
STABILITY: STABLE
CONDITIONS TO AVOID:
  NOT APPLICABLE.
INCOMPATIBILITY (MATERIALS TO AVOID):
  NONE KNOWN.
HAZARDOUS DECOMPOSITION PRODUCTS:
  NONE KNOWN.
HAZARD POLYMERIZATION: WON'T OCCUR
CONDITIONS TO AVOID:
  NOT APPLICABLE.
* * * * * * * * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * * * * * * *
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
  USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AND STOP LEAK WHERE SAFE. CONTAIN
  AND ABSORB SPILL WITH AN INERT MATERIAL. SCOOP UP AND REMOVE.
```

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT ABSORBED MATERIAL TO

WASTE DISPOSAL METHOD:

PN: NIS1312 0

SANITARY LANDFILL.

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

PAGE

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

PAGE 1

District I 1625 N. French Dr., Hobbs, NM 88240

nh i irst, Artesia, NM 88210 φII District IV 2040 South Pacheco, Santa Fe, NM 87505 ergy ıne and &

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505

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Form C-138 Revised March 17, 1999

Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| IEQUEST TOKATIKO VAL TO ACCELTE | JOHID WINDIN |
|--|---|
| 1. RCRA Exempt: Non-Exempt: X | 4. Generator COASTAL CHEMICAL |
| Verbal Approval Received: Yes No | 5. Originating Site YAR D |
| 2. Management Facility Destination KEY DISPOSAL | 6. Transporter KEY |
| 3. Address of Facility Operator # 345 C2 3500 AZ+2 C NEW MEXICO | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) FALMINGTON, NM | |
| 9. <u>Circle One</u> : | |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by ne material is not-hazardous and the Generator's certification of origin. No waste class approved | cessary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transporters | ort. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Estimated Volume <300bb/s cy Known Volume to be entered by the oper | EC 2000 ator at the end of the haul)cy |
| SIGNATURE Waste Management Pacility Authorized Agent TITLE: Moe Waste Management Pacility Authorized Agent | DATE: 12-15-200 |
| TYPE OR PRINT NAME: MICHAEL TALOUICAS TELES | PHONE NO. <u>505-334-6186</u> |
| | |
| | |
| (This space for State Use) | |
| APPROVED BY: Demy tout TITLE: Geolog | DATE: 12/19/00 |
| APPROVED BY: 74+ 12:6 TITLE: Environment | 6 Godonst DATE: //1/00 |

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 Resource. 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 APPROVAL TO ACCEPT SOLID WASTE

| 1. RCRA Exempt: Non-Exempt: 💢 | 4. Generator CO45TALCHEMICAL |
|---|---------------------------------------|
| Verbal Approval Received: Yes No | 5. Originating Site YARD |
| 2. Management Facility Destination KEY DISPESAL | 6. Transporter KEY |
| 3. Address of Facility Operator New Mexico | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) FALMINGTON, N.M. | |
| 9. <u>Circle One</u> : | |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by a one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by new material is not-hazardous and the Generator's certification of origin. No waste class approved | essary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transpo | rt. |
| BRIEF DESCRIPTION OF MATERIAL: | • |
| | DEC 2000 RECEIVED RLCON. DIV DIST. 3 |
| Estimated Volume <u> </u> | ator at the end of the haul)cy |
| SIGNATURE Multiple Control TITLE: MGA Waste Management Facility Authorized Agent | DATE: 12-15-200 |
| TYPE OR PRINT NAME PAICHAEL TALOUICA TELEF | PHONE NO. <u>505-334-618 L</u> |
| | |
| (This space for State Use) | |
| APPROVED BY: Deny Kenny TITLE: Geold | 09 12 DATE: 12/19/01 |
| APPROVED BY: TITLE: | DATE: |
| i de la companya de | • |

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 87401 |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| YARD | COASTAL CHEMICAL CO., INC.
#10 RD 5911
FARMINGTON, NM 87401 |
| Attach list of originating sites as appropriate | |
| 4. Source and Description of Waste | |
| | AND TANKS USED TO DELIVER VIRGIN SED OUT ARE VIRGIN?UNUSED CHEMICALS. OLAMINE, GLYCOL (TEG & EG) |
| | |
| | |
| • | |
| MIKE EBERHARD (Print Name) | representative for: |
| (Print Name) | do hereby certify that, |
| (Print Name) COASTAL CHEMICAL CO, INC. according to the Resource Conservation and Recover | do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July, |
| (Print Name) | do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July, |
| (Print Name) COASTAL CHEMICAL CO, INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste | do hereby certify that, ary Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification) MPT oilfield waste which is non-hazardous by characteristic |
| (Print Name) COASTAL CHEMICAL CO, INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste | do hereby certify that,
ary Act (RCRA) and Environmental Protection Agency's July,
waste is: (Check appropriate classification) |
| (Print Name) COASTAL CHEMICAL CO, INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste | 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 |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste XX NON-EXE analysis of | do hereby certify that, ary 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. |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste EXEMPT oilfield waste analysis of and that nothing has been added to the exempt or note in the control of the exempt of of | do hereby certify that, ary 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): |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste analysis of and that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or note that nothing has been added to the exempt or not | do hereby certify that, ary 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): |



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.

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.

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

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

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:

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

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

Product Code: 55520 Page: R-1

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93 MSDS:000913

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

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

U.S. REGULATIONS

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

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title [1]) 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)
(R) Indicates a Trademark of The Dow Chemical Company

* An Operating Unit of The Dow Chemical Company

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

⁽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.

An Operating Unit of The Dow Chemical Company

1 / HM18 HEALTH

HMIB FLAMMARILITY

1

breathing smoke ifumes, mist or vapors on the

· HMIB REACTIVITY HMIB PERSONAL PROT - IDENTIFICATION SECTION 1 DISTRIBUTED BY COASIAL CHEMICAL COMPANY, INC P.D. BOX 820 ABBEVILLE, LA 70511-0820 (318) 893-3852 EMERGENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300 EFFECTIVE DATE..... 02/26/90 MANUFRETURER'S NAME.... UNION CARBIDE DOW CHEMICAL TEXACO . OXY-PETROCHEMICAL . TRADE NAME..... TRIETHYLENE GLYCOL CHEMICAL FAMILY POLYETHYLENE BLYCOL CAS NUMBER..... 112-27-5 CHEMICAL FORMULA..... C6H14D4 BECTION II - HAZARDOUB INGREDIENTS TLV (Units) PRUD. CAS ZARDOUS COMPONENTS TRIETHYLENE 99 None 112-27-6 GLYCOL Established BECTION III - PHYBICAL DATA C75년만단대대표했던티보험단년단단단단단단단단단단단원보임된원단당보대로단보도본도본도본도단보로대로단되는 Referent 및 News Heat News News News News News News News FREEZING POINT (F)..... -7 Deg. C., 19 Deg. F. VAPOR PRESSURE (Inin Hg)... (1 Inin VAPOR DENSITY (Air=1).... 5.2, Air = 1 BOLUBILITY IN H20..... Completely soluble in all proportions APPEARANCE/UDUR..... Clear, colorless, viscous liquid with slight odd BPECIFIC GRAVITY (H20=1). 1.1 @ 77 Deg. F., 25/25 Deg. C SECTION IV - FIRE AND EXPLOSION HAZARD DATA FLASH POINT..... 350 Dwg. F. LOWER FLAME LIMIT.... 0.9 HIGHER FLAME LIMIT..... 3.2 EXTINGUISH MEDIA..... Use water fog or spray, Alcohol Foam, Dry Powder Carbon Dioxida (CO2). 'NUSUAL FIRE HAZARD..... Containers may explode from internal pressure is confined to fire. Cool With Water. Keep Unnecess people away. Approach fire from upwind side. A

downWind wide.

TRIETHYLENE GLYP

BECTION V - HEALTH HAZARD DATA

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

HOUTRO OF ENTRY.

INHALATION? Irritant

BKIN? Mild irritant

INGESTION? Irritant

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

CARCINOGENICITY NO

NTP7 NO

IARC MONDGRAPHB?

DSHA REC

NO

OVER EXPOSURE EFFECTS.... Bkin irritation develops slowly after contact. irritation develops immediately upon contact.

FIRST AID PROCEDURES.... In case of contact, immediately flush eyes or & With plenty of Water for at least 15 minutes wh removing contaminated clothing and shoes. Get m attention. Wash plothing before reuse. If small do not induce vomiting, get immediate medical attention. If inhaled, remove to fresh air. If breathing, give artificial respiration, preferal mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

BECTION VI - REACTIVITY DATA

CHEMICAL BIABILITY..... Product is stable

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

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials. DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Honox

HAZARDOUB POLYMERIZATION. Will not occur

POLYMERIZATION AVOID.... None

BECTION VII - BOILL OR LEAK PROCEDURE

츱섫눥딦뱦켮긜섇굕뎐쁔찞뾩꽭썕,쁹궦킩짫뱮쩮퀅쁅퐩凡呼몍즊몍꽴덝긂쀠쀠켂몍쬤몍퐩켂쿿덿궦첉첉덿첉첉첉첉첉첉첉첉첉첉첉첉첉 FOR SPILL...... In case of spillage, absorb with inset material dispose of in accordance with applicable require

WASTE DISPOSAL METHOD.... industrial Waste. Follow Federal, State and Loc laws.

BECTION VIII - BPECIAL PROTECTION

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

recommended.

ENTILATION Required in closed areas

CHANICAL EXHAUST..... Required in closed areas

PROTECTIVE BLOVES Wear impervious gloves

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

T SETHYLENE BLYCO'

1 1 20

DIHER PROTECTIVE

EQUIPMENT..... Chemical type apron recommended

BECTION IX - BPECIAL HANDLING

HANDLI II AND STORAGE.... Store away from oxidizers or materials bearing yellow "DOT" label. Keep out of sun and away from the control of the

-water contamination.

PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. Af handling this product, wash hands before eating drinking, or smoking. If contact occurs, remove contaminated clothing. If headed, take first at

action shown in Section V. Use with adequate ventilation.

HAZARD CLASS..... Not Kenulated

DOT BIIIPPING NAME..... Triethylene Glycol

REPORTABLE QUANTITY (RQ). None UN NUMBER..... None Na #..... None PACKAG/MB SIZE..... N/A

SECTION X - REGULATURY

땫ū짒뇠÷⊷좪빏뇶꾶뮭됮캶찞썦쁔됮ū잗긂둮쾏캢덠딃둄뀰둮좪쭕눥홪뫋降ūï뎄æ두둮X뒚딦묨뙥쀼컁컜눥묨횎뀕캶찞뵁윰pŋ;;ZVFVX¤직뭐ūX+牢뵥긲믔

CERCLA RO VALUE..... None

SARA TRO...... None
SARA Bal...... None
SECTION 313..... No

EPA HITARD WASTE #..... None

CLEANAIR..... Yes Section 111

CLEAN MATER.... No

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

PREPARED BY Glan White, B. I.B., 817-560-4631

TRIETHYLENE BLYCOL

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUE IN ASSESSING COMPLIANCE WITH HEALTH, BAFETY AND ENVIRONMENTAL REGULATIONS.

FURMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIE IS ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BE ACCURATE, ALTHOUGH NO GUARANTEE OF THIS PRODUCT IS WITHIN THE EXCLUSIONATION 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 C TRIETHLYLENE GLYCOL (OCESSED

SHEET

1

1

HMIS HEALTH

. HMIS FLAMMABILITY

| | | , | <u>о</u>
В | | REACTIVITY
PERSONAL PROT | |
|--|---|---|---|---------|---|--|
| | SECTION I - IDENTIFICATION DISTRIBUTED BY COASTAL CHEMICAL COMPANY, INC P.O. BOX 820 ABBEVILLE, LA 70511-0820 (318) 893-3862 | | | | | |
| | | | | | | |
| | MANUFACTURER'S NAME | (318) 893-38
02/26/90 | 18) 893-3862 DR CHEMTREC (800) 424-9300
/26/90 | | | |
| | | | | | | |
| | SECTION II - HAZARDOUS INGREDIENTS | | | | | |
| | HAZARDOUS COMPONENTS | | TLV (Units) | | F'ROD. CAS | |
| | TRIETHYLENE
GLYCOL | 98 None
Esta | blished | | 112-27-6 | |
| | SECTION III - PHYSICAL DATA FREEZING POINT (F)7 Deg. C., 19 Deg. F. VAPOR PRESSURE (mm Hg) (1 mm VAPOR DENSITY (Air=1) 5.2, air = 1 SOLUBILITY IN H20 Completely soluble in all proportions APPEARANCE/ODOR Light amber color, viscous liquid with slight orde SPECIFIC GRAVITY (H20=1). 1.1 @ 77 Deg. F., 25/25 Deg. C PH | | | | | |
| | | | | | | |
| | SECTION IV - FIRE AND EXPLOSION HAZARD DATA | | | | | |
| | FLASH POINT LOWER FLAME LIMIT HIGHER FLAME LIMIT EXTINGUISH MEDIA | 350 Deg. F.
0.9
9.2 | g or spray, Al | | | |
| | UNUSUAL FIRE HAZARD | JAL FIRE HAZARD Containers may explode from internal pressure if confined to fire. Cool with water. Keep unnecessa people away. Approach fire from upwind side. Avo breathing smoke , fumes, mist or vapors on the downwind side. | | | | |
| | | | | ======= | ======================================= | |

SECTION V - HEALTH HAZARD DATA

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

MATERIAL SAFETY DA TRIETHLYLENE GLYCOL A ROCESSED

ROUTES OF ENTRY

INHALATION? Irritant

SKIN? Mild irritant INGESTION? Irritant

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

CARCINOGENICITY

NO

NTP?

NO

IARC MONOGRAPHS? - OSHA REGI

NO

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. & irritation develops immediately upon contact.

FIRST AID PROCEDURES.... In case of contact, immediately flush eyes or sk with plenty of water for at least 15 minutes whi removing contaminated clothing and shoes. Get me attention. Wash clothing before reuse. If swalls do not induce vomiting, get immediate medical attention. If inhaled, remove to fresh air. breathing, give artificial respiration, preferab mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupt

container.

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials.

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

HAZARDOUS POLYMERIZATION. Will not occur

FOLYMERIZATION AVOID.... None

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL..... In case of spillage, absorb with inert material as

dispose of in accordance with applicable regulation

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 : TRIETHLYLENE GLYCOL

SHEET ROCESSED

HANDLING AND STORAGE.... Store away from oxidizers or materials bearing yellow "DOT" label. Keep out of sun and away fr heat. Clean up leaks immediately to prevent soi water contamination. PRECAUTIONARY MEASURES... Avoid contact with skin, eyes, and clothing. Af 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 SUDDEN RELEASE OF

'RESSURE..... 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, 5.I.S., 817-560-4631

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTON ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS BELIEVED BY COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



Material Safety Data Sheet

The Dow Chemical Company Midland, Michigan 48674

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

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

Product Code: 29451

Effective Date: 06/30/94

Date Printed: 07/25/95

MSD: 002850

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS
Proprietary alkylamine
Water

CAS#

AMOUNT (%w/w)

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% UFL: 19.6%

AUTOIGNITION TEMPERATURE: 350C; 662F

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

FIRE AND EXPLOSION HAZARDS: Keep unnecessary people away; isolate

(Continued on page 3)
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MATERI SAFETY SHEET DATA

PAGE: 3

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.

STORAGE:

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINE(S): None established.

VENTILATION: Good general ventilation should be sufficient for most conditions.

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

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Wear a face-shield which allows use of chemical goggles, or wear a full-face respirator, to protect face and eyes when there is any likelihood of splashes. Remove contaminated clothing

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

MATERI SAFETY

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

Effective Date: 06/30/94

Date Printed: 07/25/95

MSD: 002850

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immediately, wash skin area with soap and water, and launder clothing before reuse.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT VAPOR PRESSURE : 306-324F, 152-162C : <2.5 mmHg @ 20C

VAPOR DENSITY

: 2.6 : Complete

SOLUBILITY IN WATER SPECIFIC GRAVITY

: 0.93-0.94 @ 20/200

FREEZING POINT

: -4.5C, 24F

APPEARANCE

: Colorless liquid

ODOR

: Amine

10. STABILITY AND REACTIVITY

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

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

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

HAZARDOUS POLYMERIZATION: Will not occur.

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

ACUTE SKIN: The dermal LD50 has not been determined.

ACUTE INGESTION: The oral LD50 for rats is between 1000 and 2340 mg/kg.

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

(Continued on page 5)

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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

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

(Continued on page 6, over)
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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

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:

CAS #

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

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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.



The Dow Chemical Company Abelland, Khi bugan district

Material Safety Data Sheet

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

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

Product Code: 13693

Effective Date: 06/30/94

Date Printed: 01/10/95

MSU: 003430

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Methyldiethanolamine Proprietary Alkylamine

CAS# 000105-59-9

60-70%

Water

CAS# 007732-18-5

2.0% MAX

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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

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

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

SKIN: Short single exposure may cause severe skin burns. Classified as corrosive according to DOT. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The dermal LD50 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

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

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

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

Product Code: 13693

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

MSD: 003430

PAGE: 3

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 PRECAULIONS 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 Trademark of The Dow Chemical Company

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Product: GAS/SPEC (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. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT : 183c, 361F

: 0.5 mmHg @ 25C VAPOR PRESSURE

VAPOR DENSITY : 3.5

SOLUBILITY IN WATER : Complete

: 1.01 @ 25/250 SPECIFIC GRAVITY

FREEZING POINT -23.10

: Pale straw liquid APPEARANCE

ODOR : Amine odor

10. STABILITY AND REACTIVITY

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

(Continued on page 5)

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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 POLYMERIZATIÔN: 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

(Continued on page 6 , over)
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SAFETY MATERIA DATA SHEET

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

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REGULATORY INFORMATION (CONTINUED)

certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME

CAS NUMBER

LIST

PROPRIETARY INGREDIENT

PROPRIETARY 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 (WIIMIS) Classification for this product is:

B3 - combustible liquid with a flash point between 37.80 and 93.30 - corrosive to metal or skin

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

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

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14): COMPONENTS:

CAS #

(w/ws) THUOMA

Methyldiethanolamine

CAS# 000105-59-9

60-70%

Proprietary Alkylamine

HMIRA INFORMATION: A claim for exemption from ingredient disclusure 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

PAGE: 8

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

Effective Date: 06/30/94

Date Printed: 01/10/95

MSD: 003430

REGULATORY INFORMATION (CONTINUED)

Claim Number: 3500

Filing Date: June 29, 1994

16. OTHER INFORMATION

MSDS STATUS: Revised section 15

PRODUCT USE: Gas conditioning solvent.

⁽R) Indicates a Trademark of The Dow Chemical Company The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Nade. Consult The Dow Chemical Company for further information.

ETHYLENE GLYCOL

| | | | • | |
|--|---|---|---|---------|
| | | | HMIS HEALTH HMIS FLAMMABILIT HMIS REACTIVITY HMIS PERSONAL PR | |
| The state of the s | | | ======================================= | === |
| | SECTION I - | | | ===: |
| DISTRIBUTED BY | · · · · · · · · · · · · · · · · · · · | AL COMPANY, INC | | |
| EMERGENCY PHONE NUMBER EFFECTIVE DATE MANUFACTURER'S NAME | (318) 893-3862
2/06/1996 | OR CHEMTREC | (800) 424-9300 | |
| TRADE NAME CHEMICAL FAMILY CAS NUMBER CHEMICAL FORMULA | GLYCOL
107-21-1 | L | | |
| | | | ***** | |
| SECTI | ON II - HAZAI | RDOUS INGREDIE | VIS | |
| nAZARDOUS COMPONENTS | | | PROD. (| |
| TAZARDOOD COMPONENTS | 6 | IDV (UIILS) | PROD. | CAS # |
| ETHYLENE GLYCOL | 100% ACGIH (| CEILING 50ppm | 107-21 | -1 |
| **************** | | | ======================================= | ===== |
| S | ECTION III - I | | | |
| FREEZING POINT (F) VAPOR PRESSURE (mm Hg) VAPOR DENSITY (Air=1) SOLUBILITY IN H20 APPEARANCE/ODOR SPECIFIC GRAVITY (H20=1). PH | 9 DEG F
0.12 MMHG @ 25
2.14
COMPLETELY MISC
COLORLESS LIQUI
1.1155 @ 20/20 | C
CIBLE
ID; PRACTICALL | , | |
| ~===================================== | ======================================= | ======================================= | : *************** | ===== |
| SECTION I | V - FIRE AND | | | ===== |
| FLASH POINTLOWER FLAME LIMITHIGHER FLAME LIMITEXTINGUISH MEDIA | N/D
N/D
Water fog or sp
(CO2). | · • | | |
| | bréathing smoke
downwind side. | e ,fumes, mist | or vapors on the | |

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 v 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. CHRON: Kidney and liver damage possible. May cause reproductive disorders. CARCINOGENICITY NTP? IARC MONOGRAPHS? OSHA REGULA NO NO NO OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact. Symptoms of overexposure: headache, fatique, 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 medic 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 medica attention. If swallowed, induce vomiting immediatel 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 ruptur container. INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials. Alkaline Material DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide ZARDOUS POLYMERIZATION. Will not occur

.JLYMERIZATION AVOID.... None

ETHYLENE GLYCOL

| | VII - SPILL OR LEAK PROCEDURE | |
|---|--|--|
| FOR SPILL In | n case of spillage, absorb with inert material ispose of in accordance with applicable regulations | |
| | ndustrial Waste. Follow Federal, State and Local aws. | |
| | ION VIII - SPECIAL PROTECTION | |
| RESPIRATORY PROTECTION What approximately protection approximately ap | nen ventilation is not adequate, use of NIOSH pproved organic vapor/acid gas cartridge respirate recommended. | |
| MECHANICAL EXHAUST Re LOCAL EXHAUST De PROTECTIVE GLOVES We | equired in closed areas | |
| EYE PROTECTION Us OTHER PROTECTIVE | se chemical goggles or full face shield. | |
| | rion ix - special handling | |
| | | |
| ye
he | core away from oxidizers or materials bearing a ellow "DOT" label. Keep out of sun and away from eat. Clean up leaks immediately to prevent soil or ater contamination. | |
| PRECAUTIONARY MEASURES At had a drawn a dra | void contact with skin, eyes, and clothing. After andling this product, wash hands before eating, rinking, or smoking. If contact occurs, remove ontaminated clothing. If needed, take first aid ction shown in Section V. Use with adequate | |
| HAZARD CLASS Dr | entilation.
rums - NOT REGULATED
ulk - Class 9 | |
| | rum - Ethylene Glycol ulk - Other regulated substances, liquid, n.o.s. ethylene glycol) | |
| REPORTABLE QUANTITY (RQ). 5,
UN NUMBER | 000 pounds one | |
| PACKAGING SIZE | · | |
| SECTION X - REGULATORY | | |
| | SECTION X - RECONSTOR! | |

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 | None | 107-21-1 | 100% |
| EPA HAZARD WASTE # CLEANAIR CLEAN WATER | Yes, Section 111 and 19 | 90 Amendments | |
| FOOT NOTES N/A - not approximate - means less than > App approximate Est. | - means greater than | available | |
| | | | |

IS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOM 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 TO 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.

PREPARED BY:......... Joe Hudman, Coastal Chemical Co., Inc. 713-477-6675

COASTALGUARD 100 ANTIFREEZE/COOLANT

| | | 1 HM |
|--------------------|---|---|
| | | 1 HM |
| Section 19 | \ \ | 0 HM. |
| , | | В НМ. |
| ; | ======================================= | |
| . : | | SECTION I - IDENTIFICATION |
| | | CONCENT CHEMICAL CO INC |
| 100% | DISTRIBUTED BY | COASTAL CHEMICAL CO., INC. (318)893-3862 |
| • | EMERGENCY PHONE NUMBER | · · |
| , | EFFECTIVE DATE | 2/06/1996 |
| ; | | COASTAL CHEMICAL CO., INC. |
| | | COASTALGUARD 100 ANTIFREEZE/COOL? INHIBITED ETHYLENE GLYCOL SOLUTIO |
| | CAS NUMBER | |
| | CHEMICAL FORMULA | |
| | | |
| | | |
| 1c. 713-477-6675 | | TION II - HAZARDOUS INGREDIENTS |
| | HAZARDOUS COMPONENTS | % TLV (Units) |
| SIST OUR CUSTOMERS | MAARDOOD COME ORDERED | · |
| REGULATIONS. THE | ETHYLENE GLYCOL | 95 % ACGIH CEILING 50ppm |
| AND IS BELIEVED | | |
| OR IMPLIED BY THE | | SECTION III - PHYSICAL DATA |
| IN THE EXCLUSIVE | • | SECTION III - PHYSICAL DATA |
| OVERNMENTAL | FREEZING POINT (F) | |
| | VAPOR PRESSURE (mm Hg) | |
| | VAPOR DENSITY (Air=1) | |
| | SOLUBILITY IN H20 | |
| | SPECIFIC GRAVITY (H20=1). | YELLOW/GREEN LIQUID; PRACTICALLY O |
| | PH | |
| | | |
| | | |
| | | IV - FIRE AND EXPLOSION HAZARD DA |
| | FLASH POINT | |
| | LOWER FLAME LIMIT | |
| | HIGHER FLAME LIMIT | N/D |
| | EXTINGUISH MEDIA | Water fog or spray, Foam, Dry Powd (CO2). |
| • | UNUSUAL FIRE HAZARD | NONE KNOWN Approach fire from upwi- |
| | | breathing smoke , fumes, mist or va |
| | | downwind side. |
| | | |
| | | CCTION V - INCALTH HAZARD DATA |
| | | |
| | | |

COASTALGUARD 100 ANTIFREEZE/COOLANT.

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

ROUTES OF ENTRY

INHALATION?

-SKIN?

INGESTION? Ingestion of verv

IRRITANT, POSSIBLY Not expected to

cause significant

large amounts

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

NTP?

IARC MONOGRAPHS?

OSHA REGULATED

NO

NO

NO

OVER EXPOSURE EFFECTS.... Skin irritation develops slowly after contact. Eye irritation develops immediately upon contact.

Symptoms of overexposure: headache, fatique, 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

| CONSTREGENCE TOO MAITTREESE COORMAI | |
|---|--|
| FOR SPILL In case of spillage, absorb with iner dispose of in accordance with applica | |
| WASTE DISPOSAL METHOD Industrial Waste. Follow Federal, Stalaws. | te and Local |
| | |
| SECTION VIII - SPECIAL PROTECTION | |
| SECTION VIII - SPECIME PROTECTION | |
| RESPIRATORY PROTECTION When ventilation is not adequate, use approved organic vapor/acid gas cartrists is recommended. | of NIOSH |
| 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 shie | eld. |
| OTHER PROTECTIVE EQUIPMENT Chemical type apron recommended | |
| EQUIFMENT: Chemical type apron recommended | |
| | |
| SECTION IX - SPECIAL HANDLING | |
| 222222222222222222222222222222222222222 | |
| HANDLING AND STORAGE Store away from oxidizers or materials yellow "DOT" label. Keep out of sun ar heat. Clean up leaks immediately to provide water contamination. | nd away from |
| PRECAUTIONARY MEASURES Avoid contact with skin, eyes, and clock handling this product, wash hands before drinking, or smoking. If contact occur contaminated clothing. If needed, take action shown in Section V. Use with action shown in Section V. | ore eating,
rs, remove
e first aid |
| ventilation. HAZARD CLASS Drums - Not Regulated | |
| Bulk - Class 9 | |
| DOT SHIPPING NAME Drums - COASTALGUARD 100 Bulk - Other regulated substances, lic (ethylene glycol) | quid, n.o.s. |
| REPORTABLE QUANTITY (RQ). 5000 pounds | |
| UN NUMBER None | |
| NA # Drums - None; Bulk - NA3082 | |
| PACKAGING SIZE N/A | • |
| '
 | |
| SECTION X - REGULATORY | |
| | |
| | |
| EPA ACUTE YES | |
| EPA CHRONIC YES | |
| EPA IGNITABILITY NO | • |
| DN DENGERTUTEV N∩ | |

-3-

EPA REACTIVITY..... NO

COASTALGUARD 100 ANTIFREEZE/COOLANT

| PRESSURE | NO |
|--|--|
| CERCLA RQ VALUE | 5000 pound for ethylene glycol |
| SARA RQ | None |
| EPA HAZARD WASTE # | Yes, Section 111 Volatile Organic Compounds & Section 112 Statutory Air Pollutants (1990 Amendments) |
| FOOT NOTES N/A - not app
< - means less than >
App approximate Est | |

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

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

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

MSU: 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 IDENTIFICATION

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)

(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 2

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

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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). Hear: 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 (BIR'IH DEFECTS): Contains component(s) which did not cause birth defects; other fetal effects occurred only at doses toxic to the mother.

4. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

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

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or 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)
(R) Indicates a Trademark of The Dow Chemical Company

PAGE: 3

Product: DIETHANO! AMINE 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 LIMITS

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 shevel 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 temperature possibly resulting in spontaneous combustion.

STORAGE: Do not store in common area with halogenated materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

(Continued on page 4 . over)
(R) Indicates a Trademark of The Dow Chemical Company

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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 profonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or fill-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 GUIDELINE(S): Diethanolamine: ACGIH TLV is 2 mg/m3, skin; OSHA ICL 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 GRAVIIY: 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 exides.

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

PAGE: 5

Product: DIETHANOLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 0:/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

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 (BOD20) is 1.20 p/p. iheoretical oxygen demand (ThOD) 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

PAGE: 6

Product: DIETHALOLAMINE 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

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 Trac'smark of The Dow Chemical Company

PAGE: 7

Product: DIETHAN LAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96

Date Printed: 04/27/96

MSD: 00)904

with federal, state r provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME

CAS NUMBER CONCENTRATION

DIETHANOLAMINE

000111-42-2 86 %

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

An immediate health hazard A delayed health hazard

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

CHEMICAL NAME

CAS NUMBER LIST

DIETHANOLAMINE

000111-42-2 NJ3 PA1 PA3

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

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

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

OSHA HAZARD COMMUNICATION STANDARD:

(Continued on page 8, over)

(R) Indicates a Trad-mark of The Dow Chemical Company

PAGE: 8

Product: DIETHANULAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 05/01/96

Date Printed: 04/27/96

MSD: 000904

REGULATORY INFORMATION (CONTINUED)

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

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases: Category:

Chemical Name

かんしょう 小学 さんかん 一切の 大道を通じる 中華建築体 さんしを甘いたした。 一切の 一直を表している はない こうじゅう かんしゅう しんりょう

CAS#

RQ

% 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): AMOUNT (%w/w) CAS # COMPONENTS:

Diethanolamine

CAS# 000111-42-2

85%

16. OTHER INFORMATION

REVISION INDICATOR: Revised section 14.

(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 Informati n.

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 Resour

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505

RECEIVED

Form C-138 Revised March 17, 1999

DEC 18 2000 Environmental Bureau Submit Original Plus 1 Copy to Appropriate District Office

Oil Conservation Division

| REQUEST FOR APPROVAL TO ACCEPT S | SOLID WASTE |
|--|--|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator WFS / Production Opi |
| Verbal Approval Received: Yes No | 5. Originating Site COMPLETION SITES |
| 2. Management Facility Destination KEY ENERGY D 15 pos4L | 6. Transporter Ley |
| 3. Address of Facility Operator #345 CR 3500 AZ+CC NEW MEXICO | 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 one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessarial is not-hazardous and the Generator's certification of origin. No waste class approved | essary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transpo | rt. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Estimated Volume 1000 bbls cy Known Volume to be entered by the operation | DEC 2008 DEC |
| SIGNATURE Waste Management Facility Authorized Agent TITLE: Moe TITLE: Moe | DATE: 12-6-2000 |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TELEP | HONE NO. <u>505 -334 - 6/36</u> |
| | |
| (This space for State Heat | · · · · · · · · · · · · · · · · · · · |
| APPROVED BY: Leny Cont TITLE: Geolog | 15T DATE: 12/11/200 |
| APPROVED BY: Tunting This TITLE: Engroum | In 600 and DATE: 12/18/00 |

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 Reso 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 APPROVAL TO ACCEPT SOLID WASTE

| , | |
|--|--|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator WES / Proportion OP. |
| Verbal Approval Received: Yes No | 5. Originating Site COMPIEMOR SITES |
| 2. Management Facility Destination KEY ENERGY D15, 2054L | 6. Transporter Ley |
| #345 CR 3500 AZ+&C NEW MEXICO | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) SEE SITE LIST | |
| 9. <u>Circle One</u> : | · |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. (B. All requests for approval to accept non-exempt wastes must be accompanied by nematerial is not-hazardous and the Generator's certification of origin. No waste class approved | cessary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transpo | ort. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| $\frac{1}{\sqrt{M}} \frac{1}{\sqrt{M}} \frac{1}{\sqrt{M}$ | ventor at the end of the haultcy |
| SIGNATURE Waste Management Facility Authorized Agent TITLE: MG & | DATE: 12-6-2000 |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TELES | PHONE NO. <u>505 -334 - 6136</u> |
| | |
| (This space for State Use) | |
| APPROVED BY: Derry Frant TITLE: (20/09) | 5/ DATE: 12/11/2000 |
| APPROVED BY: TITLE: | DATE: |
| | 1 |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 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, Laguna Mesa, Martinez Dta |
| ATTRICT THE OF ORIGINATING SIGNS SPORTED TO THE COLUMN | a Mesa, 31-6 WPX |
| 4. Source and Description of Waste | |
| | |
| RAIN WATER & WASH | WATER |
| · | |
| | |
| į | |
| | |
| | |
| I. Buster Gaston | |
| (Print Name) | representative for: |
| Production Operators, Inc. | do hereby certify that, |
| according to the Resource Conservation and Recover | ry Act (RCRA) and Environmental Protection Agency's July, |
| 1988, regulatory determination, the above described | W8St8 IS: (Check appropriate classification) |
| · · · · · · · · · · · · · · · · · · · | , , , , , , , , , , , , , , , , , , , |
| | WET oilfield waste which is non-hazardous by characteristic r by product identification |
| | · wy product remainistration |
| and that nothing has been added to the exempt or re | on-exempt non-hazardous waste defined above. |
| | |
| For NON-EXEMPT wants note the following door | |
| I OF THE PERSON IN ANY STREET, IN ANY STREET, IN THE STREET, IN ANY STREET, IN AN | Mentation is attached Ichack appropriate items). |
| MSDS Information | mentation is attached (check appropriate items): Other (description): |
| MSDS Information RCRA Hazardous Wasta 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 Chain of Custody | |
| MSDS Information RCRA Hazardous Waste Analysis | |
| MSDS Information RCRA Hazardous Wasta Analysis Chain of Custody Name (Original Signature): Butter | |
| MSDS Information RCRA Hazardous Waste Analysis Chain of Custody | |
| MSDS Information RCRA Hazardous Wasta Analysis Chain of Custody Name (Original Signature); Butter Title: Operations Coordinator | |
| MSDS Information RCRA Hazardous Wasta Analysis Chain of Custody Name (Original Signature): Butter | |

February 28, 2000

Mr. Bill Beevers
Williams field Service, Inc.
Manzanares District
Bloomfield, NM 87413

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

> Project No.: 97050 Job No.: 705004

Dear Mr. Beevers,

Enclosed are the analytical results for one water sample collected from the location designated as "Horse Canyon". One water sample was collected by WFS designated personnel on 2/22/00, and received by the Envirotech laboratory on 2/22/00 for TCLP W/O Herbicides and Pesticides.

The sample was documented on Envirotech Chain of Custody No. 7699 and assigned Laboratory No. G875 (Waste Water) for tracking purposes. The sample was analyzed 2/24/00 - 2/28/00 using USEPA or equivalent methods.

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

Respectfully submitted, Envirotech, Inc.

Christine M. Walters

Laboratory Coordinator / Environmental Scientist

enc.

CMW/cmw

C:/files/labreports/WFS.wpd



SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Sample ID: Williams Field Services Waste Water Project #:
Date Reported:

705004

02-25-00-

Lab ID#:

G875 Water Date Sampled:

02-22-00

Sample Mathx: Preservative:

Water Cool

Date Received: Date Analyzed: 02-22-00 02-24-00

Condition:

Cool and Intact

Chain of Custody:

7699

Parameter

Result

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 6.26

REACTIVITY:

Negative

RCRA Hazamous 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.)

CORRESIVITY:

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 CDP.

Analyst

Review



EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|---------------------|------------|
| Sample ID: | Waste Water | Date Reported: | 02-25-00 · |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-23-00 |
| Conciden: | 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) | 0.0176 | 0.0001 | 200 |
| Chloroform | ND | 0.0001 | 6.0 |
| Carbon Tetrachloride | ND | 0.0001 | 0.5 |
| Benzene | 0.145 | 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: | * | Characteristic Leaching Procedure, St | |
| | Method 5030, Purge-and | d-Trap, SW-846, USEPA, July 1992. | |
| | Method 8010, Halogena | ited Volatile Organic, SW-846, USEP | ² A, Sept. 1994. |
| | Method 8020, Aromatic | Volatile Organics, SW-846, USEPA, | Sept. 1994. |
| Note: | Regulatory Limits based | i on 40 CFR part 261 Subpart C sect | tion 261.24, July 1, 1992. |

Analyst . Que

Comments:

Horse Canyon CDP.

Christin of Walter



EPA METHOD 8040 PHENOLS

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|---------------------|--------------|
| Sample D: | Waste Water | Date Reported: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | - 02-22-00 - |
| Chain of Gustody. | 7699 | Date Received: | 02-22-00 |
| Sample Matrx: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-28-00 |
| Condition: | Cool & Intact | Analysis Requested: | TCLP |
| | • | | |

| Parameter | Concentration
(mg/L) | Detection
Limit
(mg/L) | Regulatory
Limit
(mg/L) |
|-----------------------|-------------------------|------------------------------|-------------------------------|
| o-Cresol | 1.17 | 0.020 | 200 |
| p,m-Cresoi | 1.11 | 0.040 | 200 |
| 2,4,6-Trichlorophenol | 0.491 | 0.020 | 2.0 |
| 2,4,5-Trichlorophenol | 0.065 | 0.020 | 400 |
| Pentachlorophenol | 0.454 | 0.020 | 100 |

ND - Parameter not detected at the stated detection limit.

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

References:

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

Waste, SW-846. USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

Horse Canyon CDP.

Analyst

Review Mosters



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

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|---------------------|----------|
| Sample ID: | Waste Water | Date Reported: | 02-28-00 |
| Laboratory Number: | `` G875 → ¬• | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-28-00 |
| 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 |
| Hexachioroethane | ND | 0.020 | 3.0 |
| Nitrobenzene | 0.047 | 0.020 | 2.0 |
| Hexachlorobutadiene | ND | 0.020 | 0.5 |
| 2,4-Dinitrotoluene | 0.039 | 0.020 | 0.13 |
| HexachloroBenzene | ND | 0.020 | 0.13 |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria | Parameter | Percent Recovery |
|---------------------------|------------------|------------------|
| | 2-fluorobiphenyl | 97% |

References:

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

Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-346, 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 CDP.

Alen L. Oferen

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LPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|------------------|--------------|
| Sample ID: | Waste Water | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | ` Water | Date Analyzed: | 02-24-00 |
| 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 | 0.194 | 0.001 | 5.0 |
| Barium | 0.146 | 0.001 | 21 |
| Cadmium | 0.099 | 0.001 | 0.11 |
| Chromium | 0.072 | 0.001 | 0.60 |
| Lead | 0.087 | 0.001 | 0.75 |
| Mercury | 0.004 | 0.001 | 0.025 |
| Selenium | ND | 0.001 | 5.7 |
| Silver | 0.037 | 0.001 | 0.14 |

ND - Parameter not detected at the stated detection limit.

References:

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

December 1996.

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

Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission

SW-846, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Horse Canyon CDP.

Analyst

(Mistin M Walters Beview



QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



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

| Client: | QA/QC | Project #: | N/A . |
|--------------------|------------------|---------------------|----------|
| Sample iD: | Laboratory Blank | Date Reported: | 02-25-00 |
| Laboratory Number: | 02-23-TCV | Date Sampled: | N/A |
| Sample Matrix | Water | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-23-00 |
| 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 sample G875.

Den R. Que

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AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

| QA/QC | Project #: | N/A |
|------------------|---|--|
| Matrix Duplicate | Date Reported: | 02-25-00 |
| G875 | Date Sampled: | N/A |
| Water | Date Received: | N/A |
| TCLP | Date Analyzed: | 02-23-00 |
| N/A | Date Extracted: | N/A |
| | Matrix Duplicate
G875
Water
TCLP | Matrix Duplicate Date Reported: G875 Date Sampled: Water Date Received: TCLP Date Analyzed: |

| | | 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) | 0.0176 | 0.0174 | 0.0001 | 1.1% |
| Chloroform | ND | ND | 0.0001 | 0.0% |
| Carbon Tetrachloride | ND | ND | 0.0001 | 0.0% |
| Benzene | 0.145 | 0.146 | 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 Leacning 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-246, USEPA, Sept. 1994.

Comments:

QA/QC for sample G875.

Analyst

/ Review



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

| Client: | QA/QC | Project #: | N/A |
|---------------------|--------------|-----------------|----------|
| Sample ID: | Matrix Spike | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Analysis Requested: | TCLP | Date Analyzed: | 02-23-00 |
| Condition: | N/A | Date Extracted: | N/A |

| | | | Spiked | | | SW-846 |
|----------------------|--------|--------|--------|--------|----------|-------------------|
| | Sample | Spike | Sample | Det. | | % Rec.
Accept. |
| | Result | Added | Result | Limit | Percent | |
| 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) | 0.0176 | 0.050 | 0.0671 | 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 | 0.145 | 0.050 | 0.195 | 0.0001 | 100% | 39-130 |
| 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.

Reference's:

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 G875.

Analysi



EPA METHOD 8040 PHENOLS

Quality Assurance Report Laboratory Blank

| Client: | QA/QC | Project #: | N/A |
|--------------------|------------------|---------------------|----------|
| : Sample ID: | Laboratory Blank | Date Reported: | 02-28-00 |
| Laboratory Number: | 02-28-TCA | Date Sampled: | N/A |
| Sample Matrix: | 2-Propanol | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-28-00 |
| 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 % |

Raferancas:

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 G875.

Analyst P. Green

Review Maeter



EPA METHOD 8040 PHENOLS Quality Assurance Report

| Client: | QA/QC | Project #: | N/A |
|--------------------|------------------|---------------------|----------|
| Sample ID: | Matrix Duplicate | Date Reported: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | N/A |
| Condition: | Cool & Intact | Date Analyzed: | 02-28-00 |
| | | Analysis Requested: | TCLP |

| Parameter | Sample
Result
(mg/L) | Duplicate
Result
(mg/L) | Detection
Limit
(mg/L) | Percent
Difference |
|-----------------------|----------------------------|-------------------------------|------------------------------|-----------------------|
| o-Cresol | 1.17 | 1.16 | 0.020 | 1.0% |
| p,m-Cresol | 1.11 | 1.09 | 0.040 | 2.0% |
| 2,4,6-Trichlorophenol | 0.491 | 0.486 | 0.020 | 1.0% |
| 2,4,5-Trichlorophenol | 0.065 | 0.064 | 0.020 | 1.1% |
| Pentachlorophenol | 0.454 | 0.450 | 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, Phenois, 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 G875.

Allenh. Que

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: | 02-28-00 |
| Laborator, Number: | 02-28-TBN | Date Sampled: | N/A |
| Sample Matrix: | Hexane | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | N/A |
| Condition: | , N/A | Date Analyzed: | 02-28-00 |
| | | 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.

| 2.flucrohiphenyl 93% | QA/QC Acceptance Criteria | Parameter | Percent Recovery |
|----------------------|---------------------------|------------------|------------------|
| 2-(100) 60) (100) | | 2-fluorobiphenyl | 93% |

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 G875.



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: | | 02-28-00 |
| Sample :D: | G875 | Date Sampled: | | N/A |
| Sample Matrix: | Water | Date Received: | | N/A |
| Preservative: | N/A | Date Extracted: | | N/A |
| Condition: | N/A | Date Analyzed: | | 02-28-00 |
| | • | Analysis Requested: | | TCLP |

| | Sample | Sample Duplicate | | | | |
|---------------------|--------|------------------|------------|--------|--|--|
| | Result | Result | Percent | Limit | | |
| Parameter | (mg/L) | (mg/L) | Difference | (mg/L) | | |
| Pyridine | ND | ND | 0.0% | 0.020 | | |
| Hexachloroethane | ND | ND | 0.0% | 0.020 | | |
| Nitrobenzene | 0.047 | 0.047 | 0.0% | 0.020 | | |
| Hexachlorobutadiene | ND | ND | 0.0% | 0.020 | | |
| 2,4-Dinitrotoluene | 0.039 | 0.038 | 3.0% | 0.020 | | |
| HexachioroBenzene | 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. | | | | | | | | | |

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

Comments: QA/QC for sample G875.

Note:

Analyst Cyleur L. Gierre

Pristing Daeles____



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

| Client: | | QA/QC | | Project #: | | | N/A | | | | |
|-----------------------------------|---------------------|----------------|--------------------|-------------|------------|------------|---------------------|--|--|--|--|
| Sample ID: | | 02-24-TCM | QA/QC | Date Report | ted: | | 02-25-00 | | | | |
| Laboratory Number: | | G875 | | Date Sampl | <u>ed:</u> | | N/A | | | | |
| Sample Matrix: | | Water | | Date Receiv | ved: 🗽 | | N/A | | | | |
| Analysis Requested: | | TCLP Metal | s | Date Analyz | zed: | | 02-24-00 | | | | |
| Conciden: | | N/A | * | Date Extrac | ted: | | N/A | | | | |
| Blank & Duplicate
Conc. (mg/L) | Instrument
Blank | Method Blank | Detection
Limit | Sample | Duplicate | %
Diff, | Acceptance
Range | | | | |
| Arsenic | ND | ND | 0.001 | 0.194 | 0.195 | 0.5% | 0% - 30% | | | | |
| Barium | ND | ND | 0.001 | 0.146 | 0.149 | 2.1% | 0% - 30% | | | | |
| Cadmium | ND | ND | 0.001 | 0.099 | 0.100 | 1.0% | 0% - 30% | | | | |
| Chromium | ND | ND | 0.001 | 0.072 | 0.073 | 1.4% | 0% - 30% | | | | |
| Lead | ND | ND | 0.001 | 0.087 | 0.089 | 2.3% | 0% - 30% | | | | |
| Mercury | ND | ND | 0.001 | 0.004 | 0.004 | 0.0% | 0% - 30% | | | | |
| Selenium | ND | ND | 0.001 | ND | ND | 0.0% | 0% - 30% | | | | |
| Silver | ND | ND | 0.001 | 0.037 | 0,037 | 0.0% | 0% - 30% | | | | |
| Spike
Cana (mg/L) | | Spike
Added | Sample | | | | Acceptance
Range | | | | |
| Arsenic | | 0.500 | 0.194 | 0.693 | 99.9% | | 80% - 120% | | | | |
| Barium | | 0.500 | 0.146 | 0.65 | 100.3% | | 80% - 120% | | | | |
| Cadmium | | 0.500 | 0.099 | 0.598 | 99.8% | | 80% - 120% | | | | |
| Chromium | | 0.500 | 0.072 | 0.572 | 100.0% | | 80% - 120% | | | | |
| Lead | | 0.500 | 0.087 | 0.538 | 100.2% | | 80% - 120% | | | | |
| Mercury | | 0.050 | 0.004 | 0.053 | 98.1% | | 80% - 120% | | | | |
| Selenium | | 0.500 | ND | 0.498 | 99.6% | | 80% - 120% | | | | |
| Silver | | 0.500 | 0.037 | 0.536 | 99.8% | | 80% - 120% | | | | |
| | | | | | | | | | | | |

ND - Parameter not detected at the stated detection limit.

References:

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

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

SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission.

SW-846, USEPA, December 1996.

Comments:

QA/QC for sample G875.

Analyst

Review

CHAIN OF CUSTODY RECORD

| Client / Project Name | | | Project Location | Panyon CDP | | ANALYSIS / PARAMETERS | | | | | | | | | | | | | |
|----------------------------|--|-----------------------------------|--|--|---|--|--------|-----------------|---------------------------------------|---------------------------------------|--|--|--|--|--|--|--|--|--|
| Sampler: B:11 Beeu | PDS | to constant a second facility and | Client No. 70 5 | ************************************** | | (d). | | | Heman | us . | | | | | | | | | |
| Sample No./ | Sample
Date | Sample
Time | Lab Number | Sample
Matrix | No. of
Containers | 0, T
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| Glass
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| VOA " " | /' | /1 | | " | | | * | // | | | | | | | | | | | |
| Plastic Water | /. | ,, · | | /, | | | | 11 | | | | | | | | | | | |
| . , | | | | | | | | | | | | | | | | | | | |
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| Relinquished by: (Signatur | e) | | | | Received by: (| Signature) | | • | | | | | | | | | | | |
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District I 1625 M. French Dr., Hobbs, NM 88240 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV

State of New Mexico Energy Minerals and Natural Resou

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505 RECEIVED

Form C-138 Revised March 17, 1999

NOV 2 9 2000

Submit Original Plus 1 Copy to Appropriate District Office

District IV
2040 South Pachezo, Santa Fe, NM 87505

Environmental Bureau
Cil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| REQUEST FOR ATTROVAL TO ACCEPT: | SOLID WASTE |
|--|---|
| 1. RCRA Exempt: Non-Exempt: X | 4. Generator Williams Field Services |
| Verbal Approval Received: Yes No | 5. Originating Site MILA gro Plan + |
| 2. Management Facility Destination Vey DISPOSAL | 6. Transporter Key |
| 3. Address of Facility Operator 345 AZICC NM CR 3500 | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) # 192 CR 4900 Blownfield, NM 87413 | |
| 9. <u>Circle One</u> : | |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by ne material is not-hazardous and the Generator's certification of origin. No waste class approved | cessary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transporters | ort. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| WASTE WATER MIXED WITH VACIOUS Chemice NATURAL BAS processions NOV 2000 | DEC 2000 RECEIVED OIL CON. DIV DIST. 3 |
| | 8.50.30.310.310.310.310.310.310.310.310.310 |
| Estimated Volume 5000 bb/s tcy Known Volume (to be entered by the oper | ator at the end of the haul)cy |
| SIGNATURE Waste Management Facility Authorized Agent TITLE: Mee | DATE: //-28-00 |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TELEF | HONE NO. <u>505-334-6/86</u> |
| | |
| (This space for State Use) | |
| APPROVED BY: Dent tent TITLE: 600 100 | 2/3/ DATE: 11/28/00
n.ks/ Gewlegs/ DATE: 11/29/∞ |

District I
1625 N. French Dr., Hobbs, NM 88240
District II
311 South Fira, 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 Resource

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 APPROVAL TO ACCEPT SOLID WASTE

| 1. RCRA Exempt: Non-Exempt: X | 4. Generator Williams Field Services |
|--|--|
| Verbal Approval Received: Yes No X | 5. Originating Site MILA GAO Plan + |
| 2. Management Facility Destination Way Disposal | 6. Transporter Key |
| 3. Address of Facility Operator #345 42+80 NM CR 3500 | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) # 19202 4900 Bloomfield, NM 87413 | |
| 9. <u>Circle One</u> : | |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by a one certificate per job. (B.) All requests for approval to accept non-exempt wastes must be accompanied by new material is not-hazardous and the Generator's certification of origin. No waste class approved | cessary chemical analysis to PROVE the |
| All transporters must certify the wastes delivered are only those consigned for transporters | ort. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| WASTE WATER MIXED WITH VARIOUS Chemic | wti from |
| WASTE WATER MIXED WITH WARRENS Chemic NATURAL GAS PRICESSING NOV 2000 NOV | NEW ANAlysis |
| <i>→</i> + + | ator at the end of the hawcy |
| SIGNATURE Waste Management Facility Authorized Agent TITLE: Mee | DATE: //-28-00 |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TELEP | PHONE NO. <u>505-334-6/86</u> |
| (This space for State Use) | |
| APPROVED BY: Demy Terry TITLE: Feo lo | 915T DATE: 11/28/00 |
| APPROVED BY: TITLE: | DATE: |

District 1 - (505) 393-6161

District II - (505) 748-1283 811 S. First

Aztec, NM 87410

<u>District IV</u> - (505) 827-7131

2040 S. Parbeco

1625 N. French Dr Hobes, NM 88240

Artesia, NM 88210 <u>Pistrict III</u> - (905) 334-6178 1000 Rio Brazos Road

Santa Fc, NM 87505

Form C-143

3/15/00

New Mexico

Energy Minerals and Natural Resources Department

Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131 Submit to OCD
Permitted Surface
Waste Management
Facility

GENERATOR CERTIFICATE OF WASTE STATUS

| . Waste Generator Name and Address; | 2.Permit Number (if waste generated at an OCD |
|---|---|
| Williams Field Services
Milagro Plant
#192 County Road 4900
Bloomfield, NM 87413 | permitted facility) |
| Description of Waste and Generating Process: | 4. Location of Waste (Street address &/or ULSTR)): |
| Waste aqueous liquids comprised of produced water and other impurities from natural gas along with amine and other liquids from natural gas processing. | Milagro Plant
#192 CR 4900
Bloomfield, NM 87413 |
| 5. Destination (Surface Waste Management Facility): | 6. Transporter: |
| Key Disposal or other
NMOCD permitted facility
7. Estimated Volume <u>500</u> ey Abbls per month | Various SJA service providers |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | |
| For NON-EXEMPT waste only, the following documentation is a | ttached (check appropriate items): |
| MSDS Information X Custody). | _ RCRA Hazardous Waste Analysis (With Chain of |
| | - process generating this waste has
Last waste characterization. |
| Generator certifies that, according to the Resource Conservation
Agency's July 1988 regulatory determination, the above describe | n and Recovery Act (RCRA) and the Environmental Protection ed waste is: (check appropriate classification) |
| EXEMPT oilfield waste. | X NON-EXEMPT oilfield waste that is non-hazardous pursuant to 40 CFR Part 261. (Attach appropriate documentation) |
| n addition. Generator certifies that nothing has been added to the vaste does not contain Naturally Occurring Radioactive Materia Subpart 1403. | his exempt or non-exempt non-hazardous waste and that this I (NORM) regulated pursuant to 20 NMAC 3.1 |
| Generator Signature: 1112 ON CEMALI | FOF WILLIAMS Date: 1/-27-CO |
| Print Name: Mark Harvey for Williams | |

QWAL LABORATORIES, INC.

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

LABORATORY REPORT: REFERENCE #: 0011535 SENT WILLIAMS FIELD SERVICE DATE REPORTED: 11/22/00 DATE COLLECTED: 295 CHIPETA WAY 11/17/00 SALT LAKE CITY, UTAH 94158 DATE RECEIVED: 11/21/00 MARK HARVEY P.O. #:

PROJECT: MILAGRO PONDS

Sample ID: MIL-POND-C-01

Collection Date: 11/17/00 08:05:00

Sample Matrix: WATER

| TEST | METHOD-CAS # | RESULT | UNITS | PQL | ANALYZED | EXTRACTED |
|----------------------|--------------|-----------|----------|---------|--------------------|-----------|
| METAL PREPARATION | EPA 3010 | IL001121C | <u> </u> | | 11/21/00JH | |
| SILVER, TOTAL | EPA 200.7 | <0.01 | MG/L | 0.01 | 11/22/00RD | 2 |
| ARSENIC, TOTAL | EPA 200.7 | 0.12 | MG/L | 0.01 | 11/22/00RDG | 2 |
| BARIUM, TOTAL | EPA 200.7 | .0.12 | MG/L | 0.005 | 11/22/00RD | 2 |
| CADMIUM, TOTAL | EPA 200.7 | 0.019 | MG/L | 0.005 | 11/22/00RD0 | |
| CHROMIUM, TOTAL | EPA 200.7 | 10.0 | MG/L | 0.01 | 11/22/00RD | 2 |
| MERCURY, TOTAL | EPA 245.1 | <0.0002 | MG/L | 0.0002 | 11/22/00 XM | |
| LEAD, TOTAL | EPA 200.7 | 0.10 | MG/L | 0,01 | 11/22/00RD | 2 |
| SELENIUM, TOTAL | EPA 200.7 | .029 | MG/L | 0.01 | 11/22/00RD | · · |
| REACTIVE CYANIDE | SW846 SEC7_3 | <0.001 | MG/L | 0.001 | 11/22/00MS | |
| REACTIVE SULFIDE | SEC.7.3.4.1 | <0.05 | MG/l | 0 . 0:5 | 11/22/00MS2 | 2 |
| TOTAL ORGANIC HALOGE | SW 846 9020 | 362.4 | UG/L | 5.0 | 11/22/00MB | |
| TPH GRO | 9015G/OA1 | 107 | UG/L | 500 | 11/11)00MB | |
| BTEX | OA1/8021B | | · | 3.0 | | |
| BENZENE | 71-43-2 | ND | UG/L | 1.0 | 11/21/00MB | |
| TOLUENE | 108-88-3 | 2.81 | | 1.0 | 11/11/00MB | , |
| ethylbenzene | 100-41-4 | ND | UG/L | 1.0 | 11/21/00MB | |
| TOTAL XYLENES | 1330-20-7 | 3.16 | UG/L | 1.0 | 11/21/00 MB | |
| BFB (SURROGATE) | - | 114 | | 75 | . , | |

ND=NONE DETECTED POL=PRACTICAL QUANTITATION LIMIT SU=STANDARD UNITS *BACKGROUND CONTAMINATION SUR=SURROGATE Q=OUTSIDE LIMITS B=DETECTED IN METHOD BLANK

APPROVED BY: LERRY KOESTER

TERRY KOESTER LABORATORY DIRECTOR

REFERENCE #: 0011535 PAGE: 1

Q.W.A. .. ABORATOR ES, NC.

Established 1976
2911 Rotary Terrace • Pittsburg, Kansas 66762
TO ORDER: FAX 1-316-232-7730 OR PHONE 1-316-232-1970

0011535

| 0.0 | | | | Phone | N. | | | | | | | | | 6 | 1177 | DNA | TO OI | INID | TIM | u b c | ·/\/ 18 | renz. | D (| A . / .) | 10000 | Cha | | fay Apply) |
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| O Company Name: WILLIAMS FIEL | n saav | اردر | | rnone | | 15- | 63 |) - I | ل ل | | ~ | | | | | | | | | | | | | | | | | SameDay |
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| City, State, Zip Code | | | | | | | | | | | | | • | | | ٣ | A | | H | سلا | | | | ats He | | Y. | UI | EST |
| (2) Project Name or Number | | | (5 | Purch | ase (|)rder | #: | | | | | | | | 7 | T | | | Γ | T | Τ` | T | 7 | | Ţ | \top | T | T |
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District I - (505) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 trict III • (505) 334-6178 7 Rio Brazos Road در, NM 87410 District IV - (505) 827-7131

Generator; one certificate per job.

listing or testing will be approved.

APPROVED BY:

Energy.

New Mexico anerals and Natural Resources Epartment Oil Conservation Division

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

Form C-138 Originated 8/8/95

> Submit Original Plus 1 Čopy to appropriate District Office

| 1. | RCRA Exempt: Non-Exempt: | 4. Generator WFS |
|----|--|-------------------------------------|
| | Verbal Approval Received: Yes No 🗸 | 5. Originating Site LA MAQUINA Plan |
| 2. | Management Facility Destination KEY DISPOSAL | 6. Transporter Key |
| 3. | Address of Facility Operator #345 CR 3500 AZIEC NM | 8. State NM |
| 7. | Location of Material (Street Address or ULSTR) CR 2770 AZHC NM | |
| 9. | Circle One: | |

All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the

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

All transporters must certify the wastes delivered are only those consigned for transporters BRIEF DESCRIPTION OF MATERIAL: OIL CON. DIV Exempt Plant Fluid DIST 3

Estimated Volume < 1000kb/s cy Known Volume (to be entered by the operator at the end of the haul) — Waste Management Facility Authorized Agent TYPE OR PRINT NAME: MICH TELEPHONE NO. -(This space for State Use)

CERTIFICATE OF WASTE STATUS

| | 2. Destination Name: | | |
|--|---|--|--|
| WILLIAMS ENERGY GROUP
3.8 MILES EAST ON CR 2770 - AZTEC | 1/11 (| | |
| | KEY ENTREY DISPOSAL | | |
| 192 CR 4960 | | | |
| BLOOMFIELD, N.M. 87413 | Louding of the Micros (Chrock address 9 for ill CTD): | | |
| | Location of the Waste (Street address &/or ULSTR): | | |
| WILLIAMS ENERLY GROW | P | | |
| LA MAQUINA PLANT | | | |
| Attach list of originating sites as appropriate 3, 8, | GILES EAST ON CR STO ACTEC, N.M. 87410 | | |
| 4. Source and Description of Waste | | | |
| 90% DI WATER | | | |
| 5% Anint | | | |
| 5% TRYETHELENE CAYES | 2 | | |
| | | | |
| À | | | |
| 1. CHARLES TEMPLETON | representative for: | | |
| WILLIAMS ENERGY GROW | do hereby certify that, according | | |
| to the Resource Conservation and Recovery Act (R | CRA) and Environmental Protection Agency's July, 1998, regulatory | | |
| determination, the above-described waste is: (Chec | | | |
| | | | |
| \/ | | | |
| | ON-EXEMPT oilfield waste which is non-hazardous by characteristic | | |
| EXEMPT oilfield wasteNC an | ON-EXEMPT oilfield waste which is non-hazardous by characteristic alysis or by product identification | | |
| EXEMPT citfield wasteNC and that nothing has been added to the exempt or r | alysis or by product identification | | |
| an | alysis or by product identification | | |
| an | alysis or by product identification on-exempt non-hazardous waste defined above. | | |
| and that nothing has been added to the exempt or r | alysis or by product identification on-exempt non-hazardous waste defined above. | | |
| and that nothing has been added to the exempt or reached to the exempt of t | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |
| and that nothing has been added to the exempt or r INDIVIDUAL TO THE SEMPT waste only the following documents of the sempt or r MSDS Information RCRA Hazardous Waste A | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |
| and that nothing has been added to the exempt or reached to the exempt of reached to the exempt | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |
| and that nothing has been added to the exempt or r OF NON-EXEMPT waste only the following docume MSDS Information RCRA Hazardous Waste A Chain of Custody | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |
| and that nothing has been added to the exempt or removed in the following documents and the second of the exempt or removed in the following documents and the following documents are considered and the following documents and the following documents and the following documents are considered and the following documents and the following documents are considered and the following documents and the following documents are considered and the following documents are consi | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |
| and that nothing has been added to the exempt or r OF NON-EXEMPT waste only the following docume MSDS Information RCRA Hazardous Waste A Chain of Custody | alysis or by product identification non-exempt non-hazardous waste defined above. entation is attached (check appropriate items):Other (description): | | |

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

APPROVED BY:

Energy

New Mexico
Inerals and Natural Resources
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

(505) 827-7131

artment عر

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 Bowen 160LS |
| Verbal Approval Received: Yes No X | 5. Originating Site YARD |
| 2. Management Facility Destination (EY DIS post | 6. Transporter UCY |
| 3. Address of Facility Operator #345 C23500 Azlee N m | 8. State MM |
| 7. Location of Material (Street Address or ULSTR) 314 USHW 64 | |
| 9. Circle One: 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. B. 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. |
| Estimated Volume Sobbls cy Known Volume (to be entered by the open | OCT 2000 CEIVED CEZULLA Derrator at the end of the haul) ———————————————————————————————————— |
| SIGNATURE: Masse Management Facility Authorized Agent TITLE: MGE | DATE: 10-19-200 |
| TYPE OR PRINT NAME: MICHAEL TALOUIEL TE | LEPHONE NO. 505-334-6186 |
| (This space for State Use) APPROVED BY: Down Town TITLE: Good | 09/5/ DATE: 10/19/00 |

TITLE:

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: | | | |
|--|--|--|--|--|
| National Dilwell
Down hole Tools | KEY ENERGY DISPOSAL | | | |
| Down hole 100/s | RETERIOT BIOF COAL | | | |
| (Bowen Tools) | | | | |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): | | | |
| Shop SUMP (TONK) | | | | |
| Attach list of originating sites as appropriate | | | | |
| 4. Source and Description of Waste | - Co To G Made CARS The | | | |
| CITY WATER USED 10 | Clean look Water 9000 Ino | | | |
| seferator + irst. I his w | ater is only usod locked | | | |
| oilfield Tools | clean Tools water goes thru ater is only usod To Elean | | | |
| d' | · | | | |
| · · · · · · · · · · · · · · · · · · · | | | | |
| 1, John Shafer | representative for: | | | |
| National Oil Well do hereby certify that, according | | | | |
| | do hereby certify that, according RCRA) and Environmental Protection Agency's July, 1998, regulatory | | | |
| determination, the above-described waste is: (Che | | | | |
| | | | | |
| | ON-EXEMPT oilfield waste which is non-hazardous by characteristic nalysis or by product identification | | | |
| and that nothing has been added to the exempt or | non-exempt non-hazardous waste defined above | | | |
| and that hothing has been added to the exempt of | non-exempt non-nazardous waste defined above. | | | |
| For NON-EXEMPT waste only the following documentation is attached (check appropriate items): | | | | |
| MSDS Information | Other (description): | | | |
| RCRA Hazardous Waste Analysis | | | | |
| Chain of Custody | | | | |
| | | | | |
| Name (Original Signature): | | | | |
| Name (Original Signature): | Shopen | | | |
| Name (Original Signature): / / / / Manage | Shope | | | |

District I - (505) 393-6161 P. O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 83210

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division

(505) 827-7131

Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Form C-138 Originated 8/8/95

Submit Original Plus 1 Copy

to appropriate

District Office

Trict III - (505) 334-6178
Rio Brazos Road
C, NM 87410
District IV - (505) 827-7131

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE | | |
|--|--|--|--|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator WFS | | |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating Site Light Maguing | | |
| 2. Management Facility Destination KEY DISPOSAL | 6. Transporter Key | | |
| 3. Address of Facility Operator #345 CR 3500 AZ tec NM | 8. State NM | | |
| 7. Location of Material (Street Address or ULSTR) 192 CL 4900 87413 | | | |
| 9. Circle One: | | | |
| All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. | | | |
| All transporters must certify the wastes delivered are only those consigne | d for transport. | | |
| BRIEF DESCRIPTION OF MATERIAL: | | | |
| D.I water mined with 3MAL/AMON. Amino + TRYETHYLENE Chycol | OCT 2000 PECEIVED OIL CON. DIV DIST. 3 | | |
| Estimated Volume 1200 bb /s cy Known Volume (to be entered by the op | perator at the end of the haul) ———————————————————————————————————— | | |
| SIGNATURE: Waste Management Facility Authorized Agent TITLE: MCOL | DATE: 10-4-2000 | | |
| TYPE OR PRINT NAME: MICHARIC TALOUICAL TELEPHONE NO. 505-334-6186 | | | |
| (This space for State Use) | 10/10/00 | | |
| APPROVED BY: Demy Kemy TITLE: Geolo | 05/5/ DATE: DATE: | | |
| APPROVED BY: TITLE: | DATE: 10-10-00 | | |

CERTIFICATE OF WASTE STATUS

| 1. Generator Name and Address: 2. Destination Name: | | | |
|---|--|--|--|
| WILLIAMS ENERGY GROSP
3.8 MILES EAST ON CR 2770-AZTEC KEY ENERGY DISPOSAL
192 CR 4900
BLOOMFIELD, N.M. 87413 | | | |
| 3. Originating Site (name): Location of the Waste (Street address &/or ULSTR): | | | |
| WILLIAMS ENERGY GROUP | | | |
| LA MAQUINA PLANT | | | |
| LA Madrish 1000 | | | |
| Attach list of originating sites as appropriate 3,8 MILES EAST ON C.R. 2770 AZTEC, N.M. 87410 | | | |
| 4. Source and Description of Waste | | | |
| 90% DI WATER
5% AMINE
5% TRYET: HYLENE GLYCOL | | | |
| | | | |
| | | | |
| I, CHARLES TEMPLETON representative for: | | | |
| 1.(| | | |
| WILLAMS ENERGY GROUP do hereby certify that, according | | | |
| to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory determination, the above-described waste is: (Check appropriate classification) | | | |
| determination, the above-described waste is. (Check appropriate dassinguish) | | | |
| 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. | | | |
| | | | |
| NON-EXEMPT waste only the following documentation is attached (check appropriate items): | | | |
| • | | | |
| in NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS InformationOther (description): | | | |
| NON-EXEMPT waste only the following documentation is attached (check appropriate items): | | | |
| in NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS InformationOther (description): | | | |
| NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS InformationOther (description):RCRA Hazardous Waste Analysis | | | |
| MSDS InformationOther (description): RCRA Hazardous Waste Analysis Chain of Custody | | | |
| NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS InformationOther (description):RCRA Hazardous Waste Analysis | | | |
| MSDS InformationOther (description): RCRA Hazardous Waste Analysis Chain of Custody | | | |

P. O. Box 1980 Hobbs, NM 88241-1980 Diarrice U. (505) 748-1283 811 S. First Artesia, NM 88210 P'rtrict III - (505) 334-6178 Rio Brazos Road c, NM 87410 Dia

CW exico rals and Natural Resources Department RECEIVED Oil Conservation Division 2040 South Pacheco Street

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

OCT 0 5 2000

Environmental Bureau

Form C-138 Originated 8/8/9

> Submit Origin: Plus I Cop to appropriate District Office

| <u>trict IV</u> - (505) 827-7131 | Oil Conservation Division |
|--|---|
| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE |
| 1. RCRA Exempt: Non-Exempt: 1 | 4. Generator 17 Paso field Service |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating Site Chiteo Plan F |
| 2. Management Facility Destination (E) DISPOSAL | 6. Transporter Key |
| 3. Address of Facility Operator #345 AZIEC NM CR 3500 | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) Sec 16,726N, R 12W SHOWN Co. NM | |
| 9. Circle One: | |
| 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. All transporters must certify the wastes delivered are only those consigned. | ompanied by necessary chemical analysis to on of origin. No waste classified hazardous by |
| BRIEF DESCRIPTION OF MATERIAL: | - 0000 |
| Contract where the flower Don't | OCT 2000 SIST 3 |
| Estimated Volume At LEAST 2500bb/s cy Known Volume (to be entered by the operation of the contract of the cont | |
| SIGNATURE: Masse Management Facility Authorized Agent TITLE: MOS | DATE://O-3-2000 |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TE | LEPHONE NO. <u>505-334-6/8</u> 5 |
| (This space for State Use) | |

TITLE: Environmental Geologist

DATE: 10

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 86210
Protect III - (505) 334-6178
Rio Brazos Road
Conc., NM 87410

District IV - (505) 827-7131

New Mexico Energy Mexico Trals and Natural Resources De tment 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: V | 4. Generator El Paso field Service | | |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating SiteChtec Plan + | | |
| 2. Management Facility Destination (Fy Dispose) | 6. Transporter Key | | |
| 3. Address of Facility Operator #345 AZtec Nm 62 3500 | 8. State NM | | |
| 7. Location of Material (Street Address or ULSTR) Sec 16, 726N, R12 W | | | |
| 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 | d for transport. | | |
| BRIEF DESCRIPTION OF MATERIAL: | | | |
| Contract instrument from Plant | | | |
| Waste Maragement Facility Authorized Agent | DATE: 10-3-2000 | | |
| TYPE OR PRINT NAME: MICHAEL TALOUICH TE | LEPHONE NO. <u>525-334-6/8</u> | | |
| | | | |
| (This space for State Use) | | | |
| APPROVED BY: TITLE: | DATE: | | |
| APPROVED BY: TITLE: | DATE: | | |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: | | |
|---|--|--|--|
| El Profield Services | KEY ENERGY DISPOSAL | | |
| 614 Reilly Avenue | | | |
| FARMINISTEN N.M. B7401 | -* | | |
| Originating Site (name): | Location of the Waste (Street address &/or ULSTR): | | |
| chiteo Plant | Sec 16, TZEN, RIZW SAN JUNIO CE. NA | | |
| Attach list of originating sites as appropriate | | | |
| Source and Description of Waste | | | |
| Contact waste water from D/ | ant | | |
| a ² | | | |
| I, MICHAEL DI HANSEN representative for: | | | |
| to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory determination, the above-described waste is: (Check appropriate classification) | | | |
| EXEMPT oilfield wasteX NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification | | | |
| and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above. | | | |
| For NON-EXEMPT waste only the following documentation is attached (check appropriate items): | | | |
| Other (description): | | | |
| RCRA Hazardous Waste Analysis | | | |
| XRCRA Hazardous Waste | e Analysis | | |
| Chain of Custody | e Analysis | | |
| Chain of Custody | ·
// | | |
| Chain of Custody | ·
// | | |



SUSPECTED HAZARDOUS **WASTE ANALYSIS**

.

Client:

EPFS

Project #:

705729

Sample ID:

2000 bbl Waste Water

Date Reported:

·· 08-10-00

Lab ID#:

H881

Date Sampled:

08-09-00

Sample Matrix:

Water

Date Received:

08-09-00

Preservative:

Cool

Date Analyzed:

08-10-00

Condition:

Cool and Intact

Chain of Custody:

8108

Parameter

Result

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 4.58

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.

"hristini of Walters



EPMETHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

| Client: | EPFS | Project #: | 705729 |
|--------------------|----------------------|---------------------|----------|
| Sample ID: | 2000 bbl Waste Water | Date Reported: | 08-11-00 |
| Laboratory Number: | H881 | Date Sampled: | 08-09-00 |
| Chain of Custody: | 8108 | Date Received: | 08-09-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 08-11-00 |
| 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) | 0.0444 | 0.0001 | 200 |
| Chloroform | ND | 0.0001 | 6.0 |
| Carbon Tetrachloride | ND | 0.0001 | 0.5 |
| Benzene | 0.165 | 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 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:

Chaco Plant.

Allen L. Open

Review Mristin M Walters



E METHOD 8040 PHENOLS

| Client: | EPFS | Project #: | 705729 |
|--------------------|----------------------|---------------------|----------|
| Sample ID: | 2000 bbl Waste Water | Date Reported: | 08-11-00 |
| Laboratory Number: | H881 | Date Sampled: | 08-09-00 |
| Chain of Custody: | 8108 | Date Received: | 08-09-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 08-11-00 |
| 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.

Analyst

Review Misteri M Westers



_./A Method 8090 Nitroaromatics and Cyclic Ketones TCLP Base/Neutral Organics

| | • | | |
|--------------------|----------------------|------------------------------|----------|
| Client: | EPFS | Project #: | 705729 |
| Sample ID: | 2000 bbl Waste Water | Date Reported: | 08-11-00 |
| Laboratory Number: | H881 | Date Sampled: | 08-09-00 |
| Chain of Custody: | 8108 | Date Sampled: Date Received: | 08-09-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 08-11-00 |
| 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

97%

References:

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

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

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

Note:

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

Comments:

Chaco Plant.

Den L. Geleven

Review Mristini M Walters



| | | | Det. | Regulatory |
|--------------------|---|----------------------|------------------|-------------|
| Condition: | • | Cool & Intact | Analysis Needed: | TCLP metals |
| Preservative: | | Cool | Date Extracted: | N/A |
| Sample Matrix: | | Water | Date Analyzed: | 08-10-00 |
| Chain of Custody: | | 8108 | Date Received: | 08-09-00 |
| Laboratory Number: | | H881 | Date Sampled: | 08-09-00 |
| Sample ID: | | 2000 bbl Waste Water | Date Reported: | 08-10-00 |
| Client: | | EPFS | Project #: | 705729 |

| Parameter | Concentration
(mg/L) | Limit
(mg/L) | Level
(mg/L) |
|-----------|-------------------------|-----------------|-----------------|
| Parameter | (IIIg/L) | (mg/L) | (111972) |
| Arsenic | 0.130 | 0.001 | 5.0 |
| Barium | ND | 0.001 | 100 |
| Cadmium | 0.118 | 0.001 | 1.0 |
| Chromium | 0.167 | 0.001 | 5.0 |
| Lead | 0.190 | 0.001 | 5.0 |
| Mercury | ND | 0.001 | 0.2 |
| Selenium | 0.021 | 0.001 | 1.0 |
| Silver | 0.007 | 0.001 | 5.0 |

ND - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA,

December 1996.

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

Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission

SW-846, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Chaco Plant.

Analyst:

Review Mostan Mastan



QUALITY ASSURANCE / QUALITY CONTROL DOCUMENTATION



EP. _THODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS Quality Assurance Report

| Client: | QA/QC | Project #: | N/A |
|--------------------|--|-------------------------------|----------|
| Sample ID: | Laboratory Blank | Date Reported: | 08-11-00 |
| Laboratory Number: | The state of the s | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Sampled: Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 08-11-00 |
| 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 sample H881.

Analyst P. Officer

Review Misters Multers



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

| Client: Sample ID: Laboratory Number: Sample Matrix: Analysis Requested: | QA/QC Matrix Duplicate H881 Water TCLP | Date Received: Date Analyzed: | N/A
08-11-00
N/A
N/A
08-11-00 |
|--|--|--------------------------------|---|
| Condition: | N/A | Date Extracted: | N/A |
| • | · | • | |

| | Duplicate | | | | | | | | |
|----------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------------------|----|----|--------|------|
| Parameter | Sample
Result
(mg/L) | Sample
Result
(mg/L) | Detection
Limits
(mg/L) | Percent
Difference | | | | | |
| | | | | | Vinyl Chloride | ND | ND | 0.0001 | 0.0% |
| | | | | | 1,1-Dichloroethene | ND | ND | 0.0001 | 0.0% |
| 2-Butanone (MEK) | 0.0444 | 0.0444 | 0.0001 | 0.0% | | | | | |
| Chloroform | ND | ND | 0.0001 | 0.0% | | | | | |
| Carbon Tetrachloride | ND | ND | 0.0001 | 0.0% | | | | | |
| Benzene | 0.165 | 0.165 | 0.0001 | 0.0% | | | | | |
| 1,2-Dichloroethane | ND | ND | 0.0001 | 0.0% | | | | | |
| Trichloroethene | ND | ND | 0.0003 | 0.0% | | | | | |
| Tetrachloroethene | ND | ND | 0.0005 | 0.0% | | | | | |
| Chlorobenzene | ND | ND | 0.0003 | 0.0% | | | | | |
| 1,4-Dichlorobenzene | ND | ND | 0.0002 | 0.0% | | | | | |

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample H881.

Analyst

Review Mustini My Walters



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

| Client: | QA/QC | Project #: | N/A |
|---------------------|--------------|-----------------|-----------|
| Sample ID: | Matrix Spike | Date Reported: | 08-11-00- |
| Laboratory Number: | H881 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Analysis Requested: | TCLP | Date Analyzed: | 08-11-00 |
| 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) | 0.0444 | 0.050 | 0.0939 | 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 | 0.165 | 0.050 | 0.215 | 0.0001 | 100% | 39-150 |
| 1,2-Dichloroethane | ND | 0.050 | 0.0494 | 0.0001 | 99% | 51-147 |
| Trichloroethene | ND | 0.050 | 0.0494 | 0.0003 | 99% | 35-146 |
| Tetrachloroethene | ND | 0.050 | 0.0494 | 0.0005 | 99% | 26-162 |
| Chlorobenzene | ND | 0.050 | 0.0494 | 0.0003 | 99% | 38-150 |
| 1,4-Dichlorobenzene | ND | 0.050 | 0.0494 | 0.0002 | 99% | 42-143 |

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample H881.

Allen L. Genn

Review Misters Malters



Quality Assurance Report Laboratory Blank

to to the same

| Client: | QA/QC | Project #: | N/A |
|--------------------|------------------|---------------------|----------|
| Sample ID: | Laboratory Blank | Date Reported: | 08-11-00 |
| Laboratory Number: | 08-11-TCA | Date Sampled: | N/A |
| Sample Matrix: | 2-Propanol | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 08-11-00 |
| 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 H881.

Analyst L. Office

Review Mister Multers



EPA METHOD 8040 PHENOLS Quality Assurance Report

| Client: | QA/QC | Project #: | N/A |
|--------------------|---------------|---------------------|----------|
| Sample ID: | Method Blank | Date Reported: | 08-11-00 |
| Laboratory Number: | 08-11-TCA-MB | Date Sampled: | · N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | N/A |
| Condition: | Cool & Intact | Date Analyzed: | 08-11-00 |
| | • | Analysis Requested: | TCLP |

| Parameter | 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 sample H881.

Den P. Officer

Review Misting Wester



EPA METHOD 8040 PHENOLS Quality Assurance Report

| Client: | QA/QC | Project #: | N/A |
|--------------------|------------------|---------------------|----------|
| Sample ID: | Matrix Duplicate | Date Reported: | 08-11-00 |
| Laboratory Number: | H881 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | N/A |
| Condition: | Cool & Intact | Date Analyzed: | 08-11-00 |
| | | Analysis Requested: | TCLP |

| Parameter | Sample
Result
(mg/L) | Duplicate
Result
(mg/L) | Detection
Limit
(mg/L) | Percent
Difference |
|-----------------------|----------------------------|-------------------------------|------------------------------|-----------------------|
| o-Cresol | ND | ND | 0.020 | 0.0% |
| p,m-Cresol | ND | ND | 0.040 | 0.0% |
| 2,4,6-Trichlorophenol | ND | ND | 0.020 | 0.0% |
| 2,4,5-Trichlorophenol | ND | ND | 0.020 | 0.0% |
| Pentachlorophenol | ND | ND | 0.020 | 0.0% |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter | Maximum Difference |
|----------------------------|----------------|--------------------|
| | 8040 Compounds | 30.0% |

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

QA/QC for sample H881.

Den L. Oglecon

Review Misting Watters



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

| | | and the same of th | |
|----------------------------|------------------|--|----------|
| Client: | QA/QC | Project #: | N/A |
| Sample ID: | Laboratory Blank | Date Reported: | 08-11-00 |
| Laboratory Number: | 08-11-TBN | Date Sampled: | N/A |
| Sample Matrix: | Hexane | Date Received: | N/A |
| Preservativ s : | N/A | Date Extracted: | N/A |
| Condition: | N/A | Date Analyzed: | 08-11-00 |
| | | Analysis Requested: | TCLP |
| | | | |

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

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria | Parameter | Percent Recovery |
|---------------------------|-----------|------------------|
| | | |

2-fluorobiphenyl

100%

References:

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

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

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

Note:

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

Comments:

QA/QC for sample H881.

Allen L. Cepine

Priotini M Walters



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: | 08-11-0 0- - |
| Laboratory Number: | 08-11-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: | 08-11-00 |
| | • | Analysis Requested: | TCLP |
| | | | |

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

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria | | Parameter | Percent Recovery |
|---------------------------|-------------------------|---|----------------------------|
| , | | 2-fluorobiphenyl | 100% |
| References: | Method 3510, Separato | Characteristic Leaching Procedure, S
ry Funnel Liquid-Liquid Extraction, S
natics and Cyclic Ketones, SW-846, | SW-846, USEPA, July 1992. |
| Note: | Regulatory Limits based | i on 40 CFR part 261 Subpart C sec | tion 261.24, July 1, 1992. |

Comments: QA/QC for sample H881.

Den L. Ceferen

Review Moster



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: | 08-11-00 |
| Laboratory Number: | H881 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | N/A |
| Condition: | N/A | Date Analyzed: | 08-11-00 |
| | | Analysis Requested: | TCLP |

| Parameter | Sample
Result
(mg/L) | Duplicate
Result
(mg/L) | Percent
Difference | Det.
Limit
(mg/L) |
|---------------------------|----------------------------|-------------------------------|-----------------------|-------------------------|
| Duridino | ND | ND | 0.00/ | |
| Pyridine Hexachloroethane | ND
ND | ND
ND | 0.0%
0.0% | 0.020 |
| Nitrobenzene | ND
ND | ND
ND | 0.0% | 0.020
0.020 |
| Hexachlorobutadiene | ND | ND | 0.0% | 0.020 |
| 2,4-Dinitrotoluene | ND | ND | 0.0% | 0.020 |
| HexachloroBenzene | ND | ND | 0.0% | 0.020 |

ND - Parameter not detected at the stated detection limit.

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

References:

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

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

Note:

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

Comments:

QA/QC for sample H881.

hristini my Walters



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

| QA/QC | Project #: | · N/A |
|------------------------|-------------------------|---|
| 08-10-TCM QA/QC | Date Reported: | 08-10-00 |
| `H881 `- *₄ | Date Sampled: | N/A |
| Water | Date Received: | N/A |
| TCLP Metals | Date Analyzed: | 08-10-00 |
| N/A | Date Extracted: | N/A |
| | 08-10-TCM QA/QC
H881 | 08-10-TCM QA/QC Date Reported: H881 Date Sampled: Water Date Received: TCLP Metals Date Analyzed: |

| Blank & Duplicate Conc. (mg/L) | Instrument
Blank | Method
Blank | Detecti
Limit | <i>ವಿಕ್ಟೇ</i> ಕರ್ಮಿಸಿದ್ದಾರೆ##ಗಳನ | Duplicate | %
Diff. | |
|--------------------------------|---------------------|-----------------|------------------|----------------------------------|-----------|------------|----------|
| Arsenic | ND | ND | 0.001 | 0.130 | 0.131 | 0.8% | 0% - 30% |
| Barium | ND | ND | 0.001 | ND | ND | 0.0% | 0% - 30% |
| Cadmium | ND " | ND | 0.001 | 0.118 | 0.117 | 0.8% | 0% - 30% |
| Chromium | ND | ND | 0.001 | 0.167 | 0.169 | 1.2% | 0% - 30% |
| Lead | ND | ND | 0.001 | 0.190 | 0.193 | 1.6% | 0% - 30% |
| Mercury | ND | ND | 0.001 | ND | ND | 0.0% | 0% - 30% |
| Selenium | ND | ND | 0.001 | 0.021 | 0.021 | 0.0% | 0% - 30% |
| Silver | ND . | ND | 0.001 | 0.007 | 0.007 | 0.0% | 0% - 30% |

| Spike
Conc:(mg/L) | Spike
Added | Sample | e Spiked
Sample | TO STATE OF THE SHARE PROPERTY CANDESS AND ACT | Acceptance Range |
|----------------------|----------------|--------|--------------------|--|------------------|
| Arsenic | 0.500 | 0.130 | 0.629 | 99.8% | 80% - 120% |
| Barium | 0.500 | ND | 0.499 | 99.8% | 80% - 120% |
| Cadmium | 0.500 | 0.118 | 0.616 | 99.7% | 80% - 120% |
| Chromium | 0.500 | 0.167 | 0.668 | 100.1% | 80% - 120% |
| Lead | 0.500 | 0.190 | 0.691 | 100.1% | 80% - 120% |
| Mercury | 0.050 | ND | 0.049 | 98.0% | 80% - 120% |
| Selenium | 0.500 | 0.021 | 0.520 | 99.8% | 80% - 120% |
| Silver | 0.500 | 0.007 | 0.506 | 99.8% | 80% - 120% |
| | | | | | |

ND - Parameter not detected at the stated detection limit.

References:

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

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

SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission,

SW-846, USEPA, December 1996.

Comments:

QA/QC for sample H881.

Ånalyst

Review Misting Water

| Client / Project Name Project Location | | | ocation | | | | | | | | | | | | | | |
|--|---|----------------|---|-------------|------------------|---------------------|-----------------------|----------|-----------------|--|-------------|--------------|-----------------|-----------|-------------|---------------|-------------|
| EPFS | ee ^{jit.} | | Chaco Plont | | | | ANALYSIS / PARAMETERS | | | | | | | | | | |
| Sampler: | | | Client No. | | | | Ś | W | | | | | | Re | marks | | |
| HURZEMO M. B | ROLL.S | | 97 | 057-2 | 29 | No. of | Containers | O KR | | | | | | | | | |
| Sample No./ Identification | Sample
Date | Sample
Time | Lab Number | | Sample
Matrix | Z | Cont | ドラ | | | | | | | | | |
| 2000 bliw whe water | 8.9.00 | 11:00 | 1+881 | W | ater | . 5 | — | / | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | |
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8-9 | ate | 1 | ime
G-C |
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| | This parameters, and year on the company of the de- | | a galantini muuquuliy hakkii ee ak ee ee ee ahaa ka ahaan ayaabaa | ENV | IDO, | TEC | | 100 | <u> </u> | | | | Sam | ple Re | ceipt | <u>l-</u> | |
| | | | | LIIV | IKU | | | | ⊴ . | | | | | | Υ | N | N/A |
| | | • | | | | 6. Highwa | - | | 3:- | | | | Received Inta | act | | | IVA |
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632-061 | | 07401 | | | | | Cool - Ice/Blue | Ice | | | |

District I - (505) 393-6161 P.O. B x 1980 Hobbs NM 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88210 P'-trict III - (505) 334-6178 7 Rio Brazos Road __c, NM 87410 Di

New Mexico

Energ, Ainerals and Natural Resources Department RECEIVED Oil Conservation Division

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

Submit Origin: Plus 1 Cop to appropriat Environmental Bureau District Offic

Form C-138

Originated 8/8/9

SEP 2 1 2000

| atrict IV - (505) 827-7131 | Oil Conservation Division |
|---|--|
| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE |
| 1. RCRA Exempt: Non-Exempt: X | 4. Generator OIL + GAS EQUIPMENT |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating Site YARDSUMP |
| 2. Management Facility Destination Key DISPOSAL | 6. Transporter Key |
| 3. Address of Facility Operator #345 CR 3500 AZ+60 NM | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) 4910 E. MAIN FARMWERT NM 87402 | |
| 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 consigned | d for transport. |
| BRIEF DESCRIPTION OF MATERIAL: CLEANING SUMP FOR PRODUCTION EQUIPMENT WAS CITY WATER MIXED WITH CLEANING AGENTS (| 12-8-99
12-8-99 |
| SIGNATURE: Make Jalon red TITLE: MGA | DATE: 9-19-2000 |
| TYPE OR PRINT NAME: MICHAEL TALOUGH TEL | EPHONE NO. <u>505-334-6186</u> |

| | _ | |
|------------------------------|------------------------------|-----------------|
| (This space for State Use) | | |
| | TITLE: 60/09/5/ | DATE: 9/20/00 |
| APPROVED BY: Mantian of This | TITLE: Environmental Coologi | 4 DATE: 9-21-00 |

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

District IV - (505) 827-7131

مـد NM 87410

Energy

New Mexico

nerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Form C-138 Originated 8/8/95

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

(505) 827-7131

| 1. RCRA Exempt: Non-Exempt: X | 4. Generator OIL + GAS Equipment |
|--|---|
| Verbal Approval Received: Yes No X | 5. Originatimg Site YARDSUMP |
| . Management Facility Destination Key D15 P05AL | 6. Transporter LEV |
| Address of Facility Operator #345 CR 3500 AZHC NM | 8. State N/M |
| . Location of Material (Street Address or ULSTR) 4910 E. MAIN FARMINGTON NM 81402 | |
| D. Circle One: | |
| A. All requests for approval to accept oilfield exempt wastes will be accept accept; one certificate per job. All requests for approval to accept non-exempt wastes must be accept 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 consigned | ed for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| CLEANING SUMP FOR Production Equipment WAS | OTE WATER. |
| City water mixED with Graning AGENTS (SEI 2000 | See MSDS) LAST Filed 12-8-99 |
| Estimated Volume 500 CAL cy Known Volume (to be entered by the co | |
| Estimated Volume (to be entered by the co | operator at the end of the haul) ———————————————————————————————————— |
| SIGNATURE: Masse Mahagement Fecility Authorized Agent TITLE: MG | RDATE: 9-19-2000 |
| | ELEPHONE NO. 505-334-6186 |
| (This space for State Use) | 1 T Ch In |
| APPROVED BY: Demy Kenny TITLE: Geo | 10915/ DATE: 9/20/00 |
| APPROVED BY: TITLE: | DATE: |
| | |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: |
|---|---|
| Dil + GAS Equip | KEY ENERGY DISPOSAL |
| 4910 E. MAIN | |
| FARELING FOR M. F(EX 87402
3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| 3. Onginaxing Site (name): | Location of the vvaste (Street address &/or ULSTR): |
| SAME | SAME. |
| Attach list of originating sites as appropriate | |
| 4. Source and Description of Waste | |
| Hot bath for CLEAN | ing glycol pumps + UALVES |
| USECLIN oilfield Equi | prient. |
| <u>, </u> | |
| 1, Philip Cheney | representative for: |
| to the Resource Conservation and Recovery Act (Figure 1997) determination, the above-described waste is: (Che | do hereby certify that, according RORA) and Environmental Protection Agency's July, 1998, regulatory ck appropriate classification) |
| | ON-EXEMPT oilfield waste which is non-hazardous by characteristic nalysis 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 docum | nentation is attached (check appropriate items): |
| MSDS Information | Other (description): |
| RCRA Hazardous Waste | Analysis $P, H, = 8$ |
| Chain of Custody | • |
| Name (Original Signature) | Theren |
| Title: Pump Shot | |
| | |

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

02/01/89

SUPERSEDES: 12/30/88

ZEP VAT NEUTRALIZER

Product No: 1465 Vat Neutralizer

SECTION I - EMERGENCY CONTACTS

TELEPHONE: (404) 352-1680 MEDICAL EMERGENCY:

10000000000

BETWEEN & OO AM - 5:00 PM (EST)

(770) 439-4200 (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

CHEMTRÉC: (800) 424-9300

TOLL FREE - ALL CALLS RECORDED

DISTRICT OF COLUMBIA: (202) 483-7616

ALL CALLS RECORDED

SECTION II - HAZARDOUS INGREDIENTS

(PPM)

EFFECTS (SEE NOTICE)

% IN PROD.

Date printed: 11/17/99

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

0.25 TOX COR 60-70

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

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

SECTION III - HEALTH HAZARD DATA

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

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

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

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

FIRST AID PROCEDURES:

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

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

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

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

SECTION IV - SPECIAL PROTECTION INFORMATION

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

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

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

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

SECTION V - PHYSICAL DATA

BOILING POINT (F): ~ 220 SPECIFIC GRAVITY: 1.55 VAPOR PRESSURE(mmHg): N/A EVAPORATION RATE (= 1): N/A VAPOR DENSITY(AIR = 1): N/A pH(CONCENTRATE): < 1.0 SOLUBILITY IN WATER: COMPLETE PHIUSE DILUTION OF 1% SOLUTIONI:

VOC CONTENT (CONCENTRATE): 0.0%

APPEARANCE AND ODOR: A COLORLESS LIQUID WITH NO ODOR:

MATERIAL SAFETY DATA SHEET

-SECTION ! ---

KRYLON INDUSTRIAL 31500 SOLON ROAD SOLON, OH 44139 EMERGENCY TELEPHONE NO. (218) 292-7400 INFORMATION TELEPHONE NO. (800) 247-3266

DATE OF PREPARATION 20 - Jul - 94

@1994, The Sherwin-Williams Go.

Primers

PRIMER/KRI

| 8 | | | | | | | All Purpos | e | Rust Ir | hibilive | |
|----------------|---------------------------------|------------------------|-------------|-------------------|--------------|-------|---------------|-------|---------|----------|------------------------|
| S | BECTION II | acqih osha
TLV PEL | Units | Yapot
Pressura | 1340
Zine | 1355 | 1357
Ruddy | 1368 | 1345 | 1346 | 1373
Sandatte Fille |
| | (person by might) | -STEL> -STEL> | • | (mm Hg) | Rich | White | Etro with | Gray | Vellow | Green | Surface |
| 74-08-6 | Propone (propolient) | 1000 | PPM | 780.0 | 15 | 17 | 17 | 17 | 16 | . 16 | 16 |
| 742-60-8 | / V. M. & P. Naphiha | 300 rut | PPM | 12 .0 | 1 | | | | | | 4 , |
| 100-65-3 | Telueno | 50 150 | PPM (Skin | j 22.0 | | 23 | 27 | 27 | G | 6 | |
| 330 7 | Xylene | 00 100
21505 21505 | PPM | 5.9 | 10 | | | | 12 | 12 | íθ |
| 78-83-1 | 2-Melfnyl-1-Propanol | 50 50 | PPM | 8.7 | | | | | | | 2 |
| 78 0 5 | Melityl Ethyl Ketone | <3005 <3005 | PPM | 70.0 | 34 | | | | | | • |
| 87-64-1 | Acutone | < <1000s | PP M | 760.0 | | 34 | .34 | 34 | 48 | 48 | 41 |
| 440-88-6 | · Zind _i | Not Established | 1 | | 38 | | | | | | |
| -00-6 | Taic | 2 2 | Малмз | as | | | | | 5 | 5 | 9 |
| | Therefore Dickide | 10 10(5) | 1 | 88 12I | | 6 | | 3 | | | 1 . |
| 471-04-1 | Zinc Molybdale | Not Established | | | | | | | 2 | 2 | |
| | χ ⁹ '*-, . | | | | | | | | | | |
| | YOC as a percent by weight p | or BAAQMD Rule 4 | 9 | | 59 | 92 | 80 | 82 | 83 | 83 | 82 |
| Anna 1940 | MFPA Code 308 Level | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | ::HMISO Ratings (Health - Flori | rmability - Reactivity | rì | | 2-4-0 | 2-4-0 | 2-4-0 | 2-4-0 | 2.4.0 | 2-4-0 | 2-4-0 |

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

Section III - PHYSICAL DATA

PRODUCT MEIGHTS - H.A. SPECIFIC CHAVITY - U.A. BOILEN BLESC - 48-189 97 EDILITY IN MATER . F.A.

EVAPORATION RATE - Pactor than 8ther VAPOR DEMOTTY - Heavler than Air MEUTING POINT - N.A.

Section IV -- FIRE AND EXPLOSION HAZARD DATA

PROBABILITY CLASSIFICATION PLAST POINT Betrevely Florable, Flash below 28 .00

P. ST. 1.0 URL 12.0

HUM REDIR

Carbon Olealdo, Dry Chenical, Form

PIBE IND ENTROSION INSAFOS

Colling host, classical equipment, aparks, and spen Dame, closed consultant way tion when and sed to extreme heat. Application to lot surfaces requires apoctal precautions. office energing conditions overexposite to decomposition products may cause a health heard. mptowe may not be immediately apparant. Obtain medical attention.

SCIAL FIRE FIGHTING PROCESORES Full protective aggisment including self-contained breathing apparatus should be used. congerry may be ineffective. If water is used, for notice are profesable, water may be to cool clased containers to prevent pressure build-up and possible autoionition or plon when expend to extrane heat.

Section V — HEALTH HAZARD DATA

WIRS OF EIPODURP

建新的,从。

Exposure may be by INHALATICN and/or SKlif or IVE contact, depending on conditions of use. minimize organire, follow roccumendations for preper use, ventiletion, and parsonal iotective equipment.

SUTE Hough Hazarda

TRACES OF OVERESTRONGERS

Irritation of eyes, skin and respiratory system. Hay cause nervous system depression. overexposure may result in unconsciousness and possibly death.

AND STRETCHS OF OVEREXAUSCRE

chu, distinoss, navsea, and loss of coordination are indications of excessive exposure vapors or ancay mists.

Redness and Itelians or berning sensetion may indicate eye or excessive skin exposure.

FOUCAL CONDITTORS ACCRAINTED BY EXPOSURE

constally recognized.

SERVICY AND PLAST ALD INOCEDURAS

#IC: INVAID: If affected, remove from exposure. Restore breething. Keep warm and quiet. if on Skin: Mash affected area theroughly with roap and water.

Remove contaminated clothing and Launder before re-use.

Efficiental: Flush eyes with large amounts of water for 15 minutes. Cot medical attention. If SALLOWED: Get medical actourion.

Health Hazarda

W

Seciligredient in these products is am TARC, MTP or OSHA listed asrainagen.

smethel/Sthyl Ketone may increase the notyous system effects of other solvents.

Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to

iver, orinary, blood-forming, cardiovascular, and reproductive systems.

is exposed to titanium dismide dust at 250 mg./mJ developed lung cancer, however, such ter levels are not attainable in the workplace.

Reparts have seconhated repeated and prolonged overcaposage to enlights with permanent brain ≕imrveus system damage.

Section VI --- REACTIVITY DATA

ITY - Stable

MICHERS (BILLITY Alleria di Instalia.

PARAMOUR ARCONDOCTTON PACEUCTS

By fire: Carbon Dioxide, Carbon Monovide, Oxides of Natala in Section II

MEARDOSS POLISEDISATION - WELL NOT DECAY

Section VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbant.

WASTE DISPOSAL METHOD

Waste from this product may be basardous as defined under the Resource Compersation and Recovery Act (RCRA) 40 CPR 161. Wests must be tested for ignitability to detormine the applicable HPA hazardous waste numbers. Naste from products containing Nethyl Stryl Retone and/or Elno may also require testing for extractability.

Do not incinerate. Depressuring container. Dispose of in accordance with Federal, State, and Lucal regulations regarding pollution.

Section VIII - PROTECTION INFORMATION

PRICAUTIONS TO BE TAKEN IN USE

the only with administ vaniliation. Avoid breathing vapor and spray mich. Avoid contact

with skin and eyes. Mash hende dêter deing.

These coatings may contain materials classified as mutaance particulates (listed 'as Dust' in . Section It; which may be present at hezardous levels only during manding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for maissness dusts are DCGIH TLV 10 mg./mJ (total dust), DSNA PEL 15 mg./mJ (total dust), 5 mg./mJ (respirable fraction). VINTELATION

Local exhaust preferable. Comeral exhaust accompable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSDA Standards 1918-94. 1910.107. 1910.106. DESPIRATORY ENGINEETICS

If personal exposure cannot be controlled below applicable limits by ventletion, west a properly fitted organic vapor/particulate respirator approved by MIOSH/MSHA for protection against materials in Section IT.

When sanding or abrading the dried film, wear a dust/mist respirator approved by SIOSH/NSIM for protection against non-volatile materials in Section 11. PROTECTIVE CLOVES

Home required for normal application of merosol products where minimal exim contact is expected. For long or superied contact, wear chemical resistant gloves.

Hear safety apactacies with unperforated sideshields.

Section IX --- PRECAUTIONS

DOL STORAGE CATEGORY - 1A

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are EXTREMELY PLANMARLY. Keep away from heat, sparker and open flame. Vapors will accumulate readily and may ignite explosively.

Outing was and until all vapors are gone: Keep area ventilated - Do not ample -Extleguish til flames, pilot light, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFFA Code. Wee approved Bonding and Grounding procedures.

Contents under pressure. Do not paneture, incinerate, or empose to temperature above 120 °F. Meat from sumlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Reep out of the reach of children. STATE OF THE PROPERTY OF THE P

Intentional misuse by deliberately concentrating and inhaling the contents con be harmful or (atal.

Section X — OTHER REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65

Several products (ego table) contain a chemical known to the State of California to cases cancer, birth delects or other reproductive harm.

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

Material Safety Data Sheet

| | emical Product and Company Identification | | | |
|------------------------------|---|-----------------|---|--|
| Common Name | Triethylene Glycol Reprocessed | Code | 93101 | |
| Supplier | COASTAL CHEMICAL CO.L.L.C. | MSDS# | Not available. | |
| 3520 Yeterans Memorial Drive | | Validation Date | 8/8/96 | |
| | ABBEVILLE, LA 70510
318-893-3862 | Print Date | \$12/99 | |
| Synonym | Not available. | | | |
| Trade name | Not available. | Emerkann. C | ransportation Emergency Call
HEMITREC 800-424-9300 | |
| Muterial Uses | Not available. | Jo | ther Information Call
be Hudinan
13-477-6675 | |
| Manufacturer | Various | | | |

| Section 2. Composition and Information on Ingredients | | | | | |
|---|----------|-------------|----------------|--|--|
| Name | CAS# | % by Weight | TLY/PEL: | LC ₉ /LD ₉ | |
| Diethylene glycol | 111-46-6 | 0-5 | Not available. | ORAL (LD50) mg/kg; Acute:
12565 (Hamster.). 14800 (Rat).
DERMAL (LD50) mg/kg; Acute:
11890 (Hamster.). 11900
(Rabbit). | |
| Triethylene Glycol | 11227-6 | 95-100 | | | |

| Section 3. Hazards 1 | |
|---------------------------------------|--|
| Emergency Overview | CAUTION |
| · · · · · · · · · · · · · · · · · · · | MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. |
| | |
| Routes of Entry | Eye contact. Ingestion. Skin contact. Inhalation. |
| Potential Acute Health Effects | Slightly dangerous to dangerous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation. This product may irritate eyes and skin upon contact. |
| Potential Chronic Health
Effects | CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. The substance is toxic to blood, kidneys, liver. Toxicity of the product to the reproductive system: Not available. Repeated or prolonged exposure to the substance can produce target organs damage. |

| Section 4. First Aid | Measures |
|------------------------|--|
| Eye Contact | Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention. |
| Skin Contact | If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to dean tolds, crevices, creases and grain. COLD water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. |
| Hazardous Skin Contact | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention, |
| Inhalation | Allow the victim to rest in a well ventilated area. Seek immediate medical attention. |
| Hazardous Inhalation | No additional information. |
| Ingestion | DO NOT induce vomiting. Have conscious person drink several glasses of water or milk. Seek immediate medical attention. |
| Continued on Nex | t Page |

| Triethylene Glycol
Hazardous ingestion | DO NOT induce vomiting. Examine the lies and mouth to ascertain whether the tissues are demanded a possible | ٠ |
|---|--|---|
| | 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 and E. | xplosion 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) (Diethylone 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 Hazards in Presence of
Various Substances | Very slightly to slightly flammable in presence of open flames and sparks, of heat. |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact. Not available. Risks of explosion of the product in presence of static discharge: Not available. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials. |
| Fire Fighting Media 3 3 3 3 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 acrid smoke and irritating fumes. (Diethylene @ycal) |
| Special Remarks on Explosion
Hazards | No additional remark. |

| 000000 | 4. 246186110 | l Release Measures | | * |
|-------------|--------------|--|---|--------------------------------------|
| Small Spill | | Dilute with water and mop up, or absorb with an inert DRY mater container. Finish cleaning by spreading water on the contaminated regional authority requirements. | ial and place in an appropriate
d surface and dispose of accor | e waste disposa
ding to local and |
| Large Spill | | Combustible material. Keep away from heat. Keep away from sources of ignition. Stop is water on the contaminated surface and allow to evacuate through to | eak if without risk. Firest dean | ing by spreading |

| Section | 7. Handling | and Storage |
|----------|---|--|
| Handling | *************************************** | Not available. |
| Storage | | Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightle dosed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme her and away from strong oxidizing agents: |

| Section 8. Exposure (| 20110 01307 6 | 130/Idi / Totech | <u> </u> | |
|---|--------------------------------|--|------------------------------------|---|
| Engineering Controls | | e threshold limit valu | | keep the airborne concentrations of vapors belo |
| Personal Protection | Safety glasses | s. Lab coal. Gloves | (impervious). | |
| Parsonal Protection in Case of a
Large Spill | Splash goggl
specialist BEF | es. Full suit. Boot
ORE-handling this p | s. Gloves. Suggested pro
woduct | tective clothing might not be sufficient; consult |
| Chemical Name or Product Na | me | CAS# | Exposure Limits | |
| 2,2'-Oxydiethanol
Tricthylene Glycol | | 111-46-8
112-27-6 | No. avallable. | |

| 2 4 200 | Contract of the | 100 | 4.7 | 127 | 4 | 15 (TS C) | 144 E . C . L |
|---------|-----------------|-------|----------------------|-----------|-------------|---|---------------|
| | | 50 | | 777 | CTO | 2 | 0 0 |
| . A | | \⊕ ⊃Ł | \mathbf{D}° | | 200 | 5 ************************************ | . 13 o C |
| 100052 | | 20.12 | Aug 1 | FIGS CADE | | | 12 A TAN |
| 的學 | 2A 9 | | 10 | 12 3 3 4 | 200 700 | 3.3 | 1.0 |
| | | | - 10 M | | to the same | | |

| Triethylene Glycol R | Oprocessed | | | Pa | ge Number: 3 |
|-------------------------------|---|--|-------------------|---------------------|--|
| Section 9. Physical a | nd Chemical Properties | | | | |
| Physical state and appearance | Liquid. | Odor | Not availabl | е. | = *===== |
| Motecular Weight | Not applicable. | Taste | Not availabl | le. | |
| pH (1% solu/water) | Neutral. | Color | Not available | le. | |
| Beiling Pulm | The lowest known value is 245.8°C (47 | 4.4°F) (Diethylene glyc | ol). Weighted : | average: 284.02°C | (543.2°F) |
| Melting Point/Pour Point | May start to solidify at -5°C (23°F) base | od on data for: Triethyle | ene Glycol. We | ighted average: -5. | 09°C (22.8°F) |
| Critical Temperature | Not available. | | | | |
| Specific Gravity | Weighted average: 1.12 (Water = 1) | | | | |
| Vapor Pressure | The highest known value is 0.01 mm o | f Hg (@ 20°C) (Diethyl | ene glycol). | • | |
| Vapor Density | The highest known value is 6.7 (Air = | 1) (Tetraethylene glyc | ol). Weighted a | average: 6.7 (Air = | 1) |
| Volatility | Not available. | | | | |
| Odor Threshold | Not available. | | | | |
| Evaporation rate | Not available | The second contract to the second | W. B. C. C. C. C. | | |
| Viscosity | Not available. | · <u>8</u> 11 | | <u> </u> | <u> </u> |
| Water/Oil Dist Coeff. | Not available. | | | | |
| funicity (in Water) | -Not avallable. | | | <u> </u> | and the second of the second o |
| Dispersion Properties | See solubility in water, methanol, dieth | yl.elner. | | | |
| Solubility | Easily soluble in cold water, hot water | methanol, dicthyl ethe | er. | | |
| Physical Chemical Comments | Not available. | | | | |

| Section 10. Stability | and Reactivity Data | | | | |
|---|--------------------------------|-----------------------------|---|---|----------|
| Chemical Stability | | | , | | <u> </u> |
| Conditions of Instability- | No additional remark. | | | - | |
| Incompatibility with various substances | Very slightly to slightly reac | tive with oxidizing agents. | | Ū | |
| Hazardous Decomposition Products | Not available. | | | | , |
| Hazardous Polymerization | Not available. | | | | |

| Texicity to Animals | Acute oral toxicity (LD50); > 50
Acute dermal toxicity (LD50); | 000 mg/kg: (Hamster.) (Calc.
> 5000 mg/kg: (Hamster.) (C | ulated value for the mixtu
alculated value for the mi | re).
xture). | |
|---|---|---|--|-------------------|-------------------|
| Chronic Effects on Humans | The substance is toxic to bloo | d, kidneys, liver. Toxicity of t | the product to the reprodu | ictive system: N | lot available. |
| Other Taxic Effects on Humans | Slightly dangerous to dangero | ous in case of skin contact (in | rritant, permeator), of eye | : contæct (माञ्चा | st), of ingestion |
| Special Remarks on
Toxicity to Animals | No additional remark. | | | | |
| Special Remarks on
Chronic Effects on Humans | No additional remark. | | Δ. | | |

Continued on Next Page

585 3

Page Number: 5

Triethylene Glycol Reprocessed

-17-27-1575 20 35

Nutice to Reader

To the best of text have been dependent contained havin in occurate. Manyor, mides the elect many layer on the layer of text influence contained and higher advances for the assumption of the influence contained and the contained

District I (505) 393-6161 P. O. Box 1980 Hobbs, N.M. 88241-1980 District II - (505) 748-1283 811 S. First Artesia, NM 88270 District III - (505) 334-6178 Rio Brazos Road

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

,

Submit Original Plus I Copy to appropriate District Office

Form C-138

Originated 8/8/95

Rio Brazos Road (1)
A...c., NM 87410
District IV - (505) 827-7131

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

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE |
|---|---|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator WFS |
| Verbal Approval Received: Yes No No | 5. Originating Site Ignacio Plant |
| 2. Management Facility Destination VEY DISPOSEL | 6. Transporter UE |
| 3. Address of Facility Operator #345Cえ3500 AZRC ルグ | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) しょりはな Co. Col o | |
| 9. Circle One: | |
| 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 is sting or testing will be approved. | companied by necessary chemical analysis to |
| All transporters must certify the wastes delivered are only those consigning | ed for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Preduced Wastemaker Mixes with Amine + Glycon | AUG 2000 RECEIVED OIL CON. DIV DIST. S |
| Estimated Volume 5000 hbls cy Known Volume (to be entered by the SIGNATURE: Miles 1 August 1 | operator at the end of the haul) ———————————————————————————————————— |
| TYPE OR PRINT NAME: MICHAEL TALOUICE T | ELEPHONE NO. 505-334-6186 |
| APPROVED BY: Chall Tun TITLE: Delity | 02 13T DATE: 8/4/00
026 Instactor (DATE: 8/4/00 |



NEW MEXICO ENERGY, MINERALS ATTECDISTRICT OFFICE ATTECD STATE OF

D.07. 3

GARY E. JOHNSON GOVERNOR

Jennifer A. Salisbury CABINET SECRETARY

CERTIFICATE OF WASTE STATUS

| <u> </u> | |
|---|--|
| Generator Name and Address: | 2. Destination Name: |
| Williams Field Services (Ignacio | Key Energy |
| 309 C.R. #307 Plant) | C.R. 3500 - On Crouch Mesa |
| Durango, CO 81301 | Farmington, NM 87401 |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| Ignacio Plant | 309 C.R. #307
Durango, CO |
| Attach list of originating sites as appropriate | • |
| 4. Source and Description of Waste | |
| Natural Bas Processing Plant - Wastewa | |
| various quantities of amine, glycol | l and other E & P Exempt Wastes. |
| | |
| | |
| | |
| | |
| I, Mark Harvey | representative for: |
| (Print Name) | |
| Williams Field Services | do hereby certify that, |
| according to the Resource Conservation and Recov | very Act (RCRA) and Environmental Protection Agency's July |
| | • |
| 1988, regulatory determination, the above described | |
| 1988, regulatory determination, the above described | |
| | |
| _X EXEMPT oilfield waste NON-EXE | d waste is: (Check appropriate classification) |
| X EXEMPT oilfield wasteNON-EXE | d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification |
| X EXEMPT oilfield waste NON-EXE analysis and that nothing has been added to the exempt or r | d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. |
| X EXEMPT oilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document | Memory of the company |
| X EXEMPT oilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information | d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. |
| X EXEMPT oilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis | Memory of the company |
| X EXEMPT oilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information | Memory of the company |
| X EXEMPT oilfield waste NON-EXEMPT analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. tation is attached (check appropriate items): Other (description): |
| EXEMPT cilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody This waste is in compliance with Regulated Levels of | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. tation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste NON-EXEMPT analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. tation is attached (check appropriate items): Other (description): |
| EXEMPT oilfield waste | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste NON-EXEMPT analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody This waste is in compliance with Regulated Levels of to 20 NMAC 3.1 subpart 1403.C and D. | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| EXEMPT cilfield waste NON-EXE analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody This waste is in compliance with Regulated Levels of | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste NON-EXEMPT analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody This waste is in compliance with Regulated Levels of to 20 NMAC 3.1 subpart 1403.C and D. Name (Original Signature): M | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste NON-EXEMPT analysis and that nothing has been added to the exempt or refer NON-EXEMPT waste the following document MSDS Information RCRA Hazardous Waste Analysis Chain of Custody This waste is in compliance with Regulated Levels of to 20 NMAC 3.1 subpart 1403.C and D. | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): |
| X EXEMPT oilfield waste | EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. Itation is attached (check appropriate items): Other (description): If Naturally Occurring Radioactive Material (NORM) pursuan |





P.O. Box 215 Bloomfield, NM 87413 505-632-4700 505-632-4780 Fax

July 3, 2000

Mr. Denny Foust NMOCD 1000 Rio Brazos Road Aztec, NM 87410

RE: APPROVAL TO DISPOSE OF WASTEWATER AT THE KEY ENERGY SITE

Dear Mr. Foust:

Enclosed please find a completed Certificate of Waste Status for wastewater generated at the Williams Ignacio Plant near Durango, CO. This certificate was completed to satisfy NMOCD requirements for disposing of oil and gas related waste materials. Also enclosed is a copy of acknowledgement from the Colorado Oil and Gas Conservation Commission of Williams' waste disposal plan.

Please review the information and provide a notice allowing hauling to the Key Energy disposal site on Crouch Mesa. Your time to review this submittal is appreciated.

Respectfully.

Mark Harvey

Project Coordinator

enclosures

V



Bill Owens, Governor 1120 Lincoln St., Suite 801 Denver, CO 80203

Phone: (303) 894-2100 FAX: (303) 894-2109 www.dnr.state.co.us/oil-gas

VIA FACSIMILE AND SURFACE MAIL

June 19, 2000

Wiiliams

Attn: Mark Harvey PO Eox 58900

Sart Lake City, UT 84108

Dear Mr. Harvey:

Re: State Notification of Transportation of Oil and Gas Waste

5,000 barrels/year of wastewater from Ignacio 3746 County Road 307, La Plata County, CO

Thank you for notifying the Colorado Oil and Gas Conservation Commission (COGCC) of the transportation of waste from the above referenced site to the Key Energy facility located at 6 Road 5046. Bloomfield, NM. It is our understanding that approximately 5,000 barrels of wastewater may be disposed at this facility annually.

From your description of the waste stream it appears that it would be exempt from RCRA as you have indicated in your letter of 6/16/00 to me.

The State of New Mexico Oil Conservation Commission (NMOCD) may require certification by your company, the transporter or the generator. Transportation of this waste may be subject to other state and Federal laws.

Sincerely,

Coicrado Cil and Gas Conservation Commission Staff

Dorothy E. Baldwin

Environmental Supervisor COGCC

Cc: Denney Foust, NMOCD

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 د...c, NM 87410

District IV - (505) 827-7131

Energy .

New Mexico herals and Natural Resources Partment Oil Conservation Division

Submit Original Plus I Čopy to appropriate District Office

Form C-138

Originated 8/8/95

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| 1. RCRA Exempt: Non-Exempt: | 4. Generator Williams |
|--|--|
| Verbal Approval Received: Yes 🔲 No 📜 | 5. Originating Site LA MAQUINA PLF |
| 2. Management Facility Destination KEY DISPOSA C | 6. Transporter Key |
| 3. Address of Facility Operator #345 CR 3560 AZ北C N ハ | 8. State VM |
| 7. Location of Material (Street Address or ULSTR) するまで ロンステント 47 は カンス マンス マンス マンス マンス マンス マンス マンス マンス マンス マ | |
| 9. Circle One: | |
| All requests for approval to accept oilfield exempt wastes will be acceded Generator; one certificate per job. 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. All transporters must certify the wastes delivered are only those consigned. | ompanied by necessary chemical analysis to n of origin. No waste classified hazardous by |
| All transporters must certify the wastes delivered are only those consigned | a loi tiansport. |
| BRIEF DESCRIPTION OF MATERIAL: | • |
| D. I. water mixed with small | Anionals of Amine + By/coL |
| 000 500 VANG 5000 | |
| Estimated Volume | erator at the end of the haul) ———————————————————————————————————— |
| SIGNATUFIE: Maste Management Facility Authorized Agent TITLE: Mare | DATE: 8-25-60 |
| TYPE OR PRINT NAME: MICHAE CTALOVICH TEL | EPHONE NO. 334-6186 |
| (This space for State Use) | |
| APPROVED BY: Deny Rent TITLE: Geolo | 5/5/ DATE: 8/28/00 |
| APPROVED BY:TITLE: | DATE: |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: |
|---|---|
| WILLIAMS ENERLY GROUP
3.8 MILES EAST ON CR. 2770-ALTEL
192 CR. 4900
BLOOMFIELD, N.M. 87413 | KEY ENERGY DISPOSAL |
| | Location of the Waste (Street address &/or ULSTR): |
| | Exception of the vvaste (officer address droi officer). |
| WILLIAMS ENERGY GROUP | |
| LA MAQUINA PLANT | 4.2 |
| Attach list of originating sites as appropriate 3.8 A 4. Source and Description of Waste | GILES EAST ON C.R. 2770 AZTEC, N.M. 87410 |
| 90% D.I. WATER 5% AMINE 5% TRYETHYLENE GLYCOL | |
| 1. CHARLES TEMPLETON | representative for: |
| to the Resource Conservation and Recovery Act (Retermination, the above-described waste is: (Chec | do hereby certify that, according CRA) and Environmental Protection Agency's July, 1998, regulatory k appropriate classification) |
| | ON-EXEMPT oilfield waste which is non-hazardous by characteristic alysis or by product identification |
| and that nothing has been added to the exempt or r | non-exempt non-hazardous waste defined above |
| | |
| or NON-EXEMPT waste only the following docume | |
| NON-EXEMPT waste only the following docume | |
| | entation is attached (check appropriate items):Other (description): |
| MSDS Information | entation is attached (check appropriate items):Other (description): |
| MSDS InformationRCRA Hazardous Waste AChain of Custody | entation is attached (check appropriate items):Other (description): |
| MSDS InformationRCRA Hazardous Waste A | entation is attached (check appropriate items):Other (description): |
| MSDS InformationRCRA Hazardous Waste AChain of Custody | entation is attached (check appropriate items):Other (description): |

Nesido: [(505) 393-6161 O Box 1980 (oobs, NM 88241-1980 Nesido: II - (505) 748-1283 II S Frist Victic III - (505) 334-6178 \ Rio Brazos Road

District IV - (505) 827-7131

__ 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 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 Conoco |
| Verbal Approval Received: Yes Wild 26 No 🔲 | 5. Originating Site WIWGATE FRACTIONA |
| 2. Management Facility Destination Vey ENERGY DISPOSEL | 6. Transporter Key |
| 3. Address of Facility Operator \$345 CR 3500 AZIEC NM | 8. State N/N |
| 7. Location of Material (Street Address or ULSTR) # 68 ELPASO CIECLE Gallop Nim 87301 | · |
| 9. Circle One: | |
| 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. | companied by necessary chemical analysis to |
| All transporters must certify the wastes delivered are only those consigned | ed for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Sulfaserub used to treat NATURAL | JUL 2000 PECEIVED OIL CON. DIV DIOT. 8 |
| Estimated Volume 50 66 s cy Known Volume (to be entered by the SIGNATURE: Maste Management Facility Authorized Agent TYPE OR PRINT NAME: MICHAEL TALOUICE TO SOLIS SET MICHAEL TALOUICE | |
| APPROVED BY: Sharke Terry Tour TITLE: Delot | 0/05/5T DATE: 7/12/00 |

CERTIFICATE OF WASTE STATUS

| 1. Generator Name and Address: | 2. Destination Name: |
|--|---|
| CONOCO INC. Wingute Fractionator #18 Elfaso Circle | key Disposal |
| #68 Elfaso Circle | #345 Co. Kd. 3300 |
| Gallup NM 87301 | Aztec NM. |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| Coroco wingute Fractionator | |
| #68 El Paso Circle | · - |
| Gallup MM. 87301 | |
| Attach list of originating sites as appropriate | |
| 4. Source and Description of Waste | |
| Sulfa Scrub HSW 0710L | |
| used to treat natural Gasoline. | |
| | |
| · · | |
| | |
| | |
| 1, Louis E. Ferrari (Print Name) | representative for: |
| | |
| (Print Name) | |
| (Print Name) | do hereby certify that, |
| according to the Resource Conservation and Recove | do hereby certify that, my Act (RCRA) and Environmental Protection Agency's July, |
| (Print Name) according to the Resource Conservation and Recove 1988, regulatory determination, the above described | do hereby certify that,
iry 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 | waste is: (Check appropriate classification) |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXE | do hereby certify that, my Act (RCRA) and Environmental Protection Agency's July, waste is: (Check appropriate classification) MPT cliffield waste which is non-hazardous by characteristic by product identification |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of | Waste Is: (Check appropriate classification) MPT cilifield waste which is non-hazardous by characteristic reproduct identification |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXE | Waste Is: (Check appropriate classification) MPT cilifield waste which is non-hazardous by characteristic reproduct identification |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothing has been added to the exempt of th | Waste Is: (Check appropriate classification) WPT cliffield waste which is non-hazardous by characteristic r by product identification on-exempt non-hazardous waste defined above. |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of | Waste Is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification on-exempt non-hazardous waste defined above. nentation is attached (check appropriate items): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothin | Waste Is: (Check appropriate classification) WPT cliffield waste which is non-hazardous by characteristic r by product identification on-exempt non-hazardous waste defined above. |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothing has been added to the following documents of the MSDS information | MPT oilfield waste which is non-hazardous by characteristic r by product identification en-exempt non-hazardous waste defined above. nentation is attached (check appropriate items): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothin | Waste Is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification on-exempt non-hazardous waste defined above. nentation is attached (check appropriate items): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothing | Weste is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification In-exempt non-hazardous waste defined above. Inentation is attached (check appropriate items): Other (description): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXE analysis of and that nothing has been added to the exempt or no For NON-EXEMPT waste only the following docum MSDS Information RCRA Hazardous Waste Analysis Chain of Custody Name (Original Signature): | Weste is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification In-exempt non-hazardous waste defined above. Inentation is attached (check appropriate items): Other (description): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXE analysis of and that nothing has been added to the exempt or no For NON-EXEMPT waste only the following docum MSDS Information RCRA Hazardous Waste Analysis Chain of Custody Name (Original Signature): | Weste is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification In-exempt non-hazardous waste defined above. Inentation is attached (check appropriate items): Other (description): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXEMPT analysis of and that nothing has been added to the exempt or nothing | Weste is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification In-exempt non-hazardous waste defined above. Inentation is attached (check appropriate items): Other (description): |
| according to the Resource Conservation and Recove 1988, regulatory determination, the above described X EXEMPT oilfield waste NON-EXE analysis of and that nothing has been added to the exempt or no For NON-EXEMPT waste only the following docum MSDS Information RCRA Hazardous Waste Analysis Chain of Custody Name (Original Signature): | Weste is: (Check appropriate classification) WPT cilifield waste which is non-hazardous by characteristic reproduct identification In-exempt non-hazardous waste defined above. Inentation is attached (check appropriate items): Other (description): |



MATERIAL SAFETY DATA SHEET **Petrolite Corporation**

| SECTION 1 - CHEMICAL PRODUCT A | ND COMPANY | IDENTIFICATION | |
|---|-------------|------------------------|--------------------|
| PRODUCT NAME: SULFA-SCRUB | * H\$W0700F | | |
| MANUFACTURER/SUPPLIER | | EMERGENCY TELEPHONI | NUMBERS (24 HOUR): |
| Petrolite Corporation 369 Marshall Ave St. Louis, Mo 63119-1897 CUSTOMER CARE: 1-800-872-1916 8:00am-5:(Opm Monday-Friday (CST) | | Chemirec: | 800-424-9300 |
| Preparer: Irv Knepper | | Date of Last Revision: | 01/02/97 |
| Title: Sr. Product Manager | | Supercedes MSDS Dated: | 12/28/96 |

| ITEM | | HAZARDOUS J | ngredients | | CAS# | WT/ | WT % |
|----------------|---|-------------------------|-------------------------|--|-------------------------------------|-------------------------|----------------------|
| 01
02
03 | Methanol
Ethanolamine
Alkanolamine/al | ldehyde condensate | | | 67-56-1
141-43-5
Trade Secret | | 5-10
1-5
30-60 |
| TEM | TLV-TWA | GIH
TLV-STEL | OSH
PEL-TWA | PEL-STE | | OMPANY
LV-TWA | SKJI |
| 01
02
03 | 200 ppm
3ppm
N.E. | 250 ppm
6ppm
N.E. | 200 ppm
3ppm
N.B. | N.E.
N.E.
N.E. | N | .E.
.E.
.E. | Y
N
N |
| LEGEND | N.A.: Not A
N.E.: Not E
N.D.: Not I | stablished | Ý: |): Ceiling Limit
Skin absorption is
Skin absorption is | significant to overa | II ехро _{вите} | 1 |

SECTION - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

ODOR: Amine odor

APPEARANCE: Amber liquid

SIGNIFICANT HAZARDS:

FLAMMABLE liquid and vapor. Severely irritating to the eyes and skin. Irritating to the respiratory tract. Contains a material which can be absorbed through the skin. Contains a material which can cause visual disturbances. Contains a material which can cause nervous system effects. Contains a material which may cause embryo/fetotoxicity based on animal data.

POTENTIAL HEALTH EFFECTS

EYE CONTACT:

Direct eye contact may cause severe irritation or hurns. If not immediately removed, may cause permanent eye damage.

SKIN CONTACT:

Direct skin contact may cause severe irritation. Prolonged and repeated skin contact may cause dermatitie, drying and defatting due to the solvent properties. Prolonged and repeated skin contact may cause moderate to severe skin irritation and possibly burns. A component(s) of

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO. PRODUCT WARRANTY, DISCLAIMER AND LIMITATION OF LIABILITY ARE FOUND ON THE LAST PAGE CONTINUED ON NEXT PAGE

Page 1

Product Name: SULFA-SCRUB * HSW0700F Date of Last Revision: 01/02/97

SECTION 3 - HAZARDS IDENTIFICATION - continued

this product can be absorbed through the skin upon direct contact, possibly resulting in toxic effects similar to those of inhalation. Repeated skin contact may produce an allergic sensitization. In such cases, incidental (minor) contact may cause allergic rashes.

Inhalation of high concentrations may cause headache, nausea, giddiness and shortness of breath. Prolonged, repeated, or high exposures to the vapor of a component(s) of this product may cause visual disturbances and eye damage. Vapors are intensely irritating to the mucous membranes, and may be harmful or even fatal if inhaled at high concentrations. Severe cases may result in severe and delayed lung irritation and pulmonary edema.

INCESTION:

Harmful if swallowed. May cause severe gastrointestinal disturbance with headache, nausea, vomiting and diarrhes. May be readily absorbed through the gastrointestinal tract. May result in irritation or burns to the mouth and digestive system. Effects of ingestion are similar to those of inhalation.

CHRONIC EFFECTS:

Ingestion or inhalation of high concentrations of a component(s) of this product may result in visual disturbances. In extreme cases, may cause temporary or permanent blindness, metabollic acidosis, and central nervous system depression which can possibly lead to death. Studies have shown that inhalation of a component in this product has produced teratogenic effects in laboratory animals. Animal studies have shown that a component(s) of this product is associated with adverse effects of embryo/fetotoxicity at non-malernally toxic dosage levels.

CARCINOGENICITY:

No known information.

SECTION 4 - FIRST AID MEASURES

FIRST AID PROCEDURES

EYES:

If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. If rash, irritation or burns develop, consult a physician. Launder clothing before reuse.

INHALATION:

If inhaled, remove to fresh sir. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

If ingested, DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Call a physician immediately,

NOTE TO PHYSICIAN

NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsion may be necessary,

SECTION 5 - FIRE-FIGHTING MEASURES

Flashpoint and Method:

52 C (126 F) SFCC ASTM D-3828

Autoignition Temperature: N.D.

Flammable Limits:

LEL: 6.0 %

UEL: 36.5 %

W2D2***** + S81 S82 1514

HAZARDOUS COMBUSTION PRODUCTS:

Oxides of nitrogen. Carbon monoxide. Carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash

EXTINGUISHING MEDIA: Alcohol Foam, CO2, Dry Chemical, Foam, Water Fog

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO. CONTINUED ON NEXT PAGE

Page 2

Product Name: SULFA-SCRUB® HSW0700F Date of Last Revision: 01/02/97

SECTION 5 - FIRE-PIGHTING MEASURES - communed

FIRE-PIGHTING INTRUCTIONS:

Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Flammable, Cool fire-exposed containers using water spray.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LEAKS OR SPILLS:

Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container.

OTHER:

No known information.

Refer to Section 15 for regulatory reporting requirements in the event of an accidental release.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE:

Planmable liquid. Avoid heat, sparks and open flames. Avoid breathing vapor and contact with eyes, skin and clothing. Keep container closed when not in use. Chemical residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning. Use in well ventilated area.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Chemical resistant gloves and chemical goggles should be used to prevent skin and eye contact.

RESPIRATORY PROTECTION:

When concentrations exceed the exposure limits specified, use of a NIOSH approved supplied air respirator with full facepiece is recommended. Where the protection factor of the respirator may be exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary.

| SECTION 9 - PHYSICAL AND CHEMICAL PR | OPERTIES |
|--------------------------------------|---|
| Solubility in Water: Soluble | pH @ 5.0% 75/25 Isopropanol/Water: 9.9 - 11.4 |
| Density @ 60 F (16 C): 8.99 lb/USgal | Evaporation Rate: Is slower than Ether |
| Boiling Point ASTM D-86: N.D. | Vapor Density: Is heavier than air |
| Vapor Pressure: N.D. | Physical State: Liquid |

Specific Gravity: 1.08

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:

No known information.

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO. CONTINUED ON NEXT PAGE

Page 3

SULFA-SCRUB * HSW0700F 01/02/97 Product Name: Date of Last Revision:

SECTION 10 - STABILITY AND REACTIVITY - communed

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

No known information

OTHER:

A component(s) of this product has tested positive as a human skin sensitizer. A component(s) of this product has tested positive in an Ames study. However, follow-up "in-vivo" studies had negative results.

COMPONENT TOXICOLOGICAL INFORMATION:

LD so Dermal LD & Oral LC ninhalation Component 15800 mg/kg-RB 5628 mg/kg-R 64000 ppm/4H-R Methanol 1720-2740 mg/kg-R **Ethanolamine** 1000 mg/kg-RB N.D. 0.62 mg/l/4H-R 1788 mg/kg-R Alkanolamine/aldehyde condensate > 2000 mg/kg-RB

LEGEND:

R Rat

RB = Rabbit Mouse M

GP Guinea Pig =

SKIN AND EYE SCORE:

No Effect / Slight Irritant 7

Moderate Irritant

3 Strong Irritant

Skin: Extreme Irritant; Eye: Extreme Irritant/Corrosive

SECTION 12 - ECOLOGICAL INFORMATION

An ECOTOX ®Report is available for this product. Please contact Petrolite Corporation for a copy of this report.

OTHER:

No known information.

SECTION 13 - DISPOSAL INFORMATION

DISPOSAL INFORMATION:

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with applicable regulations. Note that these regulations may also apply to empty containers, liners, and rinsate. Processing, use, dilution, or contamination or this product may cause its physical and chemical properties to change.

SECTION 14 - TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (D.O.T.) INFORMATION

Proper Shipping Name: Flammable liquid, n.o.s. (contains Methanol and Monoethanolamine) 3 UN1993

D.O.T. Emergency Response Guide: 128

Marine Pollutant:

N.A.

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO. CONTINUED ON NEXT PAGE

WZD2***** + S81 S82 ISI4

26/01/20

| Product Name: | SULFA-SCR | UB • HSW0700F | | Date of Last Revision | m: 01/02/9 | 7 |
|---|--|---|---|--|--|---|
| | | | | | | |
| SECTION 14 | TRANSPORT | ATTON INPOR | MATION - contin | ued . | The second section is a second section of the second section of the second section is a second section of the second section is a second section of the second section of the second section is a second section of the sec | BERNOOT CO. |
| | I | NTERNATIONAL | L MARITIME ORG | (.O.M.I) NOITAZINA | INFORMATION | 4 |
| Proper Shipping | Name: Flammal | ole liquid, n.o.s., (| contains Methanol a | nd Monoethanolamine) | 3.3 UN1993 | Ш |
| IMDG Code Pag | e: 3345 | | | EMS Number: 3-06 | 5 | |
| MPAG Table Nu | ımber 1: 306 | | | MFAG Table Numb | er 2: N.A. | |
| Marine Pollutant | • | N.A. | | | | |
| SECTION 15. | REGULATO | RY INFORMAT | ION | Desprishment of the property of the second o | | |
| The Petrolite pro
Environmental R | duct contains the | e following compo
ensation, and Liab | UIIV ACL Also histed | t to the release reporti | ng requirements on the pour | of the Comprehensive
nds for each such component, and |
| Chemical Name
Methanol | | | | CAS Number
67-56-1 | RQ#
5,000 | RQ. GAL.
7,416 |
| gallons, that mus | oduct contains the ion Act. Also list be released or | sted is the Report
spilled in order to | able Chambty (RΩ) i | n pounds for each such
the Threshold Plannin | commonant and | by the Superfund Amendments
the amount of product, in
) in pounds for each such |
| Chemical Name | A Extremely Ha | zardnie Substance | s are present in this | CAS Number | RO (bs.) R | O (pal.) TPO (ba.) TPO (pal.) |
| | | | | material. , the following hazard | naternaies samby | to this mandret. |
| Hazard: Immedi | | | | , do lono wing installed | cangones appry | w uns protact; |
| SARA SECTION
This Petrolite pro
313 of SARA Tit
concentration is l | duct contains the III. Also lists | и в тое совестия | ouents that are subjection of the compone | et to the annual toxic re
at, in weight percent, i | elease inventory in the product, A | reporting requirements of Section component is not listed if its |
| Chemical Name | | | | | CAS Number | Weight Percent |
| Methanol | | | | | 67-56-1 | 7.5 % |
| TOXIC SUBSTA | NCES CONTR | OL ACT (TSCA):
f a mixture, are li | ;
sted on the TSCA in | ventory. | | |
| This Petrolite pro | educt contains th | e following comp | onents that are subje | ct to the reporting requ | irements of TSC. | A Section 12(b) if exported from |
| Chemical Name
No TSCA | 12(b) chemical | s are present in th | e product. | | CAS Number | |
| SIGNIFICANT N
This product does | NEW USE RUL
s not contain an | ES (SNUR):
y components that | are subject to a Sig | mificant New Use Rule | (SNUR). | |
| PENNSYLVANI
The following no | | | nt in the product at g | reater than 3%; | | |
| } | | | | | | |

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO. CONTINUED ON NEXT PAGE $\,$

26/01/20

| Product Name: | SULFA-SCRUB • HSW0700F | Date of Last Revision: 01/02/97 | |
|---------------|--------------------------|---------------------------------|--|
| | | | |
| SECTION 15 | RECULATORY INFORMATION - | Condined | |
| Chemical Name | | CAS Number | |
| Water | | 7732-18-5 | |
| <u> </u> | | | |

SECTION 16 - OTHER INFORMATION:

NFPA HAZARD CLASSIFICATIONS:

Health: 3

Flammability: 2

Reactivity: 0

Special: COR

REVISION HISTORY:

03/27/96 updated sect. 11 toxicology, new base format, update sect. B resp prot

10/21/96 new format

11/96 updated RQ's, sect. 15

File 431

The information and recommendations contained hereon are believed to be accurate and reliable as of the date issued. However, we do not warrant their accuracy or reliability.

We only warrant to you, but no other persons, that the product referenced berein shall conform to our quality assurance specifications for the product on the date of shipment to you. WE EXPRESSLY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Any technical advice, information or recommendation given to you is given gratis without any warranty whatsoever as to the advice, information or recommendation given or results obtained.

You shall assume all risks and shall be solely responsible for the results obtained from the storage, handling or use of the product and any information or recommendation regarding the product, whether alone or in combination with other substances.

NDER NO CIRCUMSTANCES SHALL WE BE LIABLE FOR ANY ECONOMIC, CONSEQUENTIAL (INCLUDING LOST PROFITS OR LVINGS) OR INCIDENTAL DAMAGES, EVEN IF WE ARE INFORMED OF THEIR POSSIBLITY, EXEMPLARY OR PUNITIVE AMAGES, REGARDLESS OF THE FORM OR ACTION, WHETHER IN CONTRACT OR TORT, INCLUDING OUR SOLE OR JOINT NEGLIGENCE AND STRICT LIABILITY.

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO.

26/01/20

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

New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505

Submit Original Plus I Copy to appropriate District Office

Form C-138

Originated 8/8/95

Rio Brazos Road د...c, NM 87410 District IV - (505) 827-7131

(505) 827-7131

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE |
|--|--|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator BAKER OIL Tools |
| Verbal Approval Received: Yes X 6-27-00 No | 5. Originating Site FARMWOLDNI MAED |
| 2. Management Facility Destination KEY DISPOSAL | 6. Transporter $\mathcal{L}_{\boldsymbol{\epsilon_{y}}}$ |
| 3. Address of Facility Operator # 345 CR 3500 AZICC INM | 8. State NA |
| 7. Location of Material (Street Address or ULSTR) 1732. E. MAIN 8740) | |
| 9. Circle One: | |
| A. All requests for approval to accept oilfield exempt wastes will be accepted and accept and accept accept and accept ac | ompanied by necessary chemical analysis to |
| All transporters must certify the wastes delivered are only those consigned | d for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| WASTEWATER USED towash Downhole (City) | Service Tools |
| Estimated Volume — < 8066/s cy Known Volume (to be entered by the op | JUL 2000 HECEIVED ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON ON |
| Estimated Volume ———————————————————————————————————— | erator at the end of the haul) ———————————————————————————————————— |
| SIGNATURE: Waste Management Facility Authorized Agent Waste Management Facility Authorized Agent | DATE: 6-27-00 |
| | LEPHONE NO. 505-334-618L |
| (This space for State Use) | |
| APPROVED BY: Dony Keny TITLE: GOOLOG | DATE: 7/12/00 |
| APPROVED BY: Charles Theren TITLE: 1, +8 | 6 1 P & DATE: 7/13/00 |

CERTIFICATE OF WASTE STATUS

| | 2. Destination Name: |
|---|--|
| m Lee Whiting | KEY ENERGY DISPOSAL |
| 190x 118 | THE PERSON SIGN SOME |
| M Lee whiting Box 718 Formington Nm 874 | 199 |
| B. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| Baker Oil Tools | |
| 1732 E WOIL | |
| | 7401 |
| Attach list of originating sites as appropriate 4. Source and Description of Waste | |
| water Use to waste | h Downhole tool 9 |
| Wilds 22 35 | |
| | |
| | |
| | |
| | |
| | |
| 1, Lee whitme | representative for: |
| Q1 M1 T10 | |
| 1001/4~ 13/1 1401 | do hereby certify that according |
| to the Resource Conservation and Recovery A | do hereby certify that, according Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory |
| | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) |
| to the Resource Conservation and Recovery A | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) |
| to the Resource Conservation and Recovery Address determination, the above-described waste is: EXEMPT oilfield waste | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic |
| to the Resource Conservation and Recovery Address determination, the above-described waste is: EXEMPT oilfield waste | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification |
| to the Resource Conservation and Recovery Addetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exemption. | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification |
| to the Resource Conservation and Recovery Addetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following described waste | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information RCRA Hazardous Waste | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information RCRA Hazardous Waste | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following demonstration MSDS Information RCRA Hazardous Waste Chain of Custody | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information RCRA Hazardous Waste Chain of Custody Name (Original Signature): | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following demonstration MSDS Information RCRA Hazardous Waste Chain of Custody | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |
| to the Resource Conservation and Recovery Adetermination, the above-described waste is: EXEMPT oilfield waste and that nothing has been added to the exem For NON-EXEMPT waste only the following d MSDS Information RCRA Hazardous Waste Chain of Custody Name (Original Signature): | Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory (Check appropriate classification) NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification apt or non-exempt non-hazardous waste defined above. Other (description): |

atrics I: (505):393:6161 O Som 1960] obbis NM 88241:1980 atrics II: (505) 748-1283 I S. First tesia NM 88210 :trict III: (505) 334-6178 NRio Brazos Road

utla IV - (505) 827-7131

ند, NM 87410

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: | 4. Generator Power Tools |
| | Verbal Approval Received: Yes No 🕠 | 5. Originating Site Shon Sump |
| 2. | Management Facility Destination KEY DISPOSAL | 6. Transporter Vey |
| | Address of Facility Operator #345 Ce 3500 AZtec NM | 8. State Nm |
| 7. | Location of Material (Street Address or ULSTR) #14CR 5860 | |
| 9. | Circle One: | |
| | A. All requests for approval to accept oilfield exempt wastes will be accept approval to accept non-exempt wastes must be accept non-exempt wastes will be accept non-exempt wastes delivered are only those consigned. | companied by necessary chemical analysis to on of origin. No waste classified hazardous by |
| 5 | istimated Volume | MAY 2000 DIGIT STORY |
| - | APPROVED BY: Charle Terry APPROVED BY: Deny Joint Title: Nelity | 04610 sheetes DATE: 5-22-2000 |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: |
|---|--|
| BOWEN TOOKS / DIVISOR | KEY ENERGY DISPOSAL |
| #14 CR 5860 | RET ENERGY DISPOSAL |
| ParmingTON/ N/M 87401 | |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| Shop Sump (FANK) | • |
| Attach list of originating sites as appropriate | · |
| 4. Source and Description of Waste | 5, NO other majerial is washed |
| City water used to clear these | er waste is Put in Sump, water |
| with this water or any other | |
| goes this suferanof first. of | his wated is only used to clear |
| Oil feird Tooks | |
| | |
| 1, PAUl Schanno | representative for: |
| BOWEN TOOKS /DIVISION | do hereby certify that, according |
| to the Resource Conservation and Recovery Act (F | RCRA) and Environmental Protection Agency's July, 1998, regulatory |
| determination, the above-described waste is: (Che | ck appropriate classification) |
| | ON-EXEMPT oilfield waste which is non-hazardous by characteristic nalysis 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 docum | nentation is attached (check appropriate items): |
| MSDS Information | Other (description): |
| | |
| RCRA Hazardous Waste | Analysis |
| RCRA Hazardous Waste | Analysis |
| | Analysis |
| | Analysis |
| Chain of Custody | Analysis |

- (505) 393-6161 D. Box 1980 bbs, NNI 58241-1980 - (505) 748-1283 I S. Fim NM 88210 प्रांद्य III • (505) 334-6178

- (505) 827-7131

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

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 Buelmoton |
| Verbal Approval Received: Yes No 🔀 | 5. Originating Site ULI VERDE Plant |
| 2. Management Facility Destination Key DISPOSAL | 6. Transporter Key |
| 3. Address of Facility Operator MAIL P.O. Box 900 farming on Nin | 8. State N.A |
| 7. Location of Material (Street Address or ULSTR) Blookfield, N.M. Sec. 14: Tzgá; RII W. | |
| 9. Circle One: | |
| 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 is sting or testing will be approved. | companied by necessary chemical analysis to |
| All transporters must certify the wastes delivered are only those consign | ed for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Spentwash water from cleaning Plate and Aurine Reboilers | -name Exchanges and |
| MAR 2000 MAR | OOO |
| Estimated Volume Cy Khown Volume (to be entered by the | operator at the end of the haul) cy |
| SIGNATURE: Muste Management Facility Authorized Agent TITLE: Mose | DATE: 3-21-05 |
| | ELEPHONE NO. 505-334-6186 |
| | |
| (This apace for State Use) | |
| APPROVED BY: 1 Carry 2 train TITLE: | 10013 T DATE: -12-108 |
| APPROVED BY:TITLE: | A CATE: TATE: |

APPROVED BY

Energy

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

Form C-138 Originated Stars

> Submit Origina Fine 1 Copy to appropriate District Office

| REQU | FOR APPROVAL TO ACCE | PT SOLID WASTE |
|---|-------------------------------|--|
| 1. RCRA Exempt: | | 4. Generator Buelmeton |
| Verbal Approval Received: | No [A] | 5. Originating Site ULL VERDE ON F |
| 2. Management Facility Destination | DISPLEAC | 6. Transporter Key |
| 3. Address of Facility Operator | 8741 | 9 8. State NA |
| 7. Location of Material (Street | or ULSTR) | |
| 9. Circle One: | | |
| A. All requests for approval to Generator; one certificate per B. All requests for approval to PROVE the material is not listing or testing will be app | non-exempt wastes must be | accompanied by a certification of waste from the accompanied by necessary chemical analysis cation of origin. No waste classified hazardous to |
| All transporters must certify the | delivered are only those cons | igned for transport. |
| BRIEF DESCRIPTION OF | | |
| Spentwash water | Cleaning Plate a | Frame exchanges & AND |
| Estimated Volume K 1000 bb/s | 圣 提品 | MAR 2000 MAR 2000 PRECEIVED OIL CON. DIV DIST, 3 |
| | | |
| SIGNATURE: | Agent TITLE: 200 | <u>ве</u> оате <i>3-21-лл</i> |
| TYPE OR PRINT NAME | | TELEPHONE NO. 205-334-6/86 |

17 1-1283

rals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
87505

Form C-138 Originated 8/8/95

حد NM 87410

lucics IV - (505) 827-7131

334-6178

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

Submit Original Plus 1 Copto appropriate District Office

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE |
|---|---|
| | |
| 1. RCRA Exempt: Non-Exempt: 🖸 | 4. Generator Buelmeton |
| Verbal Approval Received: Yes No 💹 | 5. Originating Site VAL VERDE Plant |
| 2. Management Facility Destination Key DisPosa L | 6. Transporter Key |
| 3. Address of Facility Operator MAIL P.O. Box 900 farmington win | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) Blookfield , N.M. Sec. 14. Tz94 , R.II W. | · |
| 9. Circle One: | |
| 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. | companied by necessary chemical analysis to |
| All transporters must certify the wastes delivered are only those consigned | ed for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Spentwash water from cleaning Plate and I | Franc Exchanges and |
| SPENTWASH WATER FROM Cleaning Plate AND F
Amine Reboilers | MAR 2000 RECEIVED CIL CON. DIV DIST. 3 operator at the end of the haul) ———————————————————————————————————— |
| Estimated Volume < 1000 bb/s cy Known Volume (to be entered by the | operator at the end of the haul) |
| SIGNATURE: Maste Management Focility Authorized Agent | DATE: 3-21-00 |
| TYPE OR PRINT NAME: MICHAEL TALONICH | TELEPHONE NO. 505-334-6/86 |
| (This space for State Use) | |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: |
|---|---|
| Burlington Resources | KEY ENERGY DISPOSAL |
| 35 35 East 30th Street | TET ENERGY BIOLOGAE |
| Farmington, NM 87401 | |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| Val Verde Plant | Val Verde Plant |
| Attach list of originating sites as appropriat | e |
| 4. Source and Description of Waste ρ _{νο} hav ρ ro | cess and products used that generate this waste re not changed since last waste analysis and file established in 1997 and 1999. |
| a^{*} | |
| | |
| - Consum (11 A- | |
| 1, Gregg Wortz | representative for: |
| Burlington Resources | do hereby certify that, according ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory |
| Burling for Resources to the Resource Conservation and Recove | do hereby certify that, according ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory |
| to the Resource Conservation and Recovered determination, the above-described waste EXEMPT oilfield waste | do hereby certify that, according ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory is: (Check appropriate classification) |
| to the Resource Conservation and Recover determination, the above-described waste EXEMPT oilfield wasteand that nothing has been added to the ex | do hereby certify that, according ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory is: (Check appropriate classification) |
| to the Resource Conservation and Recover determination, the above-described waste EXEMPT oilfield wasteand that nothing has been added to the ex | do hereby certify that, according ery Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory is: (Check appropriate classification) |
| to the Resource Conservation and Recover determination, the above-described waste EXEMPT oilfield waste and that nothing has been added to the exempt waste only the following the following the source of the | do hereby certify that, according by Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory is: (Check appropriate classification) |
| to the Resource Conservation and Recover determination, the above-described waste EXEMPT oilfield waste EXEMPT waste and that nothing has been added to the exempt waste only the following means and the conservation and Recover determination, the above-described waste waste waste only the conservation waste | do hereby certify that, according by Act (RCRA) and Environmental Protection Agency's July, 1998, regulatory is: (Check appropriate classification) X NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification empt or non-exempt non-hazardous waste defined above. g documentation is attached (check appropriate items): Other (description): |

BURLINGTON RESOURCES

SAN JUAN DIVISION

March 16, 2000

New Mexico Oil Conservation Division Attn: Denny Foust 1000 Rio Brazos Road Aztec, NM 87410



Re: Approval to dispose of Burlington Resources Oil & Gas Company's Val Verde Plant non exempt nonhazardous spent plate and frame cleaning solution.

Mr. Foust:

Burlington Resources is requesting OCD approval to dispose of the spent plate and frame cleaning solution at Key Energy Services, Farmington, NM disposal facility.

Attached are copies of chemical profile analysis of the spent cleaning solution proposed for disposal.

As per OCD's request, included are: 1) metals analysis, 7/30/99 including the chain of custody; 2) complete waste profile analysis, 3/4/97; and 3) Flash Point analysis, 3/14/00.

The data provided coupled with the generator knowledge of the process and products used determined this cleaning solution to be non exempt nonhazardous.

If you have additional questions concerning this request please contact Gregg Wurtz at 326-9537.

Sincerely,

Gregg Wurtz

Environmental Representative

cc: Correspondence

Val Verde Plant waste file

250¢ West Main Street, Farmington, NM F7.41

Phone (505) 326-4757 Fox (505) 375-4151

Jeff Schoenbacher Burlington Resources 3535 E. 30th St. Farmington, NM 87402 August 2, 1999

Dear Jeff:

Enclosed please find the reports for the samples received by our laboratory for rush analysis on July 26, 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!

Organics Lab Supervisor

Enclosure

xc: File

Phone (505) 326-4731 Fax (505) 325-4181

2506 West Main Street, Farmington, NM 87401

BURLINGTON RESOURCES

Case Narrative

On June 26, 1999, two samples were submitted to Inter-Mountain Laboratories - Farmington for rush analysis. Analysis for TCLP Metals were performed on the samples as per the accompanying Chain of Custody document.

Extractions were performed on the samples by "Toxicity Characteristic Leaching Procedure", Method 1311, SW-846, Rev. 0, July 1992.

Digestion of the extracted samples were performed by "Acid Digestion of Aqueous Samples and Extracts for Total Metals", Method 3010, SW-846, Rev. 1, July 1992.

Trace metal analysis were performed on the samples by <u>Test Methods for Evaluating Solid Waste: Physical/Chemical Methods</u>, SW-846, United States Environmental Protection Agency, November, 1986.

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.

Shaken Williams Organic Analyst

William



Interación Laboratories, Inc.

2506 West Main Street, Farminaton, NM 87401

Client:

Plyone (505) 326-4737 Fax (505) 325-4181

Burlington Resources

Project:

TCLP's

Sample ID:

V V P Plate Cleaning Waste #1

Lab ID:

0399W03764

Matrix:

Liquid

Condition:

Cool/Intact

Date Reported: 08/02/99

Date Sampled: 07/26/99

Date Received: 07/26/99

Date Analyzed: 07/30/99

| | Analytical | | | |
|-------------------------------|------------|-------|-------|-------|
| Parameter | Result | PQL | ЙСГ | Units |
| TCLP METALS - EPA METHOD 1311 | | | | |
| Arsenic | <0.25 | 0.25 | 5.0 | mg/L |
| Barium | <0.5 | 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 |
| Mercury | <0.001 | 0.001 | 0.2 | mg/L |
| Selenium | <0.25 | 0.25 | 1.0 | mg/L |
| Silver | <0.5 | 0.5 | 5.0 | mg/L |

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

Agency, November, 1986.

Reviewed By

Sharon Willams, Organic Lab Supervisor

Phone (505) 326-4737 Fax (505) 325-4181

2506 West Main Street, Farmington, NM 87

Client:

Burlington Resources

Project:

TCLP's

Sample ID:

V V P Plate Cleaning Waste #2

Lab ID:

0399W03765

Matrix:

Liquid

Condition:

Cool/Intact

Date Reported: 08/02/99

Date Sampled: 07/26/99

Date Received: 07/26/99

Date Analyzed: 07/30/99

| Parameter | Analytical
Result | PQL | MCL | Units |
|-------------------------------|----------------------|-------|-------|-------|
| TCLP METALS - EPA METHOD 1311 | | | ···· | |
| Arsenic | <0.25 | 0.25 | 5.0 | mg/L |
| Barium | 1 | 0.5 | 100.0 | mg/L |
| Cadmium | <0.2 | 0.2 | 1.0 | mg/L |
| Chromium | <0.5 | 0.5 | 5.0 | mg/L |
| Lead | <0.5 | 0.5 | 5.0 | mg/L |
| Mercury | <0.001 | 0.001 | 0.2 | mg/L |
| Selenium | <0.25 | 0.25 | 1.0 | mg/L |
| Silver | <0.5 | 0.5 | 5.0 | mg/L |

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

Reviewed By:

Sharon Willams, Organic Lab Supervisor

Phone (505) 326-4737 Fax (505) 325-4181

2506 West Main Street, Farmington, Nt4 87407

QUALITY CONTROL / QUALITY ASSURANCE

thone (505) 326-4737 Fax (505) 325-4181

2506 West Main Street, Farmington, NN 87401

Quality Control / Quality Assurance

Spike Analysis / Blank Analysis TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

Burlington Resources

Project:

ct: TC

Sample Matrix:

TCLP's Extract

Date Reported:

07/30/99

Date Analyzed:

07/30/99

Date Received:

07/26/99

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% |
| Mercury | 0.005 | < 0.001 | 0.005 | 104% |
| 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 |
| Mercury | ND | 0.001 | 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:

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

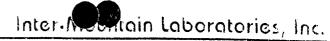
Reported by

Reviewed by _____



Phane (505) 326-4737 Fax (505) 325-4181





2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Known Analysis TOXICITY CHARACTERISTIC LEACHING PROCEDURE

Client:

Burlington Resources

Project:

Sample Matrix:

TCLP's Extract

Date Reported:

08/02/99

Date Analyzed:

07/30/99

Date Received:

07/26/99

Known Analysis

| Parameter | Found
Result | Known
Result | Percent
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 |
| Mercury | 0.004 | 0.004 | 108% | 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:

Reported by

Reviewed by Why



CHAIN OF CUSTODY RECORD

| | Sprice John | in horte | oject Locatio | O(2) | A | NALYSES / PARAMET | ERS | |
|---|---|---------------------------------------|--------------------------------|--|--|---|--------------|------|
| Sample No./ | "col- | | | , the state of the | No. of Containers | | temarks
· | |
| Identification | Date Tim | e Lab Number
ా ఆస్త్రెగ్రెడ్ | | Matrix | | | | |
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| Refir hed y: (Signature | | | Date | Time | Received by: (Signature) | * | Date | Time |
| | ; | | | | 1. 11.160 | | 1/10/19 | 7.00 |
| Relinquished by: (Signature | 7 | | Date | Time | Received by laboratory: (Sign | nature) | Date | Time |
| ٠. | | | | | | | | |
| | | Inter-Moun | tain I ah | oratoria | as Inc | , | | |
| | · 一 | | iaii Lab | oratorie | .s, inc. □ | O | | |
| 1633 Terra Avenue | 1701 Phillips | Circle 250 | 6 West Main S | | 1160 Research Drive | 11183 State Hwy. 30 | 519 | 11 |
| Sheridan, Wyoming 8:
Telephone (307) 672-8 | 2801 Gillette, Wyo
3945 Telephone (3 | | nington, NM 8
phone (505) 3 | | Bozeman, Montana 59718
Telephone (406) 586-8450 | College Station, TX 77845
Telephone (409) 776-8945 | | |



CHAIN OF CUSTODY RECORD

| Client/Project Name | 10211 | Project Location | | | | | |
|--|---|--|----------------|---|--|----------|------|
| | | | 1) 1 | | ANALYSES / PARAI | METERS | |
| Sampler: (Signature) | . * | ain of Custody Tape | No. | No. of Containers | | Remarks | |
| | ate Time Lab No | umber | Matrix | Con | , | | |
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11.1 - | | | | · , | er ^e | | |
| Relinquished by: (Signature) | ~ | Date | Time | Received by: (Signature) | | Date | T |
| F ngt shed by: (Signature) | | Date | Time | Received by: (Signature) | | Date | Time |
| Relinquished by: (Signature) | | Date | Time | Received by laboratory: (Sig | | Date | Time |
| | Intor M | | _
oratorio | s Inc | | ` | |
| O | <u></u> | ountain Lab | s., | • | ~ | | |
| 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (307) 672-8945 | 1701 Phillips Circle
Gillette, Wyoming 82718
Telephone (307) 682-8945 | 2506 West Main S
Farmington, NM 8
Telephone (505) 32 | treet
7401 | 1160 Research Drive
Bozeman, Montana 59718
Telephone (406) 586-8450 | 11183 State Hwy. 30
College Station, TX 77
Telephone (409) 776-8 | | |

2506 West Main Street, Farmington, NM 87401

March 15, 2000

Gregg Wurtz Burlington Resources 3535 E. 30th St. Farmington, NM 87402

Dear Gregg:

Enclosed please find the report for the sample received by our laboratory for analysis on March 14, 2000.

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

Thank you for choosing IML for your analytical needs!

⇔naron vvilliams

Organics Lab Supervisor

Enclosure

xc: File

2506 West Main Street, Farmington, NM 8740

BURLINGTON RESOURCES

Case Narrative

On March 14, 2000, one sample was submitted to Inter-Mountain Laboratories -Farmington for analysis. The sample was received intact. Analysis for Ignitability (Flash Point), was performed on the sample as per the accompanying Chain of Custody # 63353.

Flash Point was performed on the sample by "Standard Test Methods for Flash Point By Pensky-Martens Closed Tester". Annual Book of ASTM Standards, D93-80.

It is the policy of this laboratory to employ, whenever possible, preparatory and anlytical 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

2506 West Main Street, Farmington, NM 87401

Flash Point

Client:

Burlington Resources

Project:

Val Verde Plant

Sample ID:

VVP Plate/Frame Wash

Laboratory ID:

0300W01112

Sample Matrix:

Liquid Intact

Condition:

Date Reported:

03/15/00

Date Sampled:

03/14/00

Date Received:

03/14/00

Date Analyzed:

03/14/00

| Analyte | Result | Units |
|-------------|--------|-------|
| Flash Point | >140 | °F |

References:

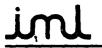
Annual Book of ASTM Standards, Method D93-80.

Reported by

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

2506 West Main Street, Farminaton, 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

Known Analysis FLASH POINT

Client:

Burlington Resources

Project:

Val Verde Plant

Sample Matrix:

Liquid

Date Reported:

03/15/00

Date Analyzed:

03/14/00

Date Received:

03/14/00

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

Reference:

Annual Book of ASTM Standards, Method D93-80.

Comments:



CHAIN OF CUSTODY RECORD

| Client/Project Name | | | | 1 - | ect Location | | | $\overline{}$ | $\overline{}$ | ANA | LYSES | S / PAF | RAMETER | RS | |
|---|----------|---|----------------|--------------------|--|------------|--------------------------------------|----------------------|---------------|----------|------------------------------------|-----------|----------|----------------------------|--|
| Burlington Res | ources | | Ob-ii | | al Verde | | | _/_ | | 7 | 7 | 7 | 7 | | <u>. </u> |
| Sampler: (Signature) | 11 1 11 | 1 PI | | n or Cu | istody Tape | NO. | | / m | 00
X, | | | | Ren | narks | |
| J. Gregg Wortz for | Vul Vei | rac Ilur | 1 | | | | | ije | 4 | (| | | | | |
| Sample No./
Identification | Date | Time | Lab Nun | nber | | Matrix | | No. of
Containers | Flash Point | | | | | | |
| VVP Plate/Frame Wash | 3/14/00 | 10:00 | 03000011 | 12 | Liquio | | | 1 | X | | | | Repor | 1 vrsu
egg Wus
- 933 | ilts |
| | 3/13/00 | | | | | | | | | | | | 10 6- | egg Wu | 12 |
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| nquished by: (Signature) | Went | 4 | | | Date 3/14/00 | 7:5/ | Received I | by: (Sign | ature) | | | | | Date | Time |
| Refinquished by: (Signature) | | | | | Date | Time | Received I | by: (Sign | ature) | | | | | Date | Time |
| Relinquished by: (Signature) | ` | | | | Date | Time | Received to | y labor | atory: (S | Ignature |) | | <u> </u> | Date 3/14/00 | Time |
| | | [| nter-Mo | unta | ain Labo | oratori | | | | R | | | | | |
| 555 Absaraka
Sheridan, Wyoming 8280
Telephone (307) 674-750 | 01 Sheri | Terra Avenu
dan, Wyomi
hone (307) | ue
ng 82801 | 1701 F
Gillette | Phillips Circle
, Wyoming 8
one (307) 68 | 9
32718 | 2506 West
Farmington
Telephone | Main St
, NM 87 | 401 | Co | 183 State
llege State
ephone | ation, TX | 77845 | 63 | 353 |

ontract Environmental Services. Post Office Box 3376 Farmington, New Mexico 87499

Phone (505) 325-1198

March 4, 1997

Burlington Resources Mr. Craig Bock 3535 E. 30th Street Farmington, New Mexico 87401

RE:

Written Procedure For Sampling Steel Tank, Spent Scale Cleaning Solution, Val Verde Plant, Bloomfield, New Mexico

Dear Mr. Bock,

Contract Environmental Services, Inc. (CES) is pleased to present this sampling procedure for the above described site to Burlington Resources (BR). Sampling will be broken down into two (2) parts. Part one (1) will be sampling the liquid and part two (2) will be sampling the bottom sludge (if any).

Part 1 - Top to bottom liquid samples will be obtained using a 3/4" PVC sample tube. The PVC will be lowered into the fluid until the bottom is encountered. A rubber stopper will be inserted into the exposed end just above the liquid level. The PVC sampler will be extracted and the contents placed in a stainless steel canister for mixing. A total of three (3) liquid samples will be taken for compositing.

Part 2 - The bottom sludge (if any) will be sampled using a PVC sample tube with an eight (8) ounce glass sample jar secured with zip ties at one end. If sludge is encountered, a sample will be gathered from the center and each side. The three (3) sludge samples will be added to the same stainless steel canister to be composited with the liquid previously obtained.

The liquid and solids will be thoroughly mixed and samples for laboratory analysis will be gathered from the stainless steel container.

Samples will be adequately preserved as directed by the lab and carefully packaged for shipping to Assaigai Laboratory of Albuquerque for analyses. Chain-of-custody records will accompany the sample from the time they are gathered until the analyses are completed at the laboratory. The lab has been informed of our request for "Rush" analyses and have scheduled the work prior to receiving the samples. They have committed to a five (5) working day turn-around-time. Assaigai will receive the samples on Thursday morning by 10:00 am to begin the analyses. We should expect results on or before Thursday, March 13th, 1997.

All sampling equipment will be wiped down on site and either decontaminated or properly disposed of.

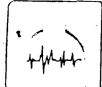
Contract Environmental Services, Inc. appreciates this opportunity to submit this sampling procedure to Burlington Resources and looks forward to serving your firm on this and other projects in the near future.

Sincerely

Shawn A. Adams

Contract Environmental Services, Inc.

ValVerde Plant
Plate Exchange. Wash Wa





87499



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

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

Report Generated:

March 12, 1997 14:42

CERTIFICATE OF ANALYSIS **RESULTS BY SAMPLE**

SENT CONTRACT ENVIRONMENTAL SERV WORKORDER #

: 9703041

TO: PO BOX 3376

WORK ID

: MOI-VAL VERDE

FARMINGTON, NM

CLIENT CODE

: CONT01

DATE RECEIVED : 03/06/97

ATTN: SHAWN ADAMS

Page: 1

Lab ID: 9703041-01A Sample ID: VALV-100

Collected: 03/05/97 12:00:00

Matrix: LIQUID

| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID |
|---|------------------------|----------------------------------|------------|-----|----------------------|------------------|
| FLASH POINT/SW846 1010
Flash Point
REACTIVITY/SW846 7-3 | >60 | Deg Centigrade | 20 | 1.0 | 03/10/97 | WFLASH204 |
| Sulfide
Cyanide | NON-REACT
NON-REACT | mg/Kg of Waste
mg/Kg of Waste | 500
250 | 1.0 | 03/11/97
03/11/97 | W97114
W97114 |

Lab ID: 9703041-01B

Collected: 03/05/97 12:00:00

Sample ID: VALV-101

Matrix: LIQUID

| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID | |
|---|--------|-------|-------|-----|--------------|----------|--|
| CORROS(NACE)/SW846 1110
Corrosivity (NACE) | ND | mm/yr | 6.0 | 1.0 | 03/07/97 | WNACE035 | |

Lab ID: 9703041-01C

Sample ID: VALV-102/103

Collected: 03/05/97 12:00:00

Matrix: LIQUID

| <u> </u> | | | | | | |
|-------------------------------|----------|-------|--------|-----|--------------|----------|
| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID |
| TCLP SV/METHOD 1311/8270B | | | | | | |
| 1.4-Dichlorobenzene | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| 2-Methylphenol / O-Cresol | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| 3/4-Methylphenol / M/P-Cresol | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| Hexachloroethane | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| Nitrobenzene | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| Hexachlorobutadiene | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| 2.4.6-Trichlorophenol | ND | mg/L | 0.010 | 290 | 03/08/97 | TSVOA186 |
| 2.4.5-Trichlorophenol | ND | mg/L | 0.010 | 290 | 03/08/97 | TSVOA186 |
| 2.4-Dinitrotoluene | ND | mg/L | 0.010 | 290 | 03/08/97 | TSVOA186 |
| Hexachlorobenzene | ND | mg/L | 0.0010 | 290 | 03/08/97 | TSVOA186 |
| Pentachlorophenol | ND | mg/L | 0.020 | 290 | 03/08/97 | TSVOA186 |
| Pyridine | ND | ing/L | 0.010 | 290 | 03/08/97 | TSVOA186 |
| TCLP SVOA XT/1311/3520 | 03/07/97 | N/A | ,,,,,, | • | | |



Lab ID: 9703041-01D Sample ID: VALV-104

Collected: 03/05/97 12:00:00

Matrix: LIQUID

| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID |
|--------------------|--------|----------|-------|-----|--------------|----------|
| рН/ЕРА 150.1
рН | 8.7 | pH Units | 0.10 | 1.0 | 03/07/97 | WPH479 |

Lab ID: 9703041-01E

Collected: 03/05/97 12:00:00 Sample ID: VALV-105

Matrix: LIQUID

| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID |
|---|--|---|--|--|--|--|
| % SOLIDS(TCLP XT)EPA 160.3
TCLP (ICP) DIG/1311/3005
TCLP EXTRACTION/TCLP 1311
TCLP METALS/1311/SW8466010 | 1.00
03/09/97
03/06/97 | % (Percent)
N/A
N/A | | | | |
| Arsenic, As Barium, Ba Cadmium, Cd Chromium, Cr Lead, Pb Mercury, Hg Selenium, Se Silver, Ag | ND
ND
ND
ND
ND
ND
ND | mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
mg/L
N/A | 0.40
0.50
0.0050
0.020
0.050
0.0020
0.050
0.040 | 1.0
1.0
1.0
1.0
1.0
1.0 | 03/10/97
03/10/97
03/10/97
03/10/97
03/10/97
03/11/97
03/10/97 | M97180.97178
M97180.97178
M97180.97178
M97180.97178
M97180.97178
M97180.97178
M97180.97178 |

Lab ID: 9703041-01F

Collected: 03/05/97 12:00:00 Matrix: LIQUID Sample ID: VALV-106/107 A/B

| TEST / METHOD | RESULT | UNITS | LIMIT | D_F | DATE
ANAL | BATCH_ID |
|---|----------|-------|--------|-----|--------------|----------|
| TCLP ZHE / TCLP 1311
ZHE/VOA/METHOD 1311/8240B | 03/06/97 | N/A | | | | |
| Vinyl Chloride | ND | mg/L | 0.0050 | 5.0 | 03/07/97 | TVOA278 |
| 1.1-Dichloroethene | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| Chloroform | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| 1,2-Dichloroethane | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| 2-Butanone (MEK) | ND | mg/L | 0.0050 | 5.0 | 03/07/97 | TVOA278 |
| Carbon Tetrachloride | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| Trichloroethene | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| Benzene | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| Tetrachloroethene | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |
| Chlorobenzene | ND | mg/L | 0.0010 | 5.0 | 03/07/97 | TVOA278 |

Fred L. Shore, Ph.D.

VP of Laboratory Operations

WORKORDER COMMENTS

DATE : 03/12/97

WORKORDER:

DEFINITIONS/DATA QUALIFIERS

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

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

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

- *** Analytical results reported pertain only to the samples provided ***

 *** for analysis and may not represent actual field conditions.

 This report is not to be reproduced except in full without the ***
- *** This report is not to be reproduced except in full, without the ***

 *** written approval of Assaigai Analytical Inc. ***

REPORT COMMENTS

Chain of Custody Record 7300 JEFFERSON, N.E. ALBUQUERQUE, NEW MEXICO 87109 (505) 345-8964 3332 WEDGEWOOD MIDLAND, TEXAS 79705 EL PASO, TEXAS 79925 (915) 593-6000 (915) 570-1116 **MELQUIADES ALANIS** 6411 LOCAL UNO Client CONTRACT LANGUAME CTAL Project Manager / Contact Supulo Andres CIUDAD JUAREZ, CHIHUAHUA MEXICO 32320 Address 1/2 Por 3376 ______ Telephone No. (775) 375 - 1198 Analysis Required City/State/Zip / Manington Day 9071994 Fax No. Chart (chi) Romarks Contract / Purchase Order / Quote Contract Entl AAL FRACTION NUMBER Field Sample Number / Location Sample Preservation Type / Size of Container Time Type Temp. Chemical 2/<100 6 07 alass Took Somile VALV-100 VALV-101 4 x 6" Ambou UALV - 102 Dri 1.3 4x6" Ambrer VALV- 103 20 11 7 15 44" MAN × VALV - 104 150 34. V 6" Plactic VALU- 105 1, me 1.1 VUA S A/B VALU- 106-3,. 2. X UDIS VAIN no Received by: Relinquished by: Received by: Relinguished by: Printed Strawell ADINGS Time Company Court ALT ENU SUCC 2 00 After analysis, samples are to be: Disposed of (additional fee) Method of Shipment: ___

Stored (30 days max)

Returned to customer

Stored over 30 days (additional fee)

RECINEN DUE

Special Instructions:

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

District IV - (505) 827-7131

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

MAR 15 2000

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: [7] | 4. Generator GIAN+ Refining |
| Verbal Approval Received: Yes ☐ No 🔀 | 5. Originating Site LodiNGTartes |
| 2. Management Facility Destination (LEY ENERGY D 150054L | 6. Transporter Ucy |
| 3. Address of Facility Operator #345 LR 3500 AZ+CC NM MAIL: PD Box 900 F44MW6TON B7499 | 8. State NM |
| 7. Location of Material (Street Address or ULSTR) #50CR 4990 Bloomfield NMB7413 | |
| 9. Circle One: | |
| A. All requests for approval to accept oilfield exempt wastes will be accepted acceptance; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accepted accepted accepted 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: | |
| NON-Process Contact Cooling Tower Water MAR 2000 ONOTION JOSEP 66/1 | MAR 2000 RECEIVED OIL CON DIV |
| Estimated Volume 400-500 6665 cy Known Volume (to be entered by the op | erator at the end of the haul) —————— cy |
| SIGNATURE: Modern TITLE: MODE | DATE: <u>3-9-00</u> |
| | EPHONE NO. 505-334-6186 |
| (This space for State Use) | |
| APPROVED BY: Deny J. Fam TITLE: GOS | 09 15 T DATE: 3/10/2000 |
| APPROVED BY: / Multim Miles TITLE: Envision | number Geologist DATE: 3/15/00 |

District I - (505) 393-6161 P.O. Box 1.980 Hobbs, NM 88241-1980 District E - (505)-748-1283 811 S. First Artesia, NM 88210 r:-trict III - (505) 334-6178 Rio Brazos Road

District IY - (505) 827-7131

___c, NM 87410

New Mexico Energy Munerals 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 Čopv to appropriate District Office

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTL |
|---|--|
| 1. RCRA Exempt: Non-Exempt: [7] | 4. Generator 61 AN + Refining |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating Site Lad NGTartes |
| 2. Management Facility Destination (LEY ENERCY D 15P054L | 6. Transporter Ley |
| 3. Address of Facility Operator #345 LR 3500 AZEC NM MAIL: PD Box 9CD F48mington 87499 | 8. State K. _N |
| 7. Location of Material (Street Address or ULSTR) #50CR 4990 BloomSick NM 87413 | |
| 9. Circle One: | |
| A. All requests for approval to accept oilfield exempt wastes will be acceded Generator; one certificate per job. 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 |
| All transporters must certify the wastes delivered are only those consigned | d for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| NON-Process Contact Cooling Tower Water Weed MSNS | MAR 2000 RECEIVED OILOON, DIV DIST. 3 |
| Estimated Volume 400 500 66 cy Known Volume (to be entered by the open SIGNATURE: Major Agent TITLE: MOR TYPE OR PRINT NAME: MINDEL TAIDUICH TEI | DATE: <u>3-9-00</u> |
| · | |
| (This space for State Use) | |
| APPROVED BY: Dany of TITLE: Geold | DATE: 03/10/2000 |
| APPROVED BY: TITLE: | DATE: |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: | |
|---|---|--|
| Giant Refining Company | Key Energy Disposal | |
| # 50 CR 4990
Bloomfield, NM 87413 | Chauch Mana Parill's | |
| 3. Originating Site (name): | Crouch Mesa Facility Location of the Waste (Street address &/or ULSTR): | |
| | | |
| Giant Refining Company # 50 CR 4990 | SAME | |
| Bloomfield, NM 87413 | | |
| Attach list of originating sites as appropriate | | |
| 4. Source and Description of Waste | | |
| Non-Process Contact Cooling Tower Water | and Scale | |
| 400 to 500 Barrels of Non-Contact Coolin | ng Tower water | |
| | | |
| , | | |
| L | | |
| Barry Holman | representative for: | |
| (Print Name) Giant Refining Company | | |
| | do hereby certify that, ry Act (RCRA) and Environmental Protection Agency's July, | |
| EXEMPT oilfield waste XX NON-EXEM | APT oilfield waste which is non-hazardous by characteristic by product identification | |
| | | |
| For NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS Information XX Other (description): | | |
| RCRA Hazardous Waste Analysis | Other (description). | |
| Chain of Custody | NORM Analysis Attached | |
| Name (Original Signature): | | |
| Title: Environmental Manager | | |
| Date: March 9, 2000 | ·
 | |



Process Equipment & Service Company, Inc.

5680 U.S. HIGHWAY 64 • 87401 / P.O. 8OX 929 • 87499 FARMINGTON, NEW MEXICO PHONE: (505) 327-2222 • FAX: (505) 327-7550

NORM SURVEY DATA SHEET

| Facility / location: GANT REFINIS | Date: 3-9-08 | |
|--|--------------|--|
| Meter Model: DOSIMETER 3007A Serial No: | 9808-238 | |
| Detector Model: DOSIMETER 3012 Serial No: | 201-887-7100 | |
| Calibration Date: 4-5-99 | | |
| Battery Check: (大) | | |
| Background Radiation Level: 0-04 mR/hr | . | |
| Description of material surveyed: Cooling Tower Scale 4 | | |
| Item / Material Surveyed: | | |
| Waste Material: 400 approx. gals 86/ Equipment: Manufacturer: | mR/hr: 0.04 | |
| Serial No: | | |
| Description: | | |
| Job No: | · | |
| Comments: | | |
| Survey Conducted by: GARY W How E (Print Name) (Signature) | | |

vict III - (505) 334-6178

Herrica IV - (505) 827-7131

APPROVED BY:

APPROVED BY:

Rio Brazos Road

_c NM 87410

Energy

ural

Department RECEIVED

Form C-138 Originated 8/8/9:

reet

MAR 0 9 2000

Environmental Bureau

Oil Conservation Division

Submit Origina
Plus 1 Copy
to appropriate
District Office

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | 005/01/01/2 | |
|--|--|--|
| 1. RCRA Exempt: Non-Exempt: X | 4. Generator WFS | |
| Verbal Approval Received: Yes 🔲 No 🗓 | 5. Originating Site Compressor sites | |
| 2. Management Facility Destination Key Disposa L | 6. Transporter Key | |
| 3. Address of Facility Operator #345 CL 3500 AZEC NM MAIL P.O. Box Good Flewward 97499 | 8. State NM | |
| 7. Location of Material (Street Address or ULSTR) 5E45T | | |
| 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 | ed for transport. | |
| Estimated Volume 1000.666/s cy Known Volume (to be entered by the | operator at the end of the raul) 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| SIGNATURE: Measure Management Facility Authorized Agent TITLE: MGR | DATE: 3-7-00 | |
| TYPE OR PRINT NAME:T | ELEPHONE NO. | |
| | · | |
| (This space for State Use) | | |

**rice III - (505) 334-6178

**Rio Brazos Roed

_____ NM 87410

bistrice IV - (505) 827-7131

APPROVED BY:

Department

Originated

Submit Original Plus 1 Copy to appropriate District Office

Santa Fe, New Mexico 87505 (505) 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 Compressive sites | |
| 2. Management Facility Destination KEY Disposal | 6. Transporter Key | |
| 3. Address of Facility Operator # 345 CL 3500 AZRCNIN MAIL P.O. Bry Good Falmington 97499 | 8. State NM | |
| 7. Location of Material (Street Address or ULSTR) 5 # 45 T | | |
| 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 consign | ed for transport. | |
| Estimated Volume 1000-66/15 cy Known Volume (to be entered by the operator at the end of the haul) SIGNATURE: Michael Market With RAIN WATER 1000 DATE: 3-7-00 | | |
| Weste Management FecilityAuthorized Agent TYPE OR PRINT NAME: | TELEPHONE NO. | |
| | | |
| (This space for State Use) APPROVED BY: Derry J. Fout TITLE: Geologist DATE: 3/8/00 | | |

CERTIFICATE OF WASTE STATUS

| Generator Name and Address: | 2. Destination Name: | |
|--|---|--|
| PRODUCTION OPERATORS, INC. | KEY ENERGY · | |
| 4000 Lomas Street | | |
| Farmington, NM 87401 | P.O. Box 900 | |
| | 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 Laguna Mesa, Martinez Dra | |
| Attach list of originating sites as appropriate Quintan | a Mesa, 31-6 WPX | |
| 4. Source and Description of Waste | | |
| | | |
| RAIN WATER & WASH | WATER | |
| · · | | |
| | | |
| | | |
| | | |
| | | |
| l,Buster Gaston | representative for: | |
| (Print Name) | • | |
| Production Operators, Inc. | do heroby certify that, | |
| | ery Act (RCRA) and Environmental Protection Agency's July, | |
| 1988, regulatory determination, the above described | W85t8 is: (Check appropriate classification) | |
| | MPT oilfield waste which is non-hazardous by characteristic | |
| enalysis c | er by product identification | |
| | | |
| and that nothing has been added to the exempt or n | on-exempt non-hazardous waste defined above. | |
| For NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS Information Other (description): | | |
| RCRA Hazardous Waste Analysis | | |
| Chain of Custody | | |
| : | · | |
| | | |
| Name (Original Signature): Buter | alan | |
| Title: Operations Coordinator | · · | |
| | | |
| Date: 02-25-2000 | | |
| | • | |



February 28, 2000

Mr, Bill Beevers Williams field Service, Inc. Manzanares District Bloomfield, NM 87413

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

> Project No.: 97050 Job No.: 705004

Dear Mr. Beevers,

Enclosed are the analytical results for one water sample collected from the location designated as "Horse Canyon". One water sample was collected by WFS designated personnel on 2/22/00, and received by the Envirotech laboratory on 2/22/00 for TCLP W/O Herbicides and Pesticides.

The sample was documented on Envirotech Chain of Custody No. 7699 and assigned Laboratory No. G875 (Waste Water) for tracking purposes. The sample was analyzed 2/24/00 - 2/28/00 using USEPA or equivalent methods.

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

Respectfully submitted, Envirotech, Inc.

Christine M. Walters

Laboratory Coordinator / Environmental Scientist

enc.

CMW/cmw

C:/files/labreports/WFS.wpd



SUSPECTED HAZARDOUS WASTE ANALYSIS

Client: Williams Field Services Project #: 705004 Sample ID: Waste Water Date Reported: 02-25-00 Lab ID#: G875 Date Sampled: 02-22-00 Sample Matrix: Water Date Received: 02-22-00 Preservative: Cool Date Analyzed: 02-24-00 Condition: Cool and Intact Chain of Custody: 7699

Parameter

Result

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 6.26

REACTIVITY:

Negative

RCRA Hazardous Waste Criteria

Parameter

Hazardous Waste Criterion

IGNITABILITY:

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

CORROSIVITY:

Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22.

(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)

REACTIVITY:

Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. (i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)

Reference:

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

Comments:

Horse Canyon CDP.

Analyst

Review



EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

| | • | | |
|--------------------|-------------------------|---------------------|----------|
| Client: | Williams Field Services | Project #: | 705004 |
| Sample ID: | Waste Water | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-23-00 |
| 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) | 0.0176 | 0.0001 | 200 |
| Chloroform | ND | 0.0001 | 6.0 |
| Carbon Tetrachloride | ND | 0.0001 | 0.5 |
| Benzene | 0.145 | 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 Cl | naracteristic Leaching Procedure, SW | -846, USEPA, July 1992. | |
| | Method 5030, Purge-and | 5030, Purge-and-Trap, SW-846, USEPA, July 1992. | | |
| | Method 8010, Halogenat | ed Volatile Organic, SW-846, USEPA | , Sept. 1994. | |
| | Method 8020, Aromatic \ | /olatile Organics, SW-846, USEPA, S | ept. 1994. | |
| Note: | Regulatory Limits based | on 40 CFR part 261 Subpart C sectio | n 261.24, July 1, 1992. | |
| Comments: | Horse Canyon CDP. | | | |

Analyst R. Opler

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EPA METHOD 8040 PHENOLS

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|---------------------|----------|
| Sample ID: | Waste Water | Date Reported: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-28-00 |
| Condition: | Cool & Intact | Analysis Requested: | TCLP |

| Parameter | Concentration
(mg/L) | Detection
Limit
(mg/L) | Regulatory
Limit
(mg/L) |
|-----------------------|-------------------------|------------------------------|-------------------------------|
| o-Cresol | 1.17 | 0.020 | 200 |
| p,m-Cresol | 1.11 | 0.040 | 200 |
| 2,4,6-Trichlorophenol | 0.491 | 0.020 | 2.0 |
| 2,4,5-Trichlorophenol | 0.065 | 0.020 | 400 |
| Pentachlorophenol | 0.454 | 0.020 | 100 |

ND - Parameter not detected at the stated detection limit.

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

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

Horse Canyon CDP.

, Analyst



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

| Client: | Williams Field Services | Project #: | 705004 |
|--------------------|-------------------------|---------------------|----------|
| Sample ID: | Waste Water | Date Reported: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Extracted: | N/A |
| Preservative: | Cool | Date Analyzed: | 02-28-00 |
| 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 | 0.047 | 0.020 | 2.0 |
| Hexachlorobutadiene | ND | 0.020 | 0.5 |
| 2,4-Dinitrotoluene | 0.039 | 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 | |
| WANGO Acceptance ontena | i arameter | r crecint recovery | |
| | | | |

2-fluorobiphenyl

97%

References:

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

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

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

Note:

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

Comments:

Horse Canyon CDP.

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Ariotini M Walter
Review



EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

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| Client: | Williams Field Services | Droinet #: | 705004 |
|--------------------|-------------------------|------------------|-------------|
| | | Project #: | 705004 |
| Sample ID: | Waste Water | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | 02-22-00 |
| Chain of Custody: | 7699 | Date Received: | 02-22-00 |
| Sample Matrix: | Water | Date Analyzed: | 02-24-00 |
| 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) |
| Amania | 0.404 | 0.001 | 5 0 |
| Arsenic | 0.194 | 0.001 | 5.0 |
| Barium | 0.146 | 0.001 | 21 |
| Cadmium | 0.099 | 0.001 | 0.11 |
| Chromium | 0.072 | 0.001 | 0.60 |
| Lead | 0.087 | 0.001 | 0.75 |
| Mercury | 0.004 | 0.001 | 0.025 |
| Selenium | ND | 0.001 | 5.7 |
| | | | |

ND - Parameter not detected at the stated detection limit.

References:

Silver

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA,

December 1996.

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

Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission

SW-846, USEPA. December 1996.

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Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Horse Canyon CDP.

Analyst

Review

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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: | 02-25-00 |
| Laboratory Number: | 02-23-TCV | Date Sampled: | . N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-23-00 |
| 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 sample G875.

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Mistin M Walter
Review



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

| Client: | QA/QC | Project #: | N/A |
|---------------------|------------------|-----------------|----------|
| Sample ID: | Matrix Duplicate | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Analysis Requested: | TCLP | Date Analyzed: | 02-23-00 |
| 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) | 0.0176 | 0.0174 | 0.0001 | 1.1% |
| Chloroform | ND | ND | 0.0001 | 0.0% |
| Carbon Tetrachloride | ND | ND | 0.0001 | 0.0% |
| Benzene | 0.145 | 0.146 | 0.0001 | 0.7% |
| 1,2-Dichloroethane | ND | ND | 0.0001 | 0.0% |
| Trichloroethene | ND | ND | 0.0003 | 0.0% |
| Tetrachloroethene | ND | ND | 0.0005 | 0.0% |
| Chlorobenzene | ND | ND | 0.0003 | 0.0% |
| 1,4-Dichlorobenzene | ND | ND | 0.0002 | 0.0% |

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample G875.

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: | 02-25-00 |
| Laboratory Number: | G875 | | Date Sampled: | N/A |
| Sample Matrix: | Water | | Date Received: | N/A |
| Analysis Requested: | TCLP | | Date Analyzed: | 02-23-00 |
| 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) | 0.0176 | 0.050 | 0.0671 | 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 | 0.145 | 0.050 | 0.195 | 0.0001 | 100% | 39-150 |
| 1,2-Dichloroethane | ND | 0.050 | 0.0494 | 0.0001 | 99% | 51-147 |
| Trichloroethene | ND | 0.050 | 0.0494 | 0.0003 | 99% | 35-146 |
| Tetrachloroethene | ND | 0.050 | 0.0494 | 0.0005 | 99% | 26-162 |
| Chlorobenzene | ND | 0.050 | 0.0494 | 0.0003 | 99% | 38-150 |
| 1,4-Dichlorobenzene | ND | 0.050 | 0.0494 | 0.0002 | 99% | 42-143 |

ND - Parameter not detected at the stated detection limit.

References:

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

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

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

Comments:

QA/QC for sample G875.

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EPA METHOD 8040 PHENOLS Quality Assurance Report Laboratory Blank

| | | i i | |
|--------------------|------------------|---------------------|----------|
| Client: | QA/QC | Project #: | N/A |
| Sample ID: | Laboratory Blank | Date Reported: | 02-28-00 |
| Laboratory Number: | 02-28-TCA | Date Sampled: | N/A |
| Sample Matrix: | 2-Propanol | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-28-00 |
| Condition: | N/A | Analysis Requested: | TCLP |

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

ND - Parameter not detected at the stated detection limit.

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

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

QA/QC for samples G875.

Analyst

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EPA METHOD 8040 PHENOLS Quality Assurance Report

| | _ | | |
|--------------------|------------------|---------------------|----------|
| Client: | QA/QC | Project #: | N/A |
| Sample ID: | Matrix Duplicate | Date Reported: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | N/A |
| Condition: | Cool & Intact | Date Analyzed: | 02-28-00 |
| | | Analysis Requested: | TCLP |

| Parameter | Sample
Result
(mg/L) | Duplicate
Result
(mg/L) | Detection
Limit
(mg/L) | Percent
Difference |
|-----------------------|----------------------------|-------------------------------|------------------------------|-----------------------|
| o-Cresol | 1.17 | 1.16 | 0.020 | 1.0% |
| p,m-Cresol | 1.11 | 1.09 | 0.040 | 2.0% |
| 2,4,6-Trichlorophenol | 0.491 | 0.486 | 0.020 | 1.0% |
| 2,4,5-Trichlorophenol | 0.065 | 0.064 | 0.020 | 1.1% |
| Pentachlorophenol | 0.454 | 0.450 | 0.020 | 0.8% |

ND - Parameter not detected at the stated detection limit.

| QA/QC Acceptance Criteria: | Parameter | Maximum Difference | |
|----------------------------|----------------|--------------------|--|
| | | | |
| | 8040 Compounds | 30.0% | |

References:

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

Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid

Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note:

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

Comments:

QA/QC for samples G875.

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: | 02-28-00 |
| Laboratory Number: | 02-28-TBN | Date Sampled: | N/A |
| Sample Matrix: | Hexane | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | N/A |
| Condition: | N/A | Date Analyzed: | 02-28-00 |
| | | 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 | 93% | • |

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 G875.

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Mistini M Walles
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: | 02-28-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | N/A |
| Condition: | N/A | Date Analyzed: | 02-28-00 |
| | | Analysis Requested: | TCLP |

| Parameter | Sample
Result
(mg/L) | Duplicate
Result
(mg/L) | Percent
Difference | Det.
Limit
(mg/L) |
|---------------------|----------------------------|-------------------------------|-----------------------|-------------------------|
| | | (3_ / | | <u> </u> |
| Pyridine | ND | ND | 0.0% | 0.020 |
| Hexachloroethane | ND | ND | 0.0% | 0.020 |
| Nitrobenzene | 0.047 | 0.047 | 0.0% | 0.020 |
| Hexachlorobutadiene | ND | ND | 0.0% | 0.020 |
| 2,4-Dinitrotoluene | 0.039 | 0.038 | 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, Separato | ry Funnel Liquid-Liquid Extraction, S\ | W-846, USEPA, July 1992. | | |
| • | Method 8090, Nitroaror | natics and Cyclic Ketones, SW-846, U | JSEPA, Sept. 1986. | | |
| Note: | Regulatory Limits base | d on 40 CFR part 261 Subpart C sect | ion 261.24, July 1, 1992. | | |

Comments:

QA/QC for sample G875.

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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: | C2-24-TCM QA/QC | Date Reported: | 02-25-00 |
| Laboratory Number: | G875 | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Analysis Requested: | TCLP Metals | Date Analyzed: | 02-24-00 |
| Condition: | N/A | Date Extracted: | N/A |

| Blank & Duplicate
Conc. (mg/L) | Instrument
Blank | Method
Blank | Detection Limit | Sample | Duplicate | %
Diff. | Acceptance
Range |
|-----------------------------------|---------------------|-----------------|-----------------|--------|-----------|------------|---------------------|
| Arsenic | ND | ND | 0.001 | 0.194 | 0.195 | 0.5% | 0% - 30% |
| Barium | ND | ND | 0.001 | 0.146 | 0.149 | 2.1% | 0% - 30% |
| Cadmium | ND | ND | 0.001 | 0.099 | 0.100 | 1.0% | 0% - 30% |
| Chromium | ND | ND | 0.001 | 0.072 | 0.073 | 1.4% | 0% - 30% |
| Lead | ND | ND | 0.001 | 0.087 | 0.089 | 2.3% | 0% - 30% |
| Mercury | ND | ND | 0.001 | 0.004 | 0.004 | 0.0% | 0% - 30% |
| Selenium | ND | ND | 0.001 | ND | ND | 0.0% | 0% - 30% |
| Silver | ND | ND | 0.001 | 0.037 | 0.037 | 0.0% | 0% - 30% |

| | A STATE OF THE PARTY OF THE PAR | | | | Acceptance
Range |
|--------------|--|---|--------|----------|---------------------|
| Conc. (mg/L) | Added | *************************************** | Sample | Recovery | Range |
| Arsenic | 0.500 | 0.194 | 0.693 | 99.9% | 80% - 120% |
| Barium | 0.500 | 0.146 | 0.65 | 100.3% | 80% - 120% |
| Cadmium | 0.500 | 0.099 | 0.598 | 99.8% | 80% - 120% |
| Chromium | 0.500 | 0.072 | 0.572 | 100.0% | 80% - 120% |
| Lead | 0.500 | 0.087 | 0.588 | 100.2% | 80% - 120% |
| Mercury | 0.050 | 0.004 | 0.053 | 98.1% | 80% - 120% |
| Selenium | 0.500 | ND | 0.498 | 99.6% | 80% - 120% |
| Silver | 0.500 | 0.037 | 0.536 | 99.8% | 80% - 120% |

ND - Parameter not detected at the stated detection limit.

References:

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

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

SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission,

SW-846, USEPA, December 1996.

Comments:

QA/QC for sample G875.

Analyst

CHAIN OF CUSTODY RECORD

| Client / Project Name | - | | Project Location | | | | | | MALVEIC / | PARAMETE | DC. | | | |
|----------------------------|----------------|----------------|------------------|-------------------------|-------------------------|------------------------|----------------|------------|------------|----------|--------------|---------|---|------------|
| WFS | | • | Horse (| lanyon CDF | | | | <i>)</i> - | INALTOID / | | ns | | | |
| Sampler: | | | Client No. | | | ys . | | | | | ş | Remark | s | |
| B:11 Beeu | ers | | 7050 | 104 | No. of | Containers CLP b H > P | · | | | | | | | |
| Sample No./ | Sample
Date | Sample
Time | Lab Number | Sample
Matrix | ž | Containers 70.00 | | | | | | | | · <u>-</u> |
| wase water | 2/22 | 14:00 | G875 | Liquid | | | | | | | TOLF |) | | |
| 61a55 | 2/22 | 14:00 | | Liquid | | | | | | | 11 | | | |
| VoA-" " | 11 | | | 0,, | | | ļ | | | | /• | | | |
| VOA " " | ,, | // | | '' | | | | | | | // | | | |
| Phstic water | . 11 | ,, | | /1 | | | | | | | 11 | | | |
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Relinquished by: (Signatu | re) | \mathcal{L} | | Date Time 2/22/00 15:55 | Received by | /: (Signati | | Boog | nl, | | | Date | | ime |
| Relinquished by: (Signatu | re) | | | | Received by | /: (Signati | ure) | | | | | , | | |
| Relinquished by: (Signatur | re) | | | | Received by | /: (Signati | ure) | | | | | | | |
| | | | | ENVIRO | TECH | 110 | \overline{C} | | | | Sample f | Receipt | J | |
| | | | | | | | | | | | | Y | N | N/A |
| | | | · | 5796 U.
Farmington, | S. Highway
New Mexic | | 1 | | | Rece | ived Intact | 7 | | |
| | | | | |) 632-0615 | | | | | Cool - | lce/Blue Ice | 11 | | |

Inter I. (505) 393-6161 obbs. NP# 88241-1980 little 11 - (505) 748-1283

nesia. NM 88210

trict III - (505) 334-6178 Rio Brazos Road .c. NM 87410 letrict IV - (505) 827-7131

New Mexico Energy Minerals and Natural Resources Department

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

Oil Conservation Division

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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 | | | |
| Verbal Approval Received: Yes ☐ No ☑ | 5. Originating Site YARD | | | |
| 2. Management Facility Destination KEY ENERGY DISPOSAL | 6. Transporter Key | | | |
| 3. Address of Facility Operator #345 CR 3500 AZ+CC , NM (FMy) | 8. State NM | | | |
| 7. Location of Material (Street Address or ULSTR) | · | | | |
| 9. Circle One: | | | | |
| A. All requests for approval to accept olifield 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. | | | | |

BRIEF DESCRIPTION OF MATERIAL:

Oilfield Service Equipment wash water

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





| | E SINDE BY | المواد |
|---|--|-----------------------------------|
| Estimated Volume 1000 bbls cy Known | Volume (to be entered by the operator at the | end of the haul) ———— cy |
| SIGNATURE: Me Car De Con Waste Management Facility Authorized Agr TYPE OR PRINT NAME: MICHAEL TAL | TITLE: Manager LOUICH TELEPHONE N | DATE: 2-21-00
10. 505-334-6186 |
| (This space for State Use) APPROVED BY: | ent TITLE: G-C0/09/5/ | DATE: 2/2//00 |
| APPROVED BY: Martin Thing | TITLE: Environment Ca | COLGEST DATE: 2/23/08 |

atrict 1: (303) 393-6161 O Box 1980 966: NM 88241:1980 atrict II: (505) 748-1283 1 S. First vests, NM 88210 *trict III: (505) 334-6178 PRIO Brazos Road

laudes IV - (505) 827-7131

_c, NM 87410

Energy Minerals and Natural Oil Conservation

urces Department

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

Form C-138
Originated 8/8/93

Submit Original
Plus 1 Copy
to appropriate
District Office

| REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE | | | | |
|--|--------------------------|--|--|--|
| 1. RCRA Exempt: Non-Exempt: X | 4. Generator KEY ENERGY | | | |
| Verbal Approval Received: Yes 🔲 No 🔀 | 5. Originating Site YARD | | | |
| 2. Management Facility Destination KEY ENERGY DISPOSAL | 6. Transporter Key | | | |
| 3. Address of Facility Operator #345 CR 3500 AZtec, NM (Phy) | 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:

Oilfield Service Equipment wash water



| | 0 1 9 5 3 5 7 · · · · · · · · · · · · · · · · · · |
|--|---|
| Estimated Volume 1000 bols cy Known Volume (to be entered by the operator at the end of t | he haul) ———— cy |
| SIGNATURE: Me Gae Dalon TITLE: Manager Waste Management Facility Authorized Agent TYPE OR PRINT NAME: MICHAEL TALOUICH TELEPHONE NO. 3 | DATE: 2-21-00
05-334-6186 |
| (This space for State Use) APPROVED BY: Demy Be Lew TITLE: G-Cologist | DATE: 2/5/00 |
| APPROVED BY: | DATE: |

CERTIFICATE OF WASTE STATUS

| 1. Generator Name and Address: | 2. Destination Name: |
|--|--|
| Key Energy Services, Inc. | Key Energy Services, Inc. |
| Four Corners Division | Disposal |
| 5651 US Highway 64 | |
| Farmington NM, 84701 | |
| 3. Originating Site: (name): | Location of the Waste (Street Address &/or ULSTR) |
| Key Energy Services, Inc. | Farmington Facility |
| Four Corners Division | Waste Water Storage Tank |
| 5651 US Highway 64 | , , , , , , , , , , , , , , , , , , , |
| Farmington NM, 84701 | |
| (Attach list of origination sites as appropriate | |
| 4. Source and Description of Waste | <i>i</i>) |
| | |
| Oilfield Service Equipment Waste Wash Wa | ater |
| • | |
| | |
| | |
| I, Bob James, representative for Key Ener | gy Services, Four Corners Division do hereby certify that, |
| according to the Resource Conservation and | Recovery Act (RECA) and Environmental Protection |
| Agency's July 1988, regulatory determination | n, the above described waste is: |
| (Check appropriate classification) | |
| | |
| EXEMPT oilfield waste | X NON-EXEMPT oilfield waste which is non-hazardous |
| | by characteristic analysis or by product identification. |
| | |
| and that nothing has been added to the ever | mpt or non-exempt non-hazardous waste defined above. |
| and that nothing has been added to the exer | The of non-exempt non-nazardous waste defined above. |
| For NON-EXEMPT waste only the following | documentation is attached (check appropriate items): |
| MSDS Information | Other (description): |
| X RCRA Hazardous Waste A | nalysis |
| X Chain of Custody | |
| | |
| | $)/\sqrt{2}$ |
| Name (Original Signature): | The Jame |
| | |
| Title: Shop | p Manager |
| Date: Febru | uary 18, 2000 |
| | |

February 17, 2000

Mr. Bob James Key Energy Service, Inc. P.O. Box 900 Farmington, NM 87499

Phone: (505) 327-4935 Fax: (505) 327-4962 Client No.: 98065-01 Job No.: 806501

Dear Mr. James.

Enclosed are the analytical results for the sample collected from the location designated as "Farmington Facility". One water sample was collected by Key Energy Service personnel on 2/11/00, and received by the Envirotech laboratory on 2/11/00 for TCLP W/O Herbicides and Pesticides.

The sample was documented on Envirotech Chain of Custody No. 7679 and assigned Laboratory No. G836 (Waste Water Tank) for tracking purposes.

The sample was analyzed 2/14/00 through 2/16/00 using USEPA or equivalent methods.

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

Respectfully submitted, Envirotech, Inc.

Christine M. Walters

Laboratory Coordinator / Environmental Scientist

enc.

CMW/cmw

C:/files/labreports/key.wpd

ACTICAL SOLUTIONS FOR A BETTER TOMORROW

SUSPECTED HAZARDOUS **WASTE ANALYSIS**

Client: Sample ID: Lab ID#:

Key Energy Services Waste Water Tank

Project #: Date Reported: Date Sampled:

806501 02-14-00 02-11-00

Sample Matrix:

G836 Water Cool

Date Received: Date Analyzed: 02-11-00 02-14-00

Preservative: Condition:

Cool and Intact

Chain of Custody:

7679

Parameter

Result

IGNITABILITY:

Negative

CORROSIVITY:

Negative

pH = 5.75

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:

Farmington Facility.

Mistin y Dales Review



EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS

| Client: | Key Energy Services | Project #: | 806501 |
|--------------------|---------------------|---------------------|----------|
| Sample ID: | Waste Water Tank | Date Reported: | 02-16-00 |
| Laboratory Number: | G836 | Date Sampled: | 02-11-00 |
| Chain of Custody: | 7679 | Date Received: | 02-11-00 |
| Sample Matrix: | Water | Date Extracted: | NA |
| Preservative: | Cool | Date Analyzed: | 02-14-00 |
| 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) | 0.0162 | 0.0001 | 200 |
| Chloroform | ND | 0.0001 | 6.0 |
| Carbon Tetrachloride | ND | 0.0001 | 0.5 |
| Benzene | 0.0017 | 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 | 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:

Farmington Facility.

Alle h. Grece

Review



EPA METHOD 8040 PHENOLS

| Client: | Key Energy Services | Project #: | 806501 |
|--------------------|---------------------|---------------------|----------|
| Sample ID: | Waste Water Tank | Date Reported: | 02-16-00 |
| Laboratory Number: | G836 | Date Sampled: | 02-11-00 |
| Chain of Custody: | 7679 | Date Received: | 02-11-00 |
| Sample Matrix: | Water | Date Extracted: | NA |
| Preservative: | Cool | Date Analyzed: | 02-15-00 |
| Condition: | Cool & Intact | Analysis Requested: | TCLP |

| | Concentration | Detection
Limit | Regulatory
Limit |
|-----------------------|---------------|--------------------|---------------------|
| Parameter | · (mg/L) | (mg/L) | (mg/L) |
| o-Cresol | 7.69 | 0.020 | 200 |
| p,m-Cresol | 3.54 | 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:

Farmington Facility.

Analyst



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

| Client: | Key Energy Services | Project #: | 806501 |
|--------------------|---------------------|---------------------|----------|
| Sample ID: | Waste Water Tank | Date Reported: | 02-16-00 |
| Laboratory Number: | G836 | Date Sampled: | 02-11-00 |
| Chain of Custody: | 7679 | Date Received: | 02-11-00 |
| Sample Matrix: | Water | Date Extracted: | NA |
| Preservative: | Cool | Date Analyzed: | 02-15-00 |
| Condition: | Cool and Intact | 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 | 0.139 | 0.020 | 2.0 |
| Hexachlorobutadiene | ND | 0.020 | 0.5 |
| 2,4-Dinitrotoluene | 0.027 | 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:

Farmington Facility.

Analyst L. Oferen

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ENVIROTECH LABS

EPA METHOD 1311 TOXICITY CHARACTERISTIC LEACHING PROCEDURE TRACE METAL ANALYSIS

| Client: | Key Energy Services | Project #: | 806501 |
|--------------------|---------------------|------------------|-------------|
| Sample ID: | Waste Water Tank | Date Reported: | 02-16-00 |
| Laboratory Number: | G836 | Date Sampled: | 02-11-00 |
| Chain of Custody: | 7679 | Date Received: | 02-11-00 |
| Sample Matrix: | Water | Date Analyzed: | 02-16-00 |
| Preservative: | Cool | Date Extracted: | NA |
| Condition: | Cool & Intact | Analysis Needed: | TCLP metals |

| Parameter | Concentration | Det.
Limit | Regulatory
Level |
|-----------|---------------|---------------|---------------------|
| Parameter | (mg/L) | (mg/L) | (mg/L) |
| Arsenic | 0.026 | 0.001 | 5.0 |
| Barium | 0.033 | 0.001 | 21 |
| Cadmium | 0.013 | 0.001 | 0.11 |
| Chromium | 0.027 | 0.001 | 0.60 |
| Lead | 0.037 | 0.001 | 0.75 |
| Mercury | ND | 0.001 | 0.025 |
| Selenium | ND | 0.001 | 5.7 |
| Silver | 0.004 | 0.001 | 0.14 |

ND - Parameter not detected at the stated detection limit.

References:

Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA,

December 1996.

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

Metals, SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission

SW-846, USEPA. December 1996.

Note:

Regulatory Limits based on 40 CFR part 261 subpart C

section 261.24, August 24, 1998.

Comments:

Farmington Facility.

Analyst

(Misterie m Walter 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: | 02-16-00 |
| Laboratory Number: | 02-14-TCV | Date Sampled: | N/A |
| Sample Matrix: | Water | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-14-00 |
| Condition: | N/A | Analysis Requested: | TCLP |

| | | Detection | Regulatory |
|----------------------|---------------|-----------|------------|
| | Concentration | Limit | Limits |
| Parameter | | (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 Accepta | nce Criteria | Parameter | Percent Recovery | |
|---------------|----------------------|--|-----------------------|--|
| | | Trifluorotoluene | 100% | |
| | | Bromofluorobenzene | 100% | |
| References: | Method 1311 Toxicity | Characteristic Leaching Procedure, SW- | .846 USEPA .lulv 1992 | |

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 G810 - G811 and G836.

Analyst R. Que

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

| Client: | QA/QC | Project #: | N/A |
|--------------------|--------------|---------------------|----------|
| Sample ID: | Method Blank | Date Reported: | 02-16-00 |
| Laboratory Number: | 02-11-TCV | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-14-00 |
| Condition: | N/A | Date Extracted: | 02-11-00 |
| | | 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 G810 - G811 and G836.

Alun R. aper



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

| Client: | QA/QC | Project #: | N/A |
|---------------------|------------------|-----------------|----------|
| Sample ID: | Matrix Duplicate | Date Reported: | 02-16-00 |
| Laboratory Number: | G810 | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Analysis Requested: | TCLP | Date Analyzed: | 02-14-00 |
| Condition: | N/A | Date Extracted: | 02-11-00 |

| | 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) | 0.0129 | 0.0129 | 0.0001 | 0.0% | |
| Chloroform | ND | ND | 0.0001 | 0.0% | |
| Carbon Tetrachloride | ND | ND | 0.0001 | 0.0% | |
| Benzene | 0.0038 | 0.0038 | 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 G810 - G811 and G836.

Analyst

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ICAL SOLUTIONS FOR A BETTER TOMORROW

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

Client: Sample ID:

Laboratory Number: G810 Sample Matrix: **TCLP Extract**

Analysis Requested: Condition:

QA/QC Matrix Spike

TCLP N/A

Project #: Date Reported:

N/A 02-16-00 Date Sampled: N/A

Date Received: Date Analyzed: Date Extracted: N/A 02-14-00 02-11-00

| 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) | 0.0129 | 0.050 | 0.0624 | 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 | 0.0038 | 0.050 | 0.0536 | 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 G810 - G811 and G836.



EPA METHOD 8040 PHENOLS Quality Assurance Report Laboratory Blank

| Client: | QA/QC | Project #: | N/A |
|--------------------|------------------|---------------------|----------|
| Sample ID: | Laboratory Blank | Date Reported: | 02-16-00 |
| Laboratory Number: | 02-15-TCA | Date Sampled: | N/A |
| Sample Matrix: | 2-Propanol | Date Received: | N/A |
| Preservative: | N/A | Date Analyzed: | 02-15-00 |
| 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 G810 - G811 and G836.

Analyst

Review



EPA METHOD 8040 PHENOLS Quality Assurance Report

| _ | | | |
|--------------------|---------------|---------------------|----------|
| Client: | QA/QC | Project #: | N/A |
| Sample ID: | Method Blank | Date Reported: | 02-16-00 |
| Laboratory Number: | 02-11-TCA | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | 02-11-00 |
| Condition: | Cool & Intact | Date Analyzed: | 02-15-00 |
| • | | 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 G810 - G811 and G836.

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Mish m Walter Review



EPA METHOD 8040 PHENOLS Quality Assurance Report

Client: **QA/QC** Project #: N/A Sample ID: Matrix Duplicate Date Reported: 02-16-00 Laboratory Number: G810 Date Sampled: N/A Sample Matrix: **TCLP Extract** Date Received: N/A Preservative: Cool Date Extracted: 02-11-00 Condition: Cool & Intact Date Analyzed: 02-15-00 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 |
|----------------------------|-----------|--------------------|
| | 0040.0 | 00.004 |

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 G810 - G811 and G836.

Analyst . Oplean

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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: | 02-16-00 |
| Laboratory Number: | 02-15-TBN | Date Sampled: | N/A |
| Sample Matrix: | Hexane | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | N/A |
| Condition: | N/A | Date Analyzed: | 02-15-00 |
| | | 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

97%

References:

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

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

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

Note:

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

Comments:

QA/QC for samples G810 - G811 and G836.

Alen L. apuen

Review Walter



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: | 02-16-00 |
| Laboratory Number: | 02-11-TBN | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Preservative: | Cool | Date Extracted: | 02-11-00 |
| Condition: | Cool and Intact | Date Analyzed: | 02-15-00 |
| | | 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.

| 2-fluorobiphenyl | 96% |
|----------------------------------|---|
| teristic Leaching Procedure, S | W-846, USEPA, July 1992. |
| nel Liquid-Liquid Extraction, St | W-846, USEPA, July 1992. |
| and Cyclic Ketones, SW-846, I | JSEPA, Sept. 1986. |
| CFR part 261 Subpart C sect | ion 261.24, July 1, 1992. |
| | teristic Leaching Procedure, S
nel Liquid-Liquid Extraction, S'
and Cyclic Ketones, SW-846, I |

Comments:

QA/QC for samples G810 - G811 and G836.

Analyst Review 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: | 02-16-00 |
| Laboratory Number: | G810 | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Preservative: | N/A | Date Extracted: | 02-11-00 |
| Condition: | N/A | Date Analyzed: | 02-15-00 |
| | | Analysis Requested: | TCLP |

| | Sample | Duplicate | Det. | | |
|-----------------------|--------|-----------|------------|--------|--|
| Parameter | Result | Result | Percent | Limit | |
| | (mg/L) | (mg/L) | Difference | (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 G810 - G811 and G836.

Aleun F. Ogenen

Review M Walter

ENVIROTECH LABS

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

| Client: | QA/QC | Project #: | N/A |
|---------------------|-----------------|-----------------|----------|
| Sample ID: | 02-16-TCM QA/QC | Date Reported: | 02-16-00 |
| Laboratory Number: | G810 | Date Sampled: | N/A |
| Sample Matrix: | TCLP Extract | Date Received: | N/A |
| Analysis Requested: | TCLP Metals | Date Analyzed: | 02-16-00 |
| Condition: | N/A | Date Extracted: | N/A |

| Blank & Duplicate | Instrument | Method | Detection | in Sample | Düplicate | | Acceptance |
|-------------------|------------|--------|-----------|-----------|-----------|------|------------|
| Conc. (mg/L) | | | | | | | |
| Arsenic | ND | ND | 0.001 | 0.067 | 0.066 | 1.5% | 0% - 30% |
| Barium | ND | ND | 0.001 | 0.585 | 0.582 | 0.5% | 0% - 30% |
| Cadmium | ND | ND | 0.001 | 0.035 | 0.035 | 0.0% | 0% - 30% |
| Chromium | , ND - | ND | 0.001 | 0.022 | 0.022 | 0.0% | 0% - 30% |
| Lead | ND | ND | 0.001 | 0.031 | 0.031 | 0.0% | 0% - 30% |
| Mercury | ND | ND | 0.001 | ND | ND | 0.0% | 0% - 30% |
| Selenium | ND | ND | 0.001 | 0.037 | 0.036 | 2.7% | 0% - 30% |
| Silver | ND | ND | 0.001 | 0.016 | 0.016 | 0.0% | 0% - 30% |

| ne 12 Spiker en 157
15 Spiker en 157 | Sple
Viced | Same | Sokoa
Postanoje | Persent Han
Persent Par | Accecence |
|---|---------------|-------|--------------------|----------------------------|------------|
| Arsenic | 0.500 | 0.067 | 0.566 | 99.8% | 80% - 120% |
| Barium | 0.500 | 0.585 | 1.08 | 99.8% | 80% - 120% |
| Cadmium | 0.500 | 0.035 | 0.534 | 99.8% | 80% - 120% |
| Chromium | 0.500 | 0.022 | 0.521 | 99.8% | 80% - 120% |
| Lead | 0.500 | 0.031 | 0.530 | 99.8% | 80% - 120% |
| Mercury | 0.050 | ND | 0.049 | 98.0% | 80% - 120% |
| Selenium | 0.500 | 0.037 | 0.535 | 99.6% | 80% - 120% |
| Silver | 0.500 | 0.016 | 0.515 | 99.8% | 80% - 120% |

ND - Parameter not detected at the stated detection limit.

References:

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

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

SW-846, USEPA, December 1996.

Methods 6010B Analysis of Metals by Inductively Coupled Plasma-Atomic Emission,

SW-846, USEPA, December 1996.

Comments:

QA/QC for samples G810 - G811 and G836.

Analysi

Molan M Dalkus Review

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CHAIN OF CUSTODY RECORD

| Client / Project Name Project Location For Energy Services Framington Facility | | | | | | ANALY | SIS / PAR | AMETERS | - | | į | | |
|--|------------------|---------------------|---------------------------------------|------------------|--------------------------|----------|-----------|---------|---|---------------|-------------|---|---------------|
| Sampler: Bob James | | Client No. 95065-01 | | No. of | 1.P
#5.P | | | | | Remar | ks | | |
| Sample No./
Identification | Sample
Date | Sample
Time | Lab Number | Sample
Matrix | N Suco | x 3 | | | | | | | |
| Waste Water Tank | 2-11-00 | 2:4500 | £ 755 G831 | Water | 5 | | | | | | | | |
| | | | | | 7 | | | | | | | | |
| | | | | | | | | | | | | | |
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| Relinquished by: (Signatu
Relinquished by: (Signatu | (/ - | 2 m | Q | Date Time | Received by: | War. | test | | | | Date 2-11-0 | ٥ | Time
/5:35 |
| Relinquished by: (Signatu | ire) | | | | Received by: | (Signatu | ıre) | | | | | + | |
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| P.O.# 907
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lew Mexico | | 1 | | | Received Into | | | N N/A |

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20/ 20

District J - (505) 393-6161 P. C. Dar 1780 Hobbs, NM'88241-1980 Distin II - (505)-748-1283 811 S. First Artesia, NM 88210 P'-vice 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

\$\$\frac{1}{200} \co\frac{1}{200}

| REQUEST FOR APPROVAL TO ACCEPT | SOLID WASTE CALLED |
|--|---|
| 1. RCRA Exempt: Non-Exempt: 1 | 4. Generator COASTAL CHONICAL |
| Verbal Approval Received: Yes, No 🔀 | 5. Originating Site YARD |
| 2. Management Facility Destination 4EY EVERGY DISPOSE | 6. Transporter Key |
| 3. Address of Facility Operator #3/15 CR3500 Attec N.M. | 8. State NA |
| 7. Location of Material (Street Address or ULSTR) 410 RD 5911 | 4 |
| 9. Circle One: | |
| A. All requests for approval to accept oilfield exempt wastes will be accepted acceptance; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accepted ac | ompanied by necessary chemical analysis to in 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: | |
| Planuater mixed with small amounts of | UNUSED Churcals |
| FEB 2000 RECEIVED OIL CON. DIV DIST. 3 Estimated Volume 50 45 Ls cy Known Volume (to be entered by the o | RECEIVED RECEIVED FEB 1 6 2000 Environmental Bureau Oil Conservation Division |
| Estimated Volume 50 65 Ls cy Known Volume (to be entered by the o | perator at the end of the haul) cy |
| SIGNATURE: Management Facility Authorized Agent Weste Management Facility Authorized Agent | DATE: 2-9-00 |
| TYPE OR PRINT NAME: MICHAEL TALQUICH TE | ELEPHONE NO. <u>505-334-6186</u> |
| (This space for State Use) | |
| APPROVED BY: Normy Dr Joent TITLE: GEO! | 0915 DATE: 2/14/00 |
| APPROVED BY: Martym & Theh. TITLE: Enviro. | nmata (200/00) DATE: 2/16/00 |

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

District IV - (505) 827-7131

(This space for State Use)

APPROVED BY:

New Mexico

Energy Minerals and Natural Resources Department 9 10 Oil Conservation Division

2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131 FEB 2000 RECEIVED ON CON DIV

Submit Original
Plus 1 Copto appropriate
District Office

Form C-138

Originated 8/8/95

REQUEST FOR APPROVAL TO ACCEPT SOLID WAST 4. Generator COASTAL CHOMICAL Non-Exempt: [7] 1. RCRA Exempt: Verbal Approval Received: No X 5. Originating Site YARD 2. Management Facility Destination 4EY ENERGY DISPISITE 6. Transporter Key #345 CR3500 Alter Nu 3. Address of Facility Operator 8. State NA 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. 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: PHINNAKER mixed with small properts of UNUSED Chemicals Last filed 8-20-99 TITLE: MADA DATE: 2-9-00_ TELEPHONE NO. 305-334-6186 TYPE OR PRINT NAME: MICHAEL TALOUICH

ZentyTITLE: Geologis

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 87401 |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): |
| | COASTAL CHEMICAL CO., INC. |
| | #10 RD 5911 ⁻ |
| | FARMINGTON, NM 87401 |
| Attach list of originating sites as appropriate 4. Source and Description of Waste | |
| | AND TANKS USED TO DELIVER VIRGIN NSED OUT ARE VIRGIN?UNUSED CHEMICALS. NOLAMINE, GLYCOL (TEG & EG) |
| | |
| | |
| | |
| I, MIKE EBERHARD | representative for: |
| (Print Name) | and the state of t |
| (Print Name) | do hereby certify that
very Act (RCRA) and Environmental Protection Agency's July |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recov. 1988, regulatory determination, the above describe EXEMPT oilfield waste | do hereby certify that
very Act (RCRA) and Environmental Protection Agency's July
d waste is: (Check appropriate classification) |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recov. 1988, regulatory determination, the above describe EXEMPT oilfield waste | do hereby certify that very Act (RCRA) and Environmental Protection Agency's July d waste is: (Check appropriate desalification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification |
| (Print Name) COASTAL CHEMICAL CO, INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above described EXEMPT oilfield waste XX NON-EXITATION OF THE PROPERTY OF THE P | do hereby certify that yery Act (RCRA) and Environmental Protection Agency's July d waste is: (Check appropriate desaification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. cumentation is attached (check appropriate items): Other (description): |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above describes EXEMPT oilfield waste XX NON-EXEMPT analysis and that nothing has been added to the exempt or a MSDS Information RCRA Hazardous Waste Analysis | do hereby certify that very Act (RCRA) and Environmental Protection Agency's July d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recov. 1988, regulatory determination, the above described. EXEMPT oilfield waste | do hereby certify that very Act (RCRA) and Environmental Protection Agency's July d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. |
| (Print Name) COASTAL CHEMICAL CO. INC. according to the Resource Conservation and Recove 1988, regulatory determination, the above describes EXEMPT oilfield waste | do hereby certify that very Act (RCRA) and Environmental Protection Agency's July d waste is: (Check appropriate classification) EMPT oilfield waste which is non-hazardous by characteristic or by product identification non-exempt non-hazardous waste defined above. |

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

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



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

Product Code: 55520 Page: 3

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93 MSDS:000913

ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

companies which recycle, reprocess or manage chemicals and companies that recondition used drums. Telephone Dow's Customer Information Center at 800/258-CHEM (2436) for further details.

6. HEALTH HAZARD DATA:

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

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined or skin is abraded.

SKIN ABSORPTION: A single prolonged skin exposure is not likely to result in absorption of harmful amounts. The LD50 for skin absorption in rabbits is >2000 mg/kg.

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is likely between 2000-3980 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration. Ingestion may cause burns of mouth and throat.

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

SYSTEMIC & OTHER EFFECTS: No relevant information found.

7. FIRST AID:

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

SKIN: Wash off in flowing water or shower. Remove contaminated clothing and wash before reuse.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

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

Product Code: 55520 Page: 4

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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

^{*} An Operating Unit of The Dow Chemical Company

Product Code: 55520 Page: R-1

Product Name: METHYLDIETHANOLAMINE

Effective Date: 07/12/93 Date Printed: 07/14/93 MSDS:000913

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

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

U.S. REGULATIONS

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

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

An immediate health hazard

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

New Jersey Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

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

CANADIAN REGULATIONS

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

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

⁽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.

^{*} An Operating Unit of The Dow Chemical Company

MATERIAL BARRTY DATA BH TRIETHYLENE BLYCOL

1 HM18 HEALTH
1 HM18 FLAMMABILITY
0 HM18 REACTIVITY
B HM18 PERSONAL PROTE

HM18 PERSONAL PROTECTIO

SECTION 1 - IVENTIFICATION

. 我知识我们没有明显是以通过我们可以是是我们的对象和"我们是我们是我们就是我们的是我们的对象的,我们也没有的,我们也没有的。"

DISTRIBUTED BY..... COASTAL CHEMICAL COMPANY, INC

P.D. BOX 820 ABBEVILLE, LA 70511-0820

(318) 833-3862

EMERBENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300

EFFECTIVE DATE..... 02/26/90

MANUFACTURER'S NAME..... UNION CARBIDE

DOM CHEMICAL

TEXACO .

OXY-PETROCHEMICAL .

TRADE NAME..... TRIETHYLENE GLYCOL

CHEMICAL FAMILY..... POLYETHYLENE BLYCOL

CAS NUMBER..... 112-27-6 CHEMICAL FORMULA.... C6H14U4

BECTION II - HAZARDOUB INGREDIENTS

ZARDOUS COMPONENTS

TLV (Unite)

PRUD. CAS #

TRIETHYLENE GLYCOL

99 None

Established

112-27-6

BECTION III - PHYBICAL DATA

,这几乎是是是是自己的现在分词,我们也是这种的是是是是是是是是是是是是是是是是是是是是是是是是这些正式是这些是是是这种是这种是这种是这种是这种是是是是是是是是

FREEZING POINT (F)..... -7 Deg. C., 19 Deg. F.

VAPOR PRESSURE (Inin Hg)... (1 min

VAPOR DENSITY (Air=1).... 5.2, air = 1

BOLUBILITY IN H20...... Completely soluble in all proportions

APPEARANCE/ODDR............ Clear, coloriess, viscous liquid with slight odor. BPECIFIC GRAVITY (H20=1). 1.1 0 77 Deg. F., 25/25 Deg.C

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT...... 350 Deg. F.

LOWER FLAME LIMIT.... 0.9

HIGHER FLAME LIMIT..... 9.2

EXTINGUISH MEDIA..... Use water tog or spray, Alcohol Foam, Dry Powder,

Carbon Dioxide (CU2).

'NUSUAL FIRE HAZARD..... Containers may explode from internal pressure if

confined to fire. Cool with water. Keep unnecessar prople away. Approach fire from upwind side. Avol breathing smoke , fumes, mist or vapors on the

downWind wide.

HATERIAL BAFETY DATA F

BECTION V - HEALTH HAZARD DATA RESHOLD LIMIT VALUE.... Recommended 5 Mg/M3 based on oil mist. INJUTIO OF ENTRY. INJULATION? BKIN? INGESTION INCLASED Invitant Irritant INGESTION? HEALTH HAZARDS ACUTE: Vapors or liquid may be irritating to skin, eyes, or mucous membranes. Avoid inhalation or skin/sys contact. a filodom a como a como de como de como a como de como IARC MONDGRAPHB? DBHA REGULA CARCINOGENICITY, NTP? NO ND OVER EXPOSURE EFFECTS.... Skin irritation develops alowly after contact. Eye irritation develops immediately upon contact. FIRST AID PROCEDURES.... In case of contact, immediately flush eyes or Eklar With plenty of Water for at least 15 minutes while removing contaminated clothing and shoes. Get mediattention. Wash clothing before reuse. If smallows do not induce vomiting, gut immediate medical attention. If inhaled, remove to fresh air. If no breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, vive oxygen. Get medical attention. BECTION VI - REACTIVITY DATA . 电压电流元率 是是是是有效的自己的自己的自己的自己的自己的的的数据的数据的数据的数据的数据的数据的数据的数据的 (1) 是是是是是是是是是是是是是是是是是是是 CHEMICAL BYABILITY..... Product is stable

CONDITIONS TO AVOID..... Heat may cause internal pressure which could ruptu

container.

INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials.

DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Honoxic HAZARDOUS POLYMERIZATION. Will not occur

POLYMERIZATION AVOID.... None

BECTION VII - BPILL OR LEAK PROCEDURE

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

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 bas cartridge respirator i recommended.

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

PROTECTIVE GLOVES...... West impervious gloves

EYE PROTECTION Use chemical goggles or full face shield.

MATL...AL BARETY DATA BUCET TRIETHYLENE GLYCOL

DTHER PROTECTIVE

EQUIPMENT.

Chemical type apron recommended BECTION IX - EPECIAL HANDLING HANDLI B AND BIDRAGE.... Btore 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 of 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 all action shown in Section V. Use with adequate ventilation. HAZARD CLASS..... Not Regulated DOT BITTPING NAME..... Triethylene Glycol REPORTABLE QUANTITY (RQ). None UN NUMBER..... None PACKADING SIZE..... N/A

- REGULATURY

| | ************************************* |
|---|---------------------------------------|
| PA ACUTE. PA CHRONIC. EPA IGNITABILITY. EPA REACTIVITY. EPA SUDDEN RELEASE OF PRESSURE. | NO |
| CERCLO RO VALUE | None |
| BARA TRO SARA RO BECTION 313 | Mana |
| EPA HATARD WASTE #
CLEAN NATER | Van Bull III |
| • | plicable N/D - no data available |
| | Glen White, B. I.B., 817-550-4571 |



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

1 HMIS HEALTH

1 . HMIS FLAMMABILITY

O HMIS REACTIVITY

B HMIS PERSONAL PROTECT

SECTION I - IDENTIFICATION

DISTRIBUTED BY..... COASTAL CHEMICAL COMPANY, INC

P.O. BOX 820

ABBEVILLE, LA 70511-0820

(318) 893-3862

EMERGENCY PHONE NUMBER... (318) 893-3862 OR CHEMTREC (800) 424-9300

EFFECTIVE DATE..... 02/26/90

MANUFACTURER'S NAME.....

A STATE OF THE STA

TRADE NAME..... TRIETHLYLENE GLYCOL REPROCESSED

CHEMICAL FAMILY..... POLYETHYLENE GLYCOL

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS % TLV (Units) PROD. CAS #

TRIETHYLENE

98 None

one 112-27-6

1967年,1967年,1968年 1988年 19

GLYCOL Established

SECTION III - PHYSICAL DATA

FREEZING POINT (F)..... -7 Deg. C., 19 Deg. F.

VAPOR PRESSURE (mm Hq)... (1 mm

VAPOR DENSITY (Air=1).... 5.2, air = 1

SOLUBILITY IN H20..... Completely soluble in all proportions

APPEARANCE/ODOR..... Light amber color, viscous liquid with slight order

SPECIFIC GRAVITY (H20=1). 1.1 @ 77 Deg. F., 25/25 Deg.C

FH..... N/D

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT...... 350 Deg. F.

LOWER FLAME LIMIT..... 0.9

HIGHER FLAME LIMIT..... 9.2

EXTINGUISH MEDIA..... Use water fog or spray, Alcohol Foam, Dry Powder,

Carbon Dioxide (CO2).

UNUSUAL FIRE HAZARD..... Containers may explode from internal pressure if

confined to fire. Cool with water. Keep unnecessary people away. Approach fire from upwind side. Avoid breathing smoke , fumes, mist or vapors on the

downwind side.

SECTION V - HEALTH HAZARD DATA

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

MATERIAL BAFETY DATA SHEET TRIETHLYLENE GLYCOL REPROCESSED

TRIETHLYLENE GLYCOL REPROCESSED INHALATION? SKIN? ROUTES OF ENTRY SINGESTION? Mild irritant Inritant Irritant ... ACUTE: Vapors or liquid may be irritating to skin, HEALTH HAZARDS. eyes, or mucous membranes. Ovoid inhalation or skin/eye contact. CARCINOGENICITY NTP? IARC MONOGRAPHS? OSHA REGULATE ND NO. ND and the first of the first of the control of the first of the first of the first of the control of the 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. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention. SECTION VI - REACTIVITY DATA CHEMICAL STABILITY..... Product is stable CONDITIONS TO AVOID..... Heat may cause internal pressure which could rupture container. INCOMPATIBLE MATERIALS... Oxidizers or Oxidizing Materials. DECOMPOSITION PRODUCTS... From fire; Smoke, Carbon dioxide, & Carbon Monoxide. HAZARDOUS POLYMERIZATION. Will not occur POLYMERIZATION AVOID.... None SECTION VII - SPILL OR LEAK PROCEDURE FOR SPILL..... In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations WASTE DISPOSAL METHOD.... Industrial Waste. Follow Federal, State and Local laws. SECTION VIII - SPECIAL PROTECTION RESPIRATORY PROTECTION... When ventilation is not adequate, use of NIOSH approved organic vapor gas cartridge respirator is recommended.

LOCAL EXHAUST..... Desired

PROTECTIVE GLOVES..... Wear impervious gloves

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

OTHER PROTECTIVE

EQUIPMENT..... Chemical type apron recommended

VENTILATION..... Required in closed areas MECHANICAL EXHAUST..... Required in closed areas

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

The state of the second section of the section of th

PACKAGING SIZE..... N/A

SECTION X - REGULATORY

EFA REACTIVITY.........NO

EPA SUDDEN RELEASE OF

'RESSURE......... NO

CERCLA RO VALUE..... 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 CUSTOM 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 TO 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

24-Hour Emergency Phone Number: 517-636-4400

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

Product Code: 29451 Acres 1849 (1949)

Effective Date: 06/30/94

Date Printed: 07/25/95

MSD: 002850

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS

Proprietary alkylamine

CAS#

AMOUNT (%w/w)

CAS# 007732-18-5

90 to 100%

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

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)

(R) Indicates a Trademark of The Dow Chemical Company

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% UFL: 19.6%

AUTOIGNITION TEMPERATURE: 350C; 662F

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

FIRE AND EXPLOSION HAZARDS: Keep unnecessary people away; isolate

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

PAGE: 3

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.

STORAGE:

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINE(S): None established.

VENTILATION: Good general ventilation should be sufficient for most conditions.

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

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Wear a face-shield which allows use of chemical goggles, or wear a full-face respirator, to protect face and eyes when there is any likelihood of splashes. Remove contaminated clothing

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

PAGE: 4

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 : 306-324F, 152-162C VAPOR PRESSURE : <2.5 mmHg @ 20C

VAPOR DENSITY : 2.6 SOLUBILITY IN WATER : Complete

SPECIFIC GRAVITY : 0.93-0.94 @ 20/20C

FREEZING POINT : -4.5C, 24F
APPEARANCE : Colorless liquid

ODOR : Amine

10. STABILITY AND REACTIVITY

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

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

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

HAZARDOUS POLYMERIZATION: Will not occur.

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

ACUTE SKIN: The dermal LD50 has not been determined.

ACUTE INGESTION: The oral LD50 for rats is between 1000 and 2340 mg/kg.

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

(Continued on page 5)

(R) Indicates a Trademark of The Dow Chemical Company

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.

रक्ते । स्थाने स्वकृत्यक्तिकारी यो क्लान्या है सिक्रिक । । स्टार्शन

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

DISPOSAL METHOD: Dispose by incineration in accordance with all local, state, and federal requirements.

14. TRANSPORT INFORMATION

CANADIAN TDG INFORMATION:

For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

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

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

U.S. REGULATIONS

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

An immediate health hazard A delayed health hazard A fire hazard

CANADIAN REGULATIONS

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

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

PAGE: 6

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

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 (% ()

Proprietary alkylamine

AMOUNT (%w/w)

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

Claim Registry Number: 3499

Filing Date: June 29, 1994

16. OTHER INFORMATION

PRODUCT USE: Gas conditioning solvent.

REVISION INDICATOR: Revised section 15

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.



Material Safety Data Sheet

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

Dow Chemical Communy

Mullinut, felo Inchus (1947)

24-Hour Emergency Phone Number: 517-636-4400

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

Product Code: 13693

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

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Methyldiethanolamine Proprietary Alkylamine Water CAS# 000105-59-9 60-70%

CAS# 007732-18-5 2.0% MAX

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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

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

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 PRECAUITORS 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 Trademark of The Dow Chemical Company

PAGE: 4

Product: GAS/SPEC (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. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

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

9. PHYSICAL AND CHEMICAL PROPERTIES.

BOILING POINT : 183C, 361F VAPOR PRESSURE : 0.5 mmHg @ 25C

VAPOR DENSITY : 3.5

SOLUBILITY IN WATER : Complete

SPECIFIC GRAVITY : 1.01 @ 25/25C

FREEZING POINT : -23.1C

APPEARANCE : Pale straw liquid

ODOR : Amine odor

10. STABILITY AND REACTIVITY

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

(Continued on page 5)

(R) Indicates a Trademark of The Dow Chemical Company

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

Product Code: 13693

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

(Continued on page 6, over)
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PAGE: 6

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

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

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

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

Product Code: 313693

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

PROPRIETARY INGREDIENT

PROPRIETARY PAI

PAl=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 Malerials Information System (WHMIS) Classification for this product is:

B3 - combustible liquid with a flash point between 37.8C and 93.3C

E - corrosive to metal or skin

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

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

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:

CAS #

AMOUNT (%w/w)

Methyldiethanolamine

CAS# 000105-59-9

60-70%

Proprietary Alkylamine

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

(Continued on page 8, over)

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PAGE: 8

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

Effective Date: 06/30/94

Date Printed: 01/10/95

MSD: 003430

REGULATORY INFORMATION (CONTINUED)

Claim Number: 3500

Filing Date: June 29, 1994

16. OTHER INFORMATION

MSDS STATUS: Revised section 15

PRODUCT USE: Gas conditioning solvent.

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ETHYLENE GLYCOL

| | 1 HMIS HEALTH 1 HMIS FLAMMABILITY 0 HMIS REACTIVITY B HMIS PERSONAL PROTECTION |
|---|---|
| • | SECTION I - IDENTIFICATION |
| DISTRIBUTED BY | |
| TRADE NAMECHEMICAL FAMILYCAS NUMBERCHEMICAL FORMULA | GLYCOL
107-21-1 |
| SRCT | ION II - HAZARDOUS INGREDIENTS |
| | :===================================== |
| hAZARDOUS COMPONENTS | % TLV (Units) PROD. CAS # |
| ETHYLENE GLYCOL | 100% ACGIH CEILING 50ppm 107-21-1 |
| | SECTION III - PHYSICAL DATA |
| FREEZING POINT (F) | 9 DEG F
0.12 MMHG @ 25 C
2.14
COMPLETELY MISCIBLE
COLORLESS LIQUID; PRACTICALLY ODORLESS
1.1155 @ 20/20 C
N/A |
| | IV - FIRE AND EXPLOSION HAZARD DATA |
| FLASH POINT | ====================================== |

ETHYLENE GLYCOL

| | | | | | * | |
|--|--------------|---------------------|----------|--------|-----------|------------------------|
| | | | | =====- |
 | 12 2 2 2 2 2 2 2 2 2 2 |
| _ ============== | | | | |
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· | 24.0 |
| | CITCHITCH II | רומגקגע עוויי ואקען | 17 2 M 2 | * |
 | |
| | SPULLINI V | - HEALTH HAZARII | מינימנו | .7. |
 | |

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

ROUTES OF ENTRY

A STATE OF THE STA

INHALATION? IRRITANT, POSSIBLY Not expected to NARCOTIC

SKIN? cause significant health hazard

INGESTION? Ingestion of very large amounts could cause serious injury, or even death.

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

Committee of the second

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, fatique, 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

| SECTIO | ON VII - SPILL OR LEAK PROCEDURE |
|-------------------------------------|--|
| | ======================================= |
| | In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations |
| | 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 | |
| MECHANICAL EXHAUST | |
| PROTECTIVE GLOVES | Wear impervious gloves |
| EYE PROTECTION OTHER PROTECTIVE | Use chemical goggles or full face shield. |
| EQUIPMENT | Chemical type apron recommended |
| | |
| Si | ECTION IX - SPRCIAL HANDLING |
| HANDLING AND STORAGE | Store away from oxidizers or materials bearing a yellow "DOT" label. Keep out of sun and away from heat. Clean up leaks immediately to prevent soil or water contamination. |
| PRECAUTIONARY MEASURES | Avoid contact with skin, eyes, and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown in Section V. Use with adequate ventilation. |
| HAZARD CLASS | |
| DOT SHIPPING NAME | Drum - Ethylene Glycol Bulk - Other regulated substances, liquid, n.o.s. (ethylene glycol) |
| REPORTABLE QUANTITY (RQ). UN NUMBER | 5,000 pounds
None |
| NA #
PACKAGING SIZE | Drums - None; Bulk - NA3082
N/A |
| | |
| | SECTION X - REGULATORY |

ETHYLENE GLYCOL

| EPA ACUTE EPA CHRONIC EPA IGNITABILITY EPA REACTIVITY EPA SUDDEN RELEASE OF PRESSURE | YES
NO
NO | |
|---|--------------------------------------|------|
| CERCLA RQ VALUE | | |
| SARA TPQSARA RQSECTION 313 | None | .00% |
| EPA HAZARD WASTE # CLEANAIR CLEAN WATER | Yes, Section 111 and 1990 Amendments | |
| FOOT NOTES N/A - not app
< - means less than >
App approximate Est | | |
| DOMBINED DI | The Treduces Greekel Greekel Greekel | |

PREPARED BY:..... Joe Hudman, Coastal Chemical Co., Inc. 713-477-6675 IS 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 TH 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 SAPETY DATA SIERT

COASTALGUARD 100 ANTIFREEZE/COOLANT

| | | 0 HMIS F |
|--|--|---|
| | The state of the s | |
| • | | |
| • | SECTION | |
| | DISTRIBUTED BY COASTAI | |
| 1,00% | (318) 89 | 93-3862 |
| • | EMERGENCY PHONE NUMBER CHEMTRE | EC (800)424-9300 |
| | EFFECTIVE DATE 2/06/19 | |
| } | MANUFACTURER'S NAME COASTAI TRADE NAME COASTAI | |
| | CHEMICAL FAMILY INHIBIT | |
| | CAS NUMBER Blended | d Product |
| | CHEMICAL FORMULA Blended | |
| | | |
| nc. 713-477-6675 | SECTION II | - HAZARDOUS INGREDIENTS |
| | | |
| TOTAL OTTO OTTOMORADO | HAZARDOUS COMPONENTS % | TLV (Units) |
| SIST OUR CUSTOMERS REGULATIONS. THE | ETHYLENE GLYCOL 95 % | ACGIH CEILING 50ppm |
| AND IS BELIEVED | Difficulty Coll Coll | Access caracter copp |
| OR IMPLIED BY THE | | |
| IIN THE EXCLUSIVE | SECTION | III - PHYSICAL DATA |
| (INE THE
OVERNMENTAL | FREEZING POINT (F) APPROX. | |
| 10 v 11(411 1114 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | VAPOR PRESSURE (mm Hg) 0.12 MM | |
| | VAPOR DENSITY (Air=1) 2.14 | TOTAL MEAGENER ! |
| | SOLUBILITY IN H20 COMPLET APPEARANCE/ODOR YELLOW/ | PELY MISCIBLE
GREEN LIGHTD: PRACTICALLY OD |
| | SPECIFIC GRAVITY (H20=1). 1.11 ty | ypical |
| | PH 10.5 - | |
| | **************** | |
| · | SECTION IV - I | FIRE AND EXPLOSION HAZARD DAT |
| | | |
| | FLASH POINT APPROX.LOWER FLAME LIMIT N/D | . 247 DEG F |
| | HIGHER FLAME LIMIT N/D | |
| | EXTINGUISH MEDIA Water | fog or spray, Foam, Dry Powde |
| | (CO2). | |
| | UNUSUAL FIRE HAZARD NONE KI | |
| | | ing smoke ,fumes, mist or vap
nd side. |
| | | |
| | | |
| | SECTION V | - IIEALTII HAZARD DATA |
| | | |

COASTALGUARD 100 ANTIFREEZE/COOLANT

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

ROUTES OF ENTRY

INHALATION?

IRRITANT, POSSIBLY Not expected to

NARCOTIC

SKIN?

cause significant

health hazard

INGESTION?

Ingestion of very large amounts

could

cause serious injury, or even

death.

HEALTH HAZARDS..... ACUTE: Vapors may be irritating to eyes, or mucous membranes. Avoid inhalation or eye contact. CHRONIC:

Kidney and liver damage possible. May cause

reproductive disorders.

CARCINOGENICITY

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... 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

| | 선거 준 하셨다는 그 사는 그는 | |
|--|--|--|
| 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. | |
| | - Laws . | |
| | | |
| | CTION VIII - SPECIAL PROTECTION | |
| | | |
| RESPIRATORY PROTECTION | When ventilation is not adequate, use of NIOSH approved organic vapor/acid gas cartridge respirator is recommended. | |
| VENTILATION | Required in closed areas | |
| | Required in closed areas | |
| LOCAL EXHAUST | | |
| | | |
| PROTECTIVE GLOVES | | |
| | Use chemical goggles or full face shield. | |
| OTHER PROTECTIVE | | |
| EQUIPMENT | Chemical type apron recommended | |
| | | |
| | | |
| | ECTION 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. | |
| | 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 | Drums - COASTALGUARD 100 Bulk - Other regulated substances, liquid, n.o.s. (ethylene glycol) | |
| REPORTABLE QUANTITY (RQ). | | |
| UN NUMBER | | |
| | Drums - None; Bulk - NA3082 | |
| PACKAGING SIZE | | |
| **************** | | |
| | SECTION X - REGULATORY | |
| *************************************** | | |
| EPA ACUTE EPA CHRONIC EPA IGNITABILITY | YES
NO | |
| | INIT 1 | |

EPA REACTIVITY.....

COASTALGUARD 100 ANTIFREEZE/COOLANT

| PRESSURE PRESSURE | NO . | |
|--|--|-----|
| CERCLA RQ VALUE | 5000 pound for ethylene glycol | |
| SARA TPQSARA RQSECTION 313 | | |
| | Yes, Section 111 Volatile Organic Compounds & Section 112 Statutory Air Pollutants (1990 Amendments) | ion |
| FOOT NOTES N/A - not app
< - means less than >
App approximate Est | | • |
| PREPARED BY: | David Trahan, C.F.T 318-898-0001 | |

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



Material Safety Data Sheet

The Dow Chemical Company Midland, Michigan 48674

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

24-Hour Emergency Phone Number: 517-636-4400

Product: DIETHANCLAMINE LOW FREEZING GRADE

Product Code: 21106

Effective Date: 03/01/96

Date Printed: 04/27/96

MSU: 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 IDENTIFICATION

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

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.

exposure tests on diethanolamine in laboratory animals include anemia (rats) and effects on kidney (rats and mice) and liver (mice). Hears 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 (BIRIH DEFECTS): Contains component(s) which did not cause birth defects; other fetal effects occurred only at doses toxic to the mother.

4. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

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

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or 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) (R) Indicates a Trademark of The Dow Chemical Company

PAGE: 3

Product: DIETHANO! AMINE 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

UFL: 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 shevel 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 temperature possibly resulting in spontaneous combustion.

STORAGE: Do not store in common area with halogenated materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

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

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 fill-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 GUIDELINE(S): Diethanolamine: ACGIH TLV is 2 mg/m3, skin; OSHA FEL 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: DIETHANO: AMINE LOW FREEZING GRADE Product Code: 211/6

Effective Date: 0:/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 (BOD2O 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 (BOD2O) is 1.20 p/p. Theoretical oxygen demand (ThOD) 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)
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Product: DIETHALOLAMINE 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

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 Trachmark of The Dow Chemical Company

PAGE: 7

Product: DIETHAN LAMINE LOW FREEZING GRADE Product Code: 21106

Effective Date: 13/01/96 Date Printed: 04/27/96

- MSD: 0003904

with federal, state r 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 CONCENTRATION CAS NUMBER DIETHANOLAMINE 000111-42-2 86

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

An immediate health 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 to 1.0%).

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

OSHA HAZARD COMMUNICATION STANDARD:

(Continued on page 8, over)

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PAGE: 8

Product: DIETHANGLAMINE LOW FREEZING GRADE

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

REGULATORY INFORMATION (CONTINUED)

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

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases: Category:

Chemical Name

CAS#

Q %

% in Product

Diethanolamine

000111-42-2

100 lb

85%

CANADIAN REGULATIONS

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

D2B - eye or skin irritant

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace elucation program.

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

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:

CAS #

AMOUNT (%w/w)

Diethanolamine

CAS# 000111-42-2

85%

16. OTHER INFORMATION

REVISION INDICATOR: Revised section 14.

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.

District 1 - (505) 393-6161 2 O. Box 1980 Hobbs, NM 88241-1980 District II - (505) 748-1283 111 S. First Artesia, NM 88210 *** trict III - (505) 334-6178

Rio Brazos Road

District IV - (505) 827-7131

ـــد, 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 Form C-138 Originated 8/8/95

> Submit Original Plus 1 Copy to appropriate District Office

| REQUEST | FOR APPRO | VAL TO ACC | EPT SOLID | WASTE |
|---------|-----------|------------|-----------|-------|

| TEGGEOT OTTAL TO ACCE. T | OOLID WAOTE | | | |
|---|--|--|--|--|
| 1. RCRA Exempt: Non-Exempt: | 4. Generator WAS | | | |
| Verbal Approval Received: Yes 🔲 No 🗗 | 5. Originating Site EL CEDRO COMPLEYO | | | |
| 2. Management Facility Destination Lay exercy DisposeL | 6. Transporter Key | | | |
| 3. Address of Facility Operator #345 CR 3500 Artec | 8. State NM | | | |
| 7. Location of Material (Street Address or ULSTR) ELCEDRO mm 100.5 | | | | |
| 9. <u>Circle One</u> : | | | | |
| All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | | | | |
| | | | | |
| Amile Treated & Fluid 9570 RAINWALE | | | | |
| 25 Amine | • | | | |
| 2.5 TREATING TEG | FEBRUAR STATE OF THE STATE OF T | | | |
| Estimated Volume 500 6615 cy Known Volume (to be entered by the operator at the end of the haul) ———————————————————————————————————— | | | | |
| SIGNATURE: Mere TITLE: MERE Waste Management Facility Authorized Agent | DATE: 2-7-00 | | | |
| TYPE OR PRINT NAME: MICHARI TALOVICH TELEPHONE NO. 505-334-6186 | | | | |
| | | | | |
| (This space for State Use) | | | | |
| APPROVED BY: Deny B. Rent TITLE: G-EO/ | 0913 DATE: 2/9/100 | | | |
| APPROVED BY: Charte TITLE: Delivy | Mileton DATE: 2/9/2000 | | | |
| والمنظم والمنظم والمنظم والمنظم والمنطوع والمنظم والمنظم والمنط والمنظم والمنط والمنط والمنظم والمنظم | | | | |

CERTIFICATE OF WASTE STATUS

| 1. Generator Name and Address: | 2. Destination Name: | | | |
|--|--|--|--|--|
| WILLIAMS
EL CEPRO COMPUEX
HWY 64 MICEMARKER 100.5 | KEYDISPOSAL | | | |
| 3. Originating Site (name): | Location of the Waste (Street address &/or ULSTR): | | | |
| EL CEDRO COMPI | EX. | | | |
| Attach list of originating sites as appropriate | | | | |
| 4. Source and Description of Waste | | | | |
| AMWE TREATWO - 95 | 16 RAIN WATER | | | |
| 2.5 | 19 AMWE | | | |
| 2.5 | % TREATING TEG | | | |
| " WILL SMITH | representative for: | | | |
| according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, | | | | |
| 1988, regulatory determination, the above described waste is: (Check appropriate classification) | | | | |
| EXEMPT oilfield waste NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification | | | | |
| and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above. | | | | |
| For NON-EXEMPT waste only the following documentation is attached (check appropriate items): MSDS Information Other (description): RCRA Hazardous Waste Analysis Chain of Custody | | | | |
| Name (Original Signature): | A | | | |
| Title: PEM COOPD WATOR (50 | 5)\$632-4879 | | | |
| Date: 2 4 00 | | | | |