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## REPORTS

# **YEAR(S)**:





Highlander Environmental Corp.

Midland, Texas

August 24, 2000

Mr. William C. Olson New Mexico Oil Conservation Division Environmental Bureau 2040 S. Pacheco Santa Fe, New Mexico 87505

### Re: Pond Closure Investigation Report, Texaco Exploration and Production Inc., Former Eunice # 1 (South) Gas Plant, Eunice, New Mexico.

Dear Mr. Olson:

On behalf of Texaco Exploration and Production Inc. (Texaco), please find enclosed one copy of the above-referenced report. The report presents the results of investigations of two inactive surface impoundments, conducted at Texaco's former Eunice #1 (South) Gas Plant, located near Eunice, New Mexico. Please call if you have questions.

Sincerely, Highlander Environmental Corp.

AUC 281

Timothy M. Reed, REM Vice President

Encl.

cc: Mr. Robert Patterson, Texaco Mr. Chris Williams, NMOCD- Hobbs District

## POND CLOSURE INVESTIGATION REPORT TEXACO EXPLORATION AND PRODUCTION, INC. FORMER EUNICE #1 (SOUTH) GAS PLANT

#### LEA COUNTY, NEW MEXICO



Prepared for

#### **TEXACO EXPLORATION & PRODUCTION INC.**

AUGUST 2000



Highlander Environmental Corp.

Midland, Texas



#### Highlander Environmental Corp.

Midland, Texas

August 23, 2000

Mr. William C. Olson New Mexico Oil Conservation Division Environmental Bureau 2040 S. Pacheco Santa Fe, New Mexico 87505

#### Re: Pond Closure Investigation Report, Texaco Exploration and Production Inc., Former Eunice #1 (South) Gas Plant, Lea County, New Mexico

Dear Mr. Olson:

This report presents the results of a subsurface investigation of two (2) inactive surface impoundments at the former Texaco Exploration and Production Inc. (Texaco), Eunice #1 (South) Gas Plant (Site), located in Lea County, New Mexico. The Site has been operated by Dynegy Midstream Services, L.P., since July 1998. The ponds, identified as the North Pond (Pond #2) and South Pond (Pond #4), are located near the northeast corner of the Site. The Site is situated in the southeast quarter (SE/4) of the northwest quarter (NW/4), Unit Letter F, Section 27, Township 22 North, Range 37 East. Figure 1 presents a Site location and topographic map. Figure 2 presents a Site drawing.

#### 1.0 **BACKGROUND**

The North Pond (Pond #2) was previously used for temporary storage of 1.2 specific gravity brine displaced from cavern (jug) wells during storage of fractionated products (i.e., propane, butane, etc.). The North Pond has a designed capacity of 75,000 barrels (bbl.), and measures approximately 243 ' x 243 ' x 15 '. The pond is lined with a 45 Mil nylon reinforced butyl liner, and is equipped with leak detection. The leak detection consists of a one-foot square perimeter collection trench, connected to a 4-inch diameter PVC lateral near the west end of the pond. The 4-inch PVC lateral is connected to a 4-inch diameter pVC riser, where fluid measurements can be obtained. Texaco stopped using the North Pond in early 1998, and brine is currently stored in a lined impoundment (Pond #3), located west of the North Pond.

The South Pond (Pond #4) was previously used for temporary storage of water produced from Site operations (i.e., boiler and cooling tower blowdown, and produced water). Water was pumped from the pond to the permitted disposal well (SWD-1), located west

of the pond. Texaco stopped using the South Pond in mid 1998. The pond has a designed capacity of approximately 52,000 bbl, and measures approximately 190' x 240' x 16'. The pond is double-lined with two (2) high-density polyethylene (HDPE) liners, and is equipped with leak detection. The leak detection system consists of a PVC lateral located near the center of the pond, which connects to a riser pipe south of the pond. The bottom of the pond slopes inward, allowing any fluid to flow to the collection lateral. Fluid observations are made at the riser pipe located south of the pond. Water from the plant is currently placed in portable tanks, and disposed of in the SWD.

#### 2.0 INVESTIGATIONS

Sediment samples were collected from the North and South Ponds on December 7, 1999. Soil samples were collected from borings drilled near the corners of each pond on January 6-7, 2000. The investigations were conducted in accordance with a work plan ("Revised Pond Closure Investigation Plan, Former Texaco Exploration and Production Inc., Eunice #1 (South) Gas Plant, Lea County, New Mexico, September 29, 1999"), which was approved by the New Mexico Oil Conservation Division (NMOCD) on October 5, 1999.

#### 2.1 Sediment Samples and Analyses

Samples of sediment were collected from each pond on December 7, 1999. Each pond was divided into two (2) approximately equal composite areas (North and South). Grab samples were collected at five (5) locations in each composite area using a clean sampling trowel. The grab samples were placed in a clean plastic sample bag, thoroughly mixed, and immediately transferred to a clean glass sample container. The glass containers were labeled, and chilled in an ice chest. Portions of the two composite samples for each pond were also blended into a single sample for each pond. As a result, a total of three samples were collected for each pond, submitted under chain-of-custody control to Trace Analysis, Inc. (Lubbock, Texas), and analyzed for benzene, toluene, ethylbenzene, xylene (collectively referred to as BTEX), gasoline and diesel range petroleum hydrocarbons (TPH), chloride and total chromium. Table 1 presents a summary of the laboratory analyses for the sediment samples. Figure 3 and Figure 4 present sample locations for the North and South Ponds, respectively. Appendix A presents the laboratory reports and chain of custody documentation.

Measurements of sediment thickness and Naturally Occurring Radioactive Materials (NORM) levels were obtained at each grab sample location. Sediment thickness was measured by advancing a probe until resistance was encountered. The thickness of sediment in the South Pond ranged from about 4 to 17 inches, and from 10 to 12 inches in the North Pond. The actual sediment thickness in the North Pond may be greater than 12 inches, since it could not be determined if probe resistance occurred from the liner or sediment. The NORM readings were obtained using a Ludlum Model 3 survey meter, equipped with a Model 44-2, 1" x 1" sodium iodide probe. The readings ranged from 4.4 to 8 microRoentgens/hour (uR/hr), and were below background levels (8 to 10 uR/hr).

#### 2.2 Soil Sampling and Analyses

Soil samples were collected from borings drilled near the corners of each impoundment. The borings were advanced from approximately 35 to 47 feet below ground surface (BGS), using a truck-mounted air-rotary drilling rig. The soil samples were collected approximately every ten feet using a split-spoon or core barrel sampler. Six (6) samples were collected from each boring at the North Pond, and five (5) samples were collected from each boring at the South Pond. The samples were placed in clean glass sample jars, labeled, chilled in an ice chest, and submitted under chain-of-custody control to Trace Analysis, Inc., located in Lubbock, Texas. Lithologic logs were prepared for the borings, and are presented in Appendix C. Figure 3 and Figure 4 present the locations of boring drilled at the North and South Ponds, respectively.

A portion of each sample was retained in a clean plastic sample bag for field screening, using the ambient temperature headspace (ATH) method. The concentration of organic vapors in the headspace of the sample bag was measured using a photoionization detector (PID), after approximately 15 minutes at ambient temperature. The PID is a qualitative instrument that measures the concentration of ionizable hydrocarbon in the sample headspace. The readings are displayed in parts per million (ppm), and the instrument was calibrated to isobutylene (75 ppm) prior to use. The PID readings are summarized on Table 2, and presented on the lithologic logs (Appendix B). The instrument calibration record is presented in Appendix C.

All samples were analyzed for chloride by method E 300.0. In addition, the sample exhibiting the highest PID reading, and the deepest sample from each boring were analyzed for BTEX by EPA method SW 846-8021B and TPH by Method 8015B modified. Table 2 presents a summary of the laboratory analyses. Appendix A presents the laboratory reports.

#### 3.0 INVESTIGATION RESULTS

The soil sample analyses were compared to the NMOCD recommended remedial action levels (RRAL) for BTEX and TPH. The concentrations of benzene and total BTEX were well below the RRAL's of 10 milligrams per kilogram (mg/kg) and 50 mg/kg, respectively. The highest TPH concentration reported in the soil samples was 96.6 mg/kg, in sample S-4, 3 to 4 feet BGS. The TPH concentrations in the soil samples were below the NMOCD's most restrictive cleanup level of 100 mg/kg. The highest chloride concentration was reported in the sample from boring N-2 (3 to 4 feet BGS), which reported 170,000 mg/kg chloride. The concentration of chloride diminishes with depth.

#### 4.0 **PROPOSED SITE CLOSURE**

Since impacts to soil were not observed at the south pond, Texaco proposes to move sediment in the south pond to the north pond. The liner beneath of the north pond will be folded toward the interior of the pond, and covered with the liner from the south pond. The top liner will be covered with approximately 1 foot of clay and crowned to provide a

barrier against infiltration of precipitation. The entire area (south and north ponds) will be graded with a final cover consisting of approximately 18 inches of topsoil, and seeded with forage grasses. Monitoring of groundwater will be performed in accordance with the NMOCD approved groundwater abatement program.

If you have any questions or need any additional information, please advise.

Highlander Environmental Corp.

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*l* Timothy M. Reed, REM Vice President

Encl.

cc: Mr. Robert Patterson, Texaco Mr. Chris Williams, NMOCD- Hobbs District





#### TABLES

Table 1: Summary of BTEX, TPH, Chromium and Chloride Analyses of Sediment Samples Texaco Exploration and Production, Inc.

Eunice #1 (South) Gas Plant, Storage Ponds

Lea County, New Mexico

										Page 1 of 1	,
Pond	Sample	Sample	Benzene	Toluene	Ethylbenzene	Xylenes	GRO	DRO	HdT	Chromium	Chloride
		Date	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
South	N 1/2	12/7/99	1.05	8.95	10.1	23.3	888	203	1,091	16	19,000
	S 1/2	12/7/99	3.76	8.58	27.4	<0.200	1,610	128	1,738	23	20,000
	S. Pond	12/7/99	3.29	7.94	21.5	<0.200	1,320	111	1,431	12	20,000
North	N 1/2	12/7/99	0.502	0.868	0.793	2.98	344	1,270	1,614	22	120,000
	S 1/2	12/7/99	3.06	26.6	27.2	64.0	1,950	1,170	3,120	20	49,000
	N. Pond	12/7/99	2.11	6.39	15.5	<0.200	1,310	2,240	3,550	23	80,000

Notes:

Gasoline Range Hydrocarbons Milligrams per kilogram 1. (mg/kg):

Diesel Range Hydrocarbons 2. GRO: 3. DRO 4. TPH:

Total Petroleum Hydrocarbons (GRO & DRO)

Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant, Storage Ponds Summary of PID, BTEX, TPH and Chloride Analyses of Soil Samples Table 2:

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	Lea Coun	ty, New Me	xico									Page 1 of 3
Pond	Soil	Sample	Sample	PID	Benzene	Toluene	Ethylbenzene	Xylenes	GRO	DRO	HAL	Chloride
	Boring	Depth (ft)	Date	(mqq)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)
South	S-1	2.5-3.5	1/6/00	10.1	,		ı	•	1	ł	1	3,800
		10-11	1/6/00	3.2	ı	I	ı	,	ı	ı	ı	3,800
		20-21	1/6/00	19.2		1	ı	ı	ı	I	ı	1,100
		30-31	1/6/00	27.3	<0.05	<0.05	0.11	0.161	61.3	<50	61.3	670
		35-36	1/6/00	3.9	<0.05	<0.05	<0.05	<0.05	Ş	<50	<55	640
	S-2	2-3	1/6/00	43.6	<0.05	<0.05	<0.05	<0.05	Ŷ	<50	<55	540
		10-11	1/6/00	31.9	ı	ı	I	ı	ı	·	ı	830
		20-21	1/6/00	31.3	ı	1	ı	•	ı	ŀ	1	210
		30-31	1/6/00	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
		35-36	1/6/00	13.0	<0.05	<0.05	<0.05	<0.05	Ŷ	<50	<55	96
	S-3	2-3	1/6/00	20.4	,	ı	-	1		,	1	2,400
		10-11	1/6/00	25.4	<0.05	<0.05	<0.05	<0.05	Ŷ	<50	<55	430
		20-21	1/6/00	21.5	ı	ı	I	ı	,	I	I	92
		30-31	1/6/00	26.0	1	ı	ı	ı	•	,	ı	86
		35-36	1/6/00	27.0	<0.05	<0.05	<0.05	<0.05	<5	<50	<55	73
	S-4	3-4	1/6/00	112.8	<0.1	<0.1	<0.1	0.159	96.6	<50	96.6	2,000
		10-11	1/6/00	24.1	ı	ı	,	1	ı	ı	ı	490
		20-21	1/6/00	14.9	ı		'	1	,		,	59
		30-31	1/6/00	18.9	ı	1	ı	1	,	I	ı	78
		35-36	1/6/00	7.8	<0.05	<0.05	<0.05	<0.05	Ş	<50	<55	89

1. (mg/kg): Milligrams per kilogram Notes:

Parts Per Million 2. (ppm):

Gasoline Range Hydrocarbons 3. GRO:

Diesel Range Hydrocarbons 4. DRO

Total Petroleum Hydrocarbons (GRO & DRO) 5. TPH:

Concentration less than test method detection limits €. ∵

No data available

No Sample Recovery 7. --

Sample Depth in Feet Below Ground 8. N/R 9. ft:

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Table 2:(Continued) Summary of PID, BTEX, TPH and Chloride Analyses of Soil SamplesTexaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant, Storage Ponds

of 3	de	(r	0	0	o	0	0		8	Q	Q	0	0	0	0	0	0	0	0	0	
Page 2 c	Chlori	(mg/l	1,50(	9,90	17,00	6,40(	7,40(	N/R	170,0(	31,00	12,00	7,10(	2,80(	1,70	5,00(	9,20(	9,30(	3,10(	1,50(	2,30(	
	Hat	(mg/kg)	•	ı	<55	ı	<55	N/R	1	<55	1	ı	<55	1	<55	ı	ı	ı	<55	ı	
	DRO	(mg/kg)	1	ı	<50	I	<50	N/R	•	<50	ı	I	<50	1	<50	I	I	ı	<50	ı	
	GRO	(mg/kg)	-	ı	Ŷ	1	Ş	N/R	-	Ş	ı	t	\$	I	\$>	I	ı	ı	ŝ	ı	
	🔬 Xyleñes ,	(mg/kg)	1	ι	<0.05	ı	<0.05	N/R	-	<0.05	ı	ı	<0.05	•	<0.05	ı	I	ł	<0.05	ı	
	Ethylbenzene	(mg/kg)	a	ı	<0.05	ı	<0.05	N/R	1	<0.05		ı	<0.05	•	<0.05	•	ı	ı	<0.05	ı	
	Toluene	(mg/kg)	1	ı	<0.05	ı	<0.05	N/R	1	<0.05	•	1	<0.05	ı	<0.05	ı	ı	·	<0.05	١	
	Benzene	(mg/kg)	1	ı	<0.05	ı	<0.05	N/R	1	<0.05	ı	ı	<0.05	ı	<0.05	ı	ı	ı	<0.05	ı	
	DID	(mqq)	14.8	9.7	34.5	18.9	22.8	N/R	5.8	9.7	1.3	1.9	2.6	3.2	88.9	15.9	24.9	12.0	20.4	7.4	
xico	Sample	Date	1/6/00	1/6/00	1/6/00	1/6/00	1/6/00	1/6/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	1/7/00	
ty, New Me	Sample	Depth (ft)	3-4	10-11	20-21	30-31	40-41	46-47	3-4	10-11	20-21	30-31	40-41	46-47	3-4	10-11	20-21	30-31	40-41	46-47	
Lea Coun	Soil	Boring	N-1						N-2						N-3						
	Pond	3	North																		

Notes:

- 1. (mg/kg): Milligrams per kilogram
- 2. (ppm): Parts Per Million
- 3. GRO: Gasoline Range Hydrocarbons
- 4. DRO Diesel Range Hydrocarbons
- 5. TPH: Total Petroleum Hydrocarbons (GRO & DRO)
- 6. <: Concentration less than test method detection limits
  - 7. -- No data available
- 8. N/R No Sample Recovery
- 9. ft: Sample Depth in Feet Below Ground

**Fexaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant, Storage Ponds** (Continued) Summary of PID, BTEX, TPH and Chloride Analyses from Soil Samples

Table 2:

Page 3 of 3 Chloride (mg/L) 13,000 12,000 7,100 8,400 7,400 NR (mg/kg) HdT 50.6 <55 N/R t ı r (mg/kg) DRO N/R <50 <50 ı (mg/kg) GRO 50.6 NR  $\Im$ ı. т . Xylenes (mg/kg) <0.05 N/R 2.31 , ī Ethylbenzene (mg/kg) <0.05 N/R ı 1 Toluene (mg/kg) 0.538 <0.05 N/R ı ı, Benzene (mg/kg) <0.05 N/R 0.23 . ÷ (mdd) 193.0 19.8 28.2 12.2 PID 7.4 N/R **Date** 1/7/00 Sample 1/7/0000/L/1 1/7/00 1/7/00 1/7/00 Lea County, New Mexico Depth (ft) Sample 10-11 30-31 40-41 46-47 20-21 3-4 Boring Soil N-4 Pond

Notes:

- 1. (mg/kg): Milligrams per kilogram
  - Parts Per Million 2. (ppm):
- Gasoline Range Hydrocarbons 3. GRO:
- Diesel Range Hydrocarbons 4. DRO
- Total Petroleum Hydrocarbons (GRO & DRO) 5. TPH:
- Concentration less than test method detection limits €. <:
- No data available 7. --
- No Sample Recovery 8. N/R
- Sample Depth in Feet Below Ground 9. ft:

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FIGURES



#### **FIGURES**

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# APPENDIX A

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#### APPENDIX A

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Laboratory Analysis

6701 Aberdeen Avenue, Suite 9 4725 Ripley Avenue, Suite A

Lubbock, Texas 79424 El Paso, Texas 79922 E-Mail: lab@traceanalysis.com

800 • 378 • 1296 888 • 588 • 3443

806 • 794 • 1296 FAX 806 • 794 • 1298 FAX 915•585•4944

Report Date:

#### 915•585•3443

#### **Analytical and Quality Control Report**

Mark Larson Highlander Environmental Services 1910 N. Big Spring St. Midland, TX 79705

12/13/99

786 Project Number: Project Name: Texaco South Eunice Gas Plant **Eunice Plant** Project Location:

Order ID Number: 99120906

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
136975	S. Pond N/2	Soil	12/7/99	10:35	12/9/99
136976	S. Pond S/2	Soil	12/7/99	10:45	12/9/99
136977	S. Pond	Soil	12/7/99	11:00	12/9/99
136978	N. Pond N/2	Soil	12/7/99	11:45	12/9/99
136979	N. Pond S/2	Soil	12/7/99	11:55	12/9/99
136980	N. Pond	Soil	12/7/99	12:00	12/9/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 3 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

6701 Aberdeen Avenue, 1 4725 Ripley Avenue, Suit	Suite 9 El Paso, Texas 79424 El Paso, Texas 79922 B88•588• E-Mail: lab@traceanalysis	1296 806•794•1296 FAX 806•794•1298 3443 915•585•3443 FAX 915•585•4944 .com
December 13, 1999 Receiving Date: 12/09/99 Sample Type: Liquid Project No: 786 Project Location: NA Client Name: Texaco	ANALYTICAL RESULTS FOR HIGHLANDER ENVIRONMENT Attention: Mark Larson 1910 N. Big Spring St. Midland, TX 79705	AL SERVICES Prep Date: 12/09/99 Analysis Date: 12/10/99 Sampling Date: 12/07/99 Sample Condition: Intact & Cool Sample Received by: VW Project Name: Eunice #1 (South) Plant
TA#	FIELD CODE	DRO (mg/kg)
T136975	S. Pond, N/2	203
T136976	S. Pond, S/2	128
T136977	S. Pond	111
T136978	N. Pond, N/2	1,270
T136979 T136980	N. Pond, S/2 N. Pond	1,170 2,240
		50
METHOD BLANK		<50
ICV		272
LCS		233
LCSD		263
MS		233
MSD		243
CCV (1)		260
CCV (2)		238
AVG. CV		257
RPD		4
% Extraction Accuracy		93

CHEMIST: MF DRO SPIKE: 250 mg/kg DRO. DRO CV: 250 mg/L DRO.

K

12-13-99

DATE

Director, Dr. Blair Leftwich

4725 Ripley Avenue, Su	ite A El Paso, Texas 79922 888•588 E-Mail: lab@traceanalys	I●3443 915●585●3443 FAX 915●585●4944 sis.com
December 14, 1999 Receiving Date: 12/09/99 Sample Type: Liquid Project No: 786 Project Location: NA Client Name: Texaco	ANALYTICAL RESULTS FOR HIGHLANDER ENVIRONMEN Attention: Mark Larson 1910 N. Big Spring St. Midland, TX 79705	ITAL SERVICES Prep Date: 12/13/99 Analysis Date: 12/13/99 Sampling Date: 12/07/99 Sample Condition: Intact & Cool Sample Received by: VW Project Name: Eunice #1 (South) Plan
TA#	FIELD CODE	TOTAL Cr (mg/kg)
T136975	S. Pond, N/2	16
T136976	S. Pond, S/2	23
T136977	S. Pond	12
T136978	N. Pond, N/2	22
T136979	N. Pond, S/2	20
1136980	N. PONA	23
REPORTING LIMIT METHOD BLANK		5.0 < 5.0
ICV		1.0
LCS		219
LCSD		198
CCV		1.0
RPD		2
% Extraction Accuracy % Instrument Accuracy		92 102
METHODS: EPA SW 846-30	51A, 6010B.	

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Director, Dr. Blair Leftwich

DATE

December Receiving I Sample Tyr Project No: Project Loc	13, 1999 2ate: 12/09/99 2e: Liquid : 786 : ation: NA	sen Avenue, Suite 9 Avenue, Suite A A A	Lubbock, Texas 79424 El Paso, Texas 79922 E-Mail: lab@th <b>NALYTICAL RESUL</b> <b>IIGHLANDER ENVIR</b> <b>(ttention: Mark L</b> <b>910 N. Big Spring</b> <b>1idland, TX 79705</b>	800e378e1296 800e378e1296 888e588e3443 raceanalysis.com TS FOR ONMENTAL CO arson St.	915-585-3443 915-585-3443 0RP. F	FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 Prep Date: 12 Analysis Date: ample Condit ample Receiv	(09/99 12/09/99 :: 12/07/99 tion: Intact	& COO	
TA#	FIELD CODE		GRO (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	(South) Plar M,P,O XYLENE (mg/kg)	nt TOTAL BTEX (mg/kg)	
T136975	S. Pond, N/2		888	1.05	8.95	10.1	23.3	43.4	
T136976	S. Pond, S/2		1,610	3.76	8.58	27.4	< 0.200	39.7 	
T136977	S. Pond		1,320	3.29 0.500	7.94	21.5 0 707	<0.200	52.7 E 11	
T136978 T136979	N. Pond, N/2 N Pond s/2		344 1 950	0.502 3 06	0.868 26.6	0./95 27.2	2.98 64.0	120	
T136980	N. Pond		1,310	2.11	6.39	15.5	< 0.200	24.0	
QC			1.0	0.098	0.097	0.095	0.279		
REPORTING	LIMIT		< 0.100	< 0.050	< 0.050	< 0.050	< 0.050		
RPD			13	2	2	~	2		
% Extractio % Instrume	on Accuracy ent Accuracy		100 100	8 8 8 6	96 97	94 95	92 93		
Methods: Chemist: R	EPA SW 846-8021B \C	;, 5035, 8015B	Modified.						
BTEX SPIKE GRO SPIKE:	: 5 mg/kg BTEX. 1.00 mg/kg GRO.	Ø	BTEX QC: 0.10 GRO CV: 1.00	)0 mg/l btex. mg/l gro.					
		121			() ()	20			

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کریکر Director, Dr. Blair Leftwich

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12-13-99 Date

#### **Analytical Results Report**

Sample Number:	136975										
Description:	S. Pond N/2				A	Data	Data		Dura	00	
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography	(IC) (mg/Kg)								• <b>•</b> • • • • • • • • • • • • • • • • •		
CL			19,000	1	E 300.0	12/10/99	12/10/99	JS	PB03428	QC04434	0.5
Sample Number:	136976							<u></u>			
Description:	S. Pond S/2				Analytical	Date	Date		Pren	OC	
Param		Fiag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography	(IC) (mg/Kg)						<u>, , ,</u>				
CL			20,000	1	E 300.0	12/10/99	12/10/99	JS	PB03428	QC04434	0.5
Sample Number:	136977		······								
Description:	S. Pond				Applation	Data	Dote		Dran	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatograph CL	y (IC) (mg/Kg)	- <u>,</u> , <u>,</u> , , , , , , , , , , , , , , ,	20,000	1	E 300.0	12/10/99	. 12/10/99	JS	PB03428	QC04434	0.5
Sample Number: Description:	136978 N. Pond N/2							<u></u>			
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatograph CL	y (IC) (mg/Kg)		120,000	1	E 300.0	12/10/99	12/10/99	JS	PB03428	QC04434	0.5
Sample Number: Description:	136979 N. Pond S/2										
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatograph CL	y (IC) (mg/Kg)		49,000	1	E 300.0	12/10/99	12/10/99	JS	PB03428	QC04434	0.5
	136980 N. Pond										
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatograph CL	y (IC) (mg/Kg)		80000	1	E 300.0	12/10/99	12/10/99	JS	PB03428	QC04434	0.5

Report Date: 12/13/99 786	Ord Tex	er ID Numb aco South I	ber: 99120906 Eunice Gas Plant		Page 1	Number: 3 of 3 Eunice Plant
	Qu	ality Co Metho	ontrol Repo d Blanks	rt		
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/Kg)		8.54	0.5	12/10/99	PB03428	QC04434

#### Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/Kg)	80000	1	62500	148665.46	110		80 - 120	0 - 20	QC04434
MSD	CL (mg/Kg)	80000	1	62500	146849.10	107	3	80 - 120	0 - 20	QC04434

#### Quality Control Report Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	13.66	109	80 - 120	12/10/99	QC04434
CCV (1	CL (mg/L)		12.5	13.39	107	80 - 120	12/10/99	QC04434

		-						-			<del>,</del>							 		 			5		1	
PAGE: 1 OF: 1	ANALYSIS REQUEST		<i>₽S 28</i>	8 8 8 9 8 9 1 9 7 0 0	S S S S S S S S S S S S S S S S S S S	1)011 0)624	22 <sup>1</sup> 23 <sup>2</sup> 23 <sup>2</sup> 2 <sup>2</sup> 2	Ag A	70 etals etels etels for for for for for for for for for for	bIN (V Genume V) bra (V Genume best BOD L Genes G best BOD LCTA SC LCTA SC LCTA SC LCTA SC LCTA SC LCTA SC LCTA M LCTA M	• • •	• >				• • • • • • • • • • • • • • • • • • • •	~>			TEP BY: (Print & Sign to Date: 17, 144	LE SHIPPED BY: (Circle)	DEL IVERED BUS AIRBILL	TANDER CONTACT PERSON: Results by Cc. 13. 19 4 C	Mark Larges Authorized:	Ves (kg	12/14
			(0	29	•	2 2 2 2 2 2	3)	یا ( 209 205	510 510 /020	8 XITE 8 38TW 8 HAT 8 HAT	· , - ,	· > - }	•	>	·> ·>	`} ·}	·> ·>									
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	and Cha	FNVIR		ide gia .vi and Tevae	allu, ICAGS	SITE MANAGE		LE LIVIE		SAMPLE IDE	Part N/2	P = 1 2</td <td>2 22 (12/2)</td> <td>Yand</td> <td>Pand, N/2</td> <td>Pand, S/2</td> <td>land</td> <td></td> <td></td> <td>12/8/99</td> <td>00:17 1 00:17</td> <td>5130 PM</td> <td></td> <td>1 JU 4</td> <td>) 378-1296 D</td> <td>WATRIX: W-Wat</td>	2 22 (12/2)	Yand	Pand, N/2	Pand, S/2	land			12/8/99	00:17 1 00:17	5130 PM		1 JU 4	) 378-1296 D	WATRIX: W-Wat
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6701 Aberdeen Avenue, Suite 9 4725 Ripley Avenue, Suite A Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79922 888•588•3443 E-Mail: lab@traceanalysis.com

800•378•1296 806•794•1296 888•588•3443 915•585•3443 @traceanalysis.com

Image: FAX
Image:

#### **Analytical and Quality Control Report**

Mark Larson Highlander Environmental Services 1910 N. Big Spring St. Midland, TX 79705

Report Date:

1/21/00

Project Number:	786
Project Name:	Texaco South Eunice Gas Plant
Project Location:	Eunice Plant

Order ID Number: A00010811

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Taken	Received
138390	S-1, 2.5-3.5'	Soil	1/6/00	9:30	1/8/00
138391	S-1, 10-11'	Soil	1/6/00	9:40	1/8/00
138392	S-1, 20-21'	Soil	1/6/00	9:50	1/8/00
138393	S-1, 30-31'	Soil	1/6/00	10:00	1/8/00
138394	S-1, 35-36'	Soil	1/6/00	10:10	1/8/00
138395	S-2, 2-3'	Soil	1/6/00	10:55	1/8/00
138396	S-2, 10-11'	Soil	1/6/00	11:00	1/8/00
138397	S-2, 20-21'	Soil	1/6/00	11:05	1/8/00
138398	S-2, 35-36'	Soil	1/6/00	11:15	1/8/00
138399	S-3, 2-3'	Soil	1/6/00	13:20	1/8/00
138400	S-3, 10-11'	Soil	1/6/00	13:25	1/8/00
138401	S-3, 20-21'	Soil	1/6/00	13:30	1/8/00
138402	S-3, 30-31'	Soil	1/6/00	13:40	1/8/00
138403	S-3, 35-36'	Soil	1/6/00	13:45	1/8/00
138404	S-4, 3-4'	Soil	1/6/00	14:10	1/8/00
138405	S-4, 10-11'	Soil	1/6/00	14:15	1/8/00
138406	S-4, 20-21'	Soil	1/6/00	14:20	1/8/00
138407	S-4, 30-31'	Soil	1/6/00	14:30	1/8/00
138408	S-4, 35-36'	Soil	1/6/00	14:35	1/8/00
138409	N-1, 3-4'	Soil	1/6/00	16:00	1/8/00
138410	N-1, 10-11'	Soil	1/6/00	15:20	1/8/00
138411	N-1, 20-21'	Soil	1/6/00	15:30	1/8/00
138412	N-1, 30-31'	Soil	1/6/00	15:35	1/8/00
138413	N-1, 40-41'	Soil	1/6/00	15:40	1/8/00
138414	N-2, 3-4'	Soil	1/7/00	8:10	1/8/00

138415	N-2, 10-11'	Soil	1/7/00	8:15	1/8/00
138416	N-2, 20-21'	Soil	1/7/00	8:20	1/8/00
138417	N-2, 30-31'	Soil	1/7/00	8:30	1/8/00
138418	N-2, 40-41'	Soil	1/7/00	8:40	1/8/00
138419	N-2, 46-47'	Soil	1/7/00	8:45	1/8/00
138420	N-3, 3-4'	Soil	1/7/00	9:18	1/8/00
138421	N-3, 10-11'	Soil	1/7/00	9:22	1/8/00
138422	N-3, 20-21'	Soil	1/7/00	9:25	1/8/00
138423	N-3, 30-31'	Soil	1/7/00	9:30	1/8/00
138424	N-3, 40-41'	Soil	1/7/00	9:40	1/8/00
138425	N-3, 46-47'	Soil	1/7/00	9:50	1/8/00
138426	N-4, 3-4'	Soil	1/7/00	10:15	1/8/00
138427	N-4, 10-11'	Soil	1/7/00	10:20	1/8/00
138428	N-4, 20-21'	Soil	1/7/00	10:25	1/8/00
138429	N-4, 30-31'	Soil	1/7/00	10:30	1/8/00
138430	N-4, 40-41'	Soil	1/7/00	10:40	1/8/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 23 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Report Date: 1/21/00 786

#### Analytical Results Report

Sample Number: Description:	138390 S-1. 2.5-3.5'										
Param	,	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		3800	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: Description:	138391 S-1, 10-11'				Applution	Data	Date		Dren	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		3800	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: Description:	138392 S-1, 20-21'				Application	Data	Data		Dron	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)	*****	1100	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: Description:	138393 S-1, 30-31'					D	Dete		D	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
BTEX (mg/Kg)			· · · · · · · · · · · · · · · · · · ·		·····						
Benzene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			< 0.05	50 50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M P O <sub>-</sub> Xylene			0.11	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Total BTEX			0.272	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Surrogate (mg/Kg) TFT			Result 5.2	Dilution 50	Spike Amount 0.1	% Rec. 104	% Rec. Limit 72 - 128	Analyst RC	Prep Batch # PB00221	QC Batch # QC00293	
4-BFB			5.8	50	0.1	116	72 - 128	RC	PB00221	QC00293	
Ion Chromatography CL	(IC) (mg/Kg)		670	1	E 300.0	1/10/00	1/11/00	JS	PB00248	QC00322	0.5
TPH DRO (mg/Kg) DRO	,		<50	1	Mod. 8015B	1/10/00	1/13/00	МА	PB00228	QC00351	50
TPH GRO (mg/Kg) GRO	1		61.3	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: Description:	138394 S-1, 35-36'				Analutical	Data	Data		Dron	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
BTEX (mg/Kg)					0.000	1/10/02	1/10/00		DDCCCC	0.0000000	0.001
Benzene Toluene			<0.05 <0.05	50 50	S 8021B S 8021B	1/10/00	1/10/00	RC	PB00221 PB00221	QC00293 QC00293	0.001

786		Ura Tex	er ID Nu	moer: A000	s Plant		Page Number: 4 of 23				
Edu II. a		-0.05								rian	
Ethylbenzene M.B.O. Yelene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00	
M,P,O-Aylene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00	
IOUAI BIEX		<0.05	50	5 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Surrogate $(ma/Va)$		Docult	<b>D</b> 11 <i>d</i> 1	Spike	%	% Rec.		Prep	QC		
TTT		Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #		
		5.17	50	0.1	103	72 - 128	RC	PB00221	QC00293		
4-BFB		5.29	50	0.1	106	72 - 128	RC	PB00221	QC00293		
Ion Chromatography (IC) (mg/Kg)											
CL		640	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5	
TPH DPO $(ma/Ka)$											
DRO		<50	1	Mod 8015B	1/10/00	1/10/00	МА	PB00228	0000208	50	
DIG		-50	1	14100. 00150	1/10/00	1/10/00	MA	1 D00220	QC00270	50	
TPH GRO (mg/Kg)											
GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1	
Somela Number 129205	······································					····					
Description: S-2 2-3'											
				Analytical	Date	Date		Prep	QC		
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL	
BTEX (mg/Kg)											
Benzene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Toluene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Ethylbenzene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
M,P,O-Xylene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Total BTEX		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
				Spike	%	% Rec.		Prep	QC		
Surrogate (mg/Kg)		Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #		
TFT		5.21	50	0.1	104	72 - 128	RC	PB00221	QC00293		
4-BFB		5.37	50	0.1	107	72 - 128	RC	PB00221	QC00293		
Ion Chromatography (IC) (mg/Kg)											
CL		540	1	E 300.0	1/10/00	1/11/00	IS	PB00248	OC00322	0.4	
		0.00		200010			••	1 2002.0	<b>Q</b> 00000		
TPH DRO (mg/Kg)											
DRO		<50	1	Mod. 8015B	1/10/00	1/10/00	MA	PB00228	QC00298	50	
TPH GRO (mg/Kg)											
GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.	
								······································			
Sample Humber: $138390$ Description: $S_2 = 10.11^{\circ}$											
2-3011ption. 0-2, 10-11				Analytical	Date	Date		Prep	QC		
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDI	
Ion Chromatography (IC) (mg/Kg)											
CL		830	I	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.:	
Sample Number: 138397											
Description: S-2. 20-21'											
				Analytical	Date	Date		Prep	QC		
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RD	
Ion Chromatography (IC) (mg/Kg)											
CL		210	1	E 300 0	1/17/00	1/19/00	JS	PB00338	OC00445	0.	

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Report Date: 1/21/	00	Order ID Number: A00010811 Texaco South Eunice Gas Plant						Page Number: 5 of 23 Eunice Plant			
786											
Sample Number:	138398			<del></del>			<b></b>				
Description:	8-2, 35-36'					<b>D</b> .				0.0	
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
BTEX (mg/Kg)											
Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Total BTEX			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
					Spike	%	% Rec.		Prep	OC	
Surrogate (mg/Kg)			Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #	
TFT			5.22	50	0.1	104	72 - 128	RC	PB00221	QC00293	
4-BFB			5.25	50	0.1	105	72 - 128	RC	PB00221	QC00293	
Ion Chromatography ()	IC) (mg/Kg)										
CL	,		96	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5
TPH DRO (mg/Kg)											
DRO			<50	1	Mod. 8015B	1/10/00	1/10/00	MA	PB00228	QC00298	50
									·		
GRO (mg/kg)			<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0. 1
	•										
Sample Number:	138399										÷
Description:	S-3, 2-3'					_	_		-		
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography (	IC) (mg/Kg)					1				<u></u>	
CL			2400	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number:	138400							<u></u>			
Description:	S-3, 10-11'										
Dana			Devile		Analytical	Date	Date	A	Prep	QC	וסת
		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	KDL
BIEX (mg/Kg)			-0.05	50	0.0001D	1/10/00	1/10/00	DC	DD00001	0000000	0.001
Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Fthulbengene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M D O Valence			<0.05	50	S 8021B	1/10/00	1/10/00	RC DC	PB00221	QC00293	0.001
M,P,U-Xylene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
TOTAL DIEA			~0.03	30	5 6021D	1/10/00	1/10/00	ĸĊ	P D00221	QC00293	0.001
Surrogate (mg/Kg)			Result	Dilution	Spike	% Rec	% Rec.	Analyst	Prep Batch #	QC Batch #	
TFT			5 15	50		103	72 - 128	RC	PR00221	0000202	
4-BFB			5.07	50	0.1	101	72 - 128	RC	PB00221	QC00293	
Ion Chromotometer	$T_{\rm C} = (m - M - 1)$									, -	
CL	ic) (mg/kg)		430	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5
TPH DRO (mg/Kg)											
DRO			<50	1	Mod. 8015B	1/10/00	1/10/00	MA	PB00228	QC00298	50
TPH GRO (mg/Kg)											
GRO			<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1

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Report Date: 1/21		Ord	Page Number: 6 of 23								
786			Te	Eunice Plant							
Sample Number: Description:	138401 S-3, 20-21'		<b>D</b>		Analytical	Date	Date		Prep	QC	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	' RDL
Ion Chromatography CL	(IC) (mg/Kg)		92	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: Description:	138402 S-3, 30-31'				A	Dete	Dete		Dura	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		86	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: Description:	138403 S-3, 35-36'				Analytical	Date	Date		Prep	OC	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
BTEX (mg/Kg) Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
TOTAL DIEN			<b>~0.05</b>	30	5 6021D	1/10/00	1/10/00	ĸĊ	F B00221	QC00293	0.001
Surrogate (mg/Kg)			Result	Dilution	Spike Amount	% Rec. 98	% Rec. Limit 72 - 128	Analyst BC	Prep Batch #. PB00221	QC Batch #	
4-BFB			4.83	50	0.1	97	72 - 128	RC	PB00221	QC00293	
Ion Chromatography CL	(IC) (mg/Kg)		73	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5
TPH DRO (mg/Kg) DRO			<50	1	Mod. 8015B	1/10/00	1/10/00	MA	PB00228	QC00298	50
TPH GRO (mg/Kg) GRO			<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: Description:	138404 S-4, 3-4'										
Param		Flag	Result	Dilution	Analytical Method	Date Prenared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDI
BTEX (mg/Kg)								-7			
Benzene			<0.1	100	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Toluene			<0.1	100	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene			<0.1	100	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene			0.159	100	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
			0.139	100	5 0021D	1/10/00	1/10/00	KC.	- DVV421	QU00293	0.00
Surrogate (mg/Kg)			Result	Dilution	Spike	% Rec	% Rec.	Analyst	Prep Batch #	QC Batch #	
TFT			10.3	100	0.1	103	72 - 128	RC	PB00221	QC00293	
4-BFB			10.6	100	0.1	106	72 - 128	RC	PB00221	QC00293	
Ion Chromatography	(IC) (mg/Kg)		2000	1	E 300 0	1/10/00	1/10/00	16	PR00247	0000320	0
UL .			2000	1	E 300.0	1/10/00	1/10/00	12	1 00024/	QC00320	0

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		104							Lunice	
DRO (mg/Kg)		<50	1	Mod. 8015B	1/10/00	1/11/00	МА	PB00231	QC00303	50
TPH GRO (mg/Kg) GRO		96.6	100	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: 138405 Description: S-4, 10-11'				A 1 1					0.0	
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL		490	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00445	0.5
Sample Number: 138406 Description: S-4, 20-21'				A	D-t-	Data		Deser	00	
Param	Flag	Result	Dilution	Method	Date Prepared	Date Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL		59	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number: 138407 Description: S-4, 30-31'										
Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDI
Ion Chromatography (IC) (mg/Kg) CL		78	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number: 138408   Description: S-4, 35-36'						•				
Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDI
BTEX (mg/Kg)										
Benzene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Toluene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Ethylbenzene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
M,P,O-Xylene		<0.05	50 50	S 8021B	1/10/00	1/10/00	RC	PB00221 PB00221	QC00293	0.00
Total DTEX	*	-0.05	50	0.00210	1/10/00		Re	1 000221	2000270	0.00
Surrogate (mg/Kg)		Result	Dilution	Spike Amount	% Rec. 104	% Rec. Limit 72 - 128	Analyst RC	Prep Batch # PB00221	QC Batch # OC00293	
4-BFB		5.23	50	0.1	105	72 - 128	RC	PB00221	QC00293	
Ion Chromatography (IC) (mg/Kg) CL		89	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.
TPH DRO (mg/Kg) DRO		<50	1	Mod. 8015E	8 1/10/00	1/11/00	MA	PB00231	QC00303	5
TPH GRO (mg/Kg) GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.

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786			Tex	Eunice Plant								
Sample Number: Description:	138409 N-1, 3-4'					5						
Param		Flag	Result	Dilution	Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL	
Ion Chromatography CL	(IC) (mg/Kg)		1500	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5	
Sample Number: Description:	138410 N-1, 10-11'				A	Dete	Dete		D	00		
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL	
Ion Chromatography CL	(IC) (mg/Kg)		9900	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5	
Sample Number: Description:	138411 N-1, 20-21'	······			Analytical	Date	Date		Pren	00		
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL	
BTEX (mg/Kg) Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Ethylbenzene			<0.05	50 50	S 8021B	1/10/00	1/10/00	RC	PB00221 PB00221	QC00293	0.001	
M.P.O-Xylene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Total BTEX			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Surrogate (mg/Kg)			Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #		
4-BFB			5.18	50	0.1	104	72 - 128	RC	PB00221	QC00293		
Ion Chromatography CL	(IC) (mg/Kg)		17,000	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5	
TPH DRO (mg/Kg) DRO			<50	1	Mod. 8015B	1/10/00	1/11/00	MA	PB00231	QC00303	50	
TPH GRO (mg/Kg) GRO			<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1	
Sample Number: Description:	138412 N-1, 30-31'											
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL	
Ion Chromatography CL	(IC) (mg/Kg)		6400	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5	
Sample Number: Description:	138413 N-1, 40-41'											
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL	
BTEX (mg/Kg)												
Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Toluene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Einyidenzene M.P.O.Xvlene			<0.05 <0.05	50 50	5 8021B S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
Total BTEX			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001	
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786	····	Tey	aco Sou	th Eunice Ga	s Plant				Eunice	Plant
Surrogate (mg/Kg) TFT 4-BFB		Result 5.41 5.32	Dilution 50 50	Spike Amount 0.1 0.1	% Rec. 108 106	% Rec. Limit 72 - 128 72 - 128	Analyst RC RC	Prep Batch # PB00221 PB00221	QC Batch # QC00293 QC00293	
Ion Chromatography (IC) (mg/Kg) CL		7400	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00320	0.5
TPH DRO (mg/Kg) DRO		<50	1	Mod. 8015B	1/10/00	1/11/00	МА	PB00231	QC00303	5(
TPH GRO (mg/Kg) GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number:138414Description:N-2, 3-4'				Analytical	Date	Date		Dren	00	
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL		170,000	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number: 138415 Description: N-2, 10-11'							<u> </u>	. <u></u>		
Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDI
BTEX (mg/Kg)									****	
Benzene		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Toluene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Ethylbenzene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
M,P.O-Xylene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Total BIEX		<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Surrogate $(mg/Kg)$		Decult	Dilution	Spike	%	% Rec.	Amaluat	Prep	QC Datab #	
TET		5 3 2	50	Amount	107	$\frac{1}{72} = 128$	RC	PR00221		
4-BFB		5.35	50	0.1	107	72 - 128	RC	PB00221	QC00293	
Ion Chromatography (IC) (mg/Kg)										
CL		31,000	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00321	0.:
TPH DRO (mg/Kg) DRO		<50	1	Mod. 8015B	1/10/00	1/11/00	МА	PB00231	QC00303	51
TPH GRO (mg/Kg) GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.
Sample Number:138416Description:N-2, 20-21'				Analytical	Date	Date		Pren	00	
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RD
Ion Chromatography (IC) (mg/Kg) CL		12,000	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.

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			Tex	aco Sout	th Eunice Ga	is Plant				Eunice	Plant
Sample Number: Description:	138417 N-2, 30-31'	· · ·			Analutical	Data	Data		Duon	00	
Param		Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography ( CL	IC) (mg/Kg)		7100	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number: Description:	138418 N-2, 40-41'						_		-		
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
BTEX (mg/Kg)	<u>.</u>							<u> </u>			
Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Total BTEX			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
					Spike	%	% Rec		Pren	00	
Surrogate (mg/Kg)			Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #	
TFT			4.88	50	0.1	98	72 - 128	RC	PB00221	QC00293	
4-BFB			4.91	50	0.1	98	72 - 128	RC	PB00221	QC00293	
Ion Chromatography ( CL	(IC) (mg/Kg)		2800	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00321	0.5
TPH DRO (mg/Kg) DRO			<50	1	Mod. 8015B	1/10/00	1/11/00	MA	PB00231	QC00303	50
TPH GRO (mg/Kg) GRO			<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: Description:	138419 N-2, 46-47'								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		1700	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number:	138420 N.3.3.4'										
Param	N-3, 3-4	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
BTEX (mg/Kg)		8				1					
Benzene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Ethylbenzene			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
M,P,O-Xylene			<0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.00
Total BTEX			< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
					Spike	%	% Rec.		Prep	QC	
Surrogate (mg/Kg)			Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #	
TFT			5.58	50	0.1	112	72 - 128	RC	PB00221	QC00293	
4-BFB			5.48	50	0.1	110	72 - 128	RC	PB00221	QC00293	
Ion Chromatography CL	(IC) (mg/Kg)		5000	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00321	0.:

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786		Tex	aco Sout	h Eunice Ga	is Plant				Eunice	Plant
TPH DRO (mg/Kg) DRO		<50	1	Mod. 8015B	1/10/00	1/11/00	MA	PB00231	QC00303	50
TPH GRO (mg/Kg) GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: 138421 Description: N-3, 10-11'				A	Dette	Dete			00	
Param	Flag I	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL		9200	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00446	0.5
Sample Number: 138422 Description: N-3, 20-21'				Analytical	Date	Date		Prep	QC	
Param	Flag l	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL		9300	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5
Sample Number:138423Description:N-3, 30-31'	-			Analytical	Data	Data		Duon	00	
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
Ion Chromatography (IC) (mg/Kg) CL	· · ·	3100	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5
Sample Number: 138424 Description: N-3, 40-41'		<u> </u>								
Param	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #-	QC Batch #	RDL
BTEX (mg/Kg)					•		•			
Benzene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene		< 0.05	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene Total BTEX		<0.05	50 50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
		-0.05	20	Spiles	0/	96 Baa	ne	Dran	00	01001
Surrogate (mg/Kg)		Result	Dilution	Amount	70 Rec.	<sup>7</sup> Kec. Limit	Analyst	Batch #	Batch #	
TFT		5.24	50	0.1	105	72 - 128	RC	PB00221	QC00293	
4-BFB		5.28	50	0.1	106	72 - 128	RC	PB00221	QC00293	
Ion Chromatography (IC) (mg/Kg) CL		1500	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00321	0.5
TPH DRO (mg/Kg) DRO		<50	1	Mod. 8015B	1/10/00	1/11/00	МА	PB00231	QC00303	5(
TPH GRO (mg/Kg) GRO		<5.00	50	8015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.

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Report Date: 1/21 786	/00		Ord Te:	ler ID Nu kaco Sou	mber: A00 th Eunice Ga	010811 as Plant	<b></b>	<b></b>	Page Ni	umber: 12 Eunice	of 23 Plant
Sample Number: Description:	138425 N-3, 46-47'				Amelutical	Data			D		
Param		Flag	Result	Dilution	Method	Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography ( CL	(IC) (mg/Kg)		2300	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5
Sample Number:	138426										
Param	11-4, 5-4	Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
BTEX (mg/Kg)											
Benzene			0.23	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Toluene			0.538	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Ethylbenzene			1.1	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
M,P,O-Xylene			2.31	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
Total BTEX			4.18	50	S 8021B	1/10/00	1/10/00	RC	PB00221	QC00293	0.001
					Snike	%	% Rec		Pren	00	
Surrogate (mg/Kg)			Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #	
TFT			5.28	50	0.1	106	72 - 128	RC	PB00221	OC00293	
4-BFB			5.59	50	0.1	112	72 - 128	RC	PB00221	QC00293	
Ion Chromotooren	(IC) $(ma/Ka)$										
CL	(IC) (IIIg/Kg)		7100	1	E 300.0	1/10/00	1/11/00	JS	PB00248	QC00322	0.5
TPH DRO (mg/Kg) DRO			<50	1	Mod. 8015B	1/10/00	1/11/00	MA	PB00231	QC00303	50
TPH GRO (mg/Kg) GRO			50.6	50	<b>8</b> 015B	1/10/00	1/10/00	RC	PB00226	QC00294	0.1
Sample Number: Description:	138427 N-4, 10-11'								~	~~~	
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		13,000	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5
Sample Number:	138428										
Description:	N-4, 20-21'										
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		12,000	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5
Sample Number: Description:	138429 N-4, 30-31'		<u></u>								
Param		Flag	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Ion Chromatography CL	(IC) (mg/Kg)		8400	1	E 300.0	1/17/00	1/19/00	JS	PB00338	QC00447	0.5

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786		Te	kaco Sou	th Eunice Ga	as Plant				Eunice	Plant
Sample Number: 138430								······································		
Description: N-4, 40-41'										
P	-	<b>D</b> 1.	<b>D</b> 11	Analytical	Date	Date		Prep	QC	
Param	Flag	Result	Dilution	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	RDL
BTEX (mg/Kg)										
MTBE		<0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
Benzene		< 0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
Toluene		< 0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
Ethylbenzene		< 0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
M,P,O-Xylene		<0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
Total BTEX		<0.05	50	S 8021B	1/13/00	1/13/00	RC	PB00271	QC00355	0.001
				Spike	%	% Rec.		Prep	QC	
Surrogate (mg/Kg)		Result	Dilution	Amount	Rec.	Limit	Analyst	Batch #	Batch #	
TFT		5.06	50	0.1	101	72 - 128	RC	PB00271	QC00355	
4-BFB		4.97	50	0.1	99	72 - 128	RC	PB00271	QC00355	
Ion Chromatography (IC) (mg/Kg)										
CL		7400	1	E 300.0	1/10/00	1/10/00	JS	PB00247	QC00321	0.5
TPH DRO (mg/Kg)										
DRO		<50	1	Mod. 8015B	1/10/00	1/11/00	MA	PB00231	QC00303	50

8015B

<5.00

5

RC

1/13/00 1/13/00

PB00272 QC00356

0.1

TPH GRO (mg/Kg) GRO

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Order ID Number: A00010811 Texaco South Eunice Gas Plant

### Quality Control Report Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Benzene (mg/Kg)		<0.05	0.05	1/10/00	PB00221	0000293
Toluene (mg/Kg)		< 0.05	0.05	1/10/00	PB00221	0C00293
Ethylbenzene (mg/Kg)		< 0.05	0.05	1/10/00	PB00221	QC00293
M,P,O-Xylene (mg/Kg)		< 0.05	0.05	1/10/00	PB00221	OC00293
Total BTEX (mg/Kg)		< 0.05	0.05	1/10/00	PB00221	OC00293
			Spike	%	% Rec.	QC
Surrogate		Result	Amount	Rec.	Limit	Batch #
TFT (mg/Kg)		5.37	0.1	107	72 - 128	QC00293
4-BFB (mg/Kg)		5.13	0.1	103	72 - 128	QC00293
MTBE (mg/Kg)		<0.05	0.05	1/13/00	PB00271	QC00355
Benzene (mg/Kg)		< 0.05	0.05	1/13/00	PB00271	QC00355
Toluene (mg/Kg)		< 0.05	0.05	1/13/00	PB00271	QC00355
Ethylbenzene (mg/Kg)		< 0.05	0.05	1/13/00	PB00271	QC00355
M,P,O-Xylene (mg/Kg)		< 0.05	0.05	1/13/00	PB00271	QC00355
Total BTEX (mg/Kg)		< 0.05	0.05	1/13/00	PB00271	QC00355
			Spike	%	% Rec.	QC
Surrogate		Result	Amount	Rec.	Limit	Batch #
TFT (mg/Kg)		5.28	0.1	106	72 - 128	QC00355
4-BFB (mg/Kg)		5.1	0.1	102	/2 - 128	QC00355
	······································	Blank	Reporting	Date	Prep	QC
Param	Flag	Result	Limit	Analyzed	Batch #	Batch #
CL (mg/Kg)		<0.5	0.5	1/10/00	PB00247	QC00320
CL (mg/Kg)		<0.5	0.5	1/10/00	PB00247	QC00321
CL (mg/Kg)		29.38	0.5	1/11/00	PB00248	QC00322
CL (mg/Kg)		9.46	0.5	1/19/00	PB00338	QC00445
CL (mg/Kg)		9.46	0.5	1/19/00	PB00338	QC00446
CL (mg/Kg)		9.47	0.5	1/19/00	PB00338	QC00447
Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
DRO (mg/Kg)		<50	50	1/10/00	PB00228	QC00298
DRO (mg/Kg)		<50	50	1/11/00	PB00231	QC00303
DRO (mg/Kg)		<50	50	1/13/00	PB00228	QC00351
Daram	Flac	Blank	Reporting	Date Analyzed	Prep Batch #	QC Batch #
	Tag	1.05uit		1/10/00		
GRO (mg/Kg)		<5	U.I	1/10/00	PB00220	QC00294

Report Date: 1/21/00	Order ID Number	r: A0001081	1	Page Nu	mber: 15 of 23
786	Texaco South Eu	inice Gas Plar	.t		Eunice Plant
GRO (mg/Kg)	<5	0.1	1/13/00	PB00272	QC00356

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Order ID Number: A00010811 Texaco South Eunice Gas Plant

### Quality Control Report Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Benzene (mg/Kg)	< 0.05	50	0.1	5.25	105		80 - 120	0 - 20	QC00293
MS	Toluene (mg/Kg)	< 0.05	50	0.1	5.28	106		80 - 120	0 - 20	QC00293
MS	Ethylbenzene (mg/Kg)	< 0.05	50	0.1	5.31	106		80 - 120	0 - 20	QC00293
MS	M,P,O-Xylene (mg/Kg)	< 0.05	50	0.3	15.7	105		80 - 120	0 - 20	QC00293
Standard MS	Surrogate TFT (mg/Kg)	Result 4 93	Dil.	Spike Amount 0 1	Analyst RC	% Rec. 99		% Rec. Limit 72 - 128	Prep Batch # PB00221	QC Batch #
MS	4-BFB (mg/Kg)	5.43	50	0.1	RC	109		72 - 128	PB00221	QC00293
MSD	Benzene (mg/Kg)	<0.05	50	0.1	5.19	104	0	<b>80 -</b> 120	0 - 20	QC00293
MSD	Toluene (mg/Kg)	< 0.05	50	0.1	5.23	105	0	80 - 120	0 - 20	QC00293
MSD	Ethylbenzene (mg/Kg)	< 0.05	50	0.1	5.33	106	0	80 - 120	0 - 20	QC00293
MSD	M,P,O-Xylene (mg/Kg)	< 0.05	50	0.3	15.6	104	0	80 - 120	0 - 20	QC00293
Standard MSD	Surrogate TFT (mg/Kg)	Result	Dil. 50	Spike Amount	Analyst RC	% Rec. 106		% Rec. Limit 72 - 128	Prep Batch # PB00221	QC Batch #
MSD	4-BFB (mg/Kg)	5.73	50	0.1	RC	115		72 - 128	PB00221	QC00293

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO (mg/Kg)	<50	1	250	232	93		70 - 130	0 - 20	QC00298
MSD	DRO (mg/Kg)	<50	1	250	243	97	5	70 - 130	0 - 20	QC00298

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO (mg/Kg)	<50	1	250	209	84		70 - 130	0 - 20	QC00303
MSD	DRO (mg/Kg)	<50	1	250	192	77	8	70 - 130	0 - 20	QC00303

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/Kg)	89	1	125	207.02	94		80 - 120	0 - 20	QC00320
MSD	CL (mg/Kg)	89	1	125	206.77	94	0	80 - 120	0 - 20	QC00320
Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/Kg)	1500	1	625	2070.67	91		80 - 120	0 - 20	QC00321

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MSD	CL (mg/Kg)	1500	1	625	2069.93	91	0	80 - 120	0 - 20	QC0032
Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/Kg)	540	1	625	1132.57	95		80 - 120	0 - 20	QC0032
MSD	CL (mg/Kg)	540	1	625	1137.46	96	1	80 - 120	0 - 20	QC0032
Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	MTBE (mg/Kg)	< 0.05	50	0.1	0.695	70		80 - 120	0 - 20	QC0035
MS	Benzene (mg/Kg)	<0.05	50	0.1	0.757	76		80 - 120	0 - 20	QC0035
MS	Toluene (mg/Kg)	< 0.05	50	0.1	0.654	65		80 - 120	0 - 20	QC0035:
MS	Ethylbenzene (mg/Kg)	<0.05	50	0.1	0.615	62		80 - 120	0 - 20	QC0035
MS	M,P,O-Xylene (mg/Kg)	<0.05	50	0.3	1.7	113		80 - 120	0 - 20	QC0035
Standard MS	Surrogate TFT (mg/Kg)	Result 5.21	Dil. 50	Spike Amount 0.1	Analyst RC	% Rec. 104		% Rec. Limit 72 - 128	Prep Batch # PB00271	QC Batch # QC0035
MS	4-BFB (mg/Kg)	5.19	50	0.1	RC	104		72 - 128	PB00271	QC0035
MSD	MTBE (mg/Kg)	<0.05	50	0.1	0.944	94	1	80 - 120	0 - 20	QC0035:
MSĎ	Benzene (mg/Kg)	<0.05	50	0.1	1.03	103	1	80 - 120	0 - 20	QC0035
MSD	Toluene (mg/Kg)	<0.05	50	0.1	0.903	90	2	80 - 120	0 - 20	QC0035
MSD	Ethylbenzene (mg/Kg)	<0.05	50	0.1	0.858	86	2	80 - 120	0 - 20	QC0035
MSD	M,P,O-Xylene (mg/Kg)	<0.05	50	0.3	2.35	156	2	80 - 120	0 - 20	QC0035
o			5.1	Spike		%		% Rec.	Prep	QC
Standard	Surrogate	Kesult	50	Amount	Analyst	Rec.		Limit	Batch #	Batch #
MSD	4-BFB (mg/Kg)	5.26	50	0.1	RC	105		72 - 128	PB00271	QC0035
<b></b>		~ ·		Spike	Matrix					
Standard	Param	Result	Dil.	Added	Result	% Rec.	RPD	% Rec. Limit	Limit	Batch #
MS	CL (mg/Kg)	3400	1	1250	4564.02	93		80 - 120	0 - 20	QC0044
MSD	CL (mg/Kg)	3400	1	1250	4584.90	95	2	80 - 120	0 - 20	QC0044
Standard	Daram	Sample	 וית	Spike Amount	Matrix Spike	% Rec	רוסק	% Rec.	RPD Limit	QC Batch f
MS	$\int \frac{dum}{dm} \frac{dm}{dm} \frac$	1700	ווע. יו	1260	2050.20		ND		0 20	
MCD MCD	CL (mg/Kg)	1700	1	1250	2838.20	93		80 - 120	0 - 20	QC0044
MSD	CL (mg/Kg)	1700	1	1250	2848.53	92	1	<b>δ</b> υ - 120	0 - 20	QC0044
		Sample		Spike Amount	Matrix Spike	%		% Rec.	RPD	QC
Standard	Param	Result	Dil.	Added	Result	Rec.	RPD	Limit	Limit	Batch #
MS	CL (mg/Kg)	8400	1	2500	10459 95	82		80 - 120	0 - 20	OC0044

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MSD	CL (mg/Kg)	8400	1	2500	10689.87	92	11	80 - 120	0 - 20	QC00447

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Order ID Number: A00010811 Texaco South Eunice Gas Plant

## Quality Control Report Lab Control Spikes and Duplicate Spike

Param		Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec. I	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS MTBE (mg/K	.g)	< 0.05	50	0.1	5.03	100		80 - 120	0 - 20	QC00293
LCS Benzene (mg/	Kg)	< 0.05	50	0.1	4.12	82		80 - 120	0 - 20	QC00293
LCS Toluene (mg/	Kg)	< 0.05	50	0.1	4.06	81		80 - 120	0 - 20	QC00293
LCS Ethylbenzene	(mg/Kg)	<0.05	50	0.1	4.12	82		80 - 120	0 - 20	QC00293
LCS M,P,O-Xylene	(mg/Kg)	<0.05	50	0.3	12	80		80 - 120	0 - 20	QC00293
Standard Surrogate LCS TFT (mg/K LCS 4-BFB (mg	.g) y/Kg)		Dil. 50 50	Spike Amount 0.1 0.1	Result 3.95 3.98	% Rec. 80 80		% Rec. Limit 72 - 128 72 - 128		QC Batch # QC00293 QC00293
LCSD MTBE (mg/K	(g)	<0.05	50	0.1	4.79	96	5	80 - 120	0 - 20	QC00293
LCSD Benzene (mg	/Kg)	<0.05	50	0.1	4.23	85	3	80 - 120	0 - 20	QC00293
LCSD Toluene (mg/	Kg)	<0.05	50	0.1	4.2	84	3	80 - 120	0 - 20	QC00293
LCSD Ethylbenzene	(mg/Kg)	< 0.05	50	0.1	4.26	85	3	80 - 120	0 - 20	QC00293
LCSD M,P,O-Xylene	(mg/Kg)	< 0.05	50	0.3	12.4	83	3	80 - 120	0 - 20	QC00293
Standard Surrogate LCSD TFT (mg/k LCSD 4-BFB (mg	(g) 2/Kg)		Dil. 50 50	Spike Amount 0.1 0.1	Result 4.36 4.4	% Rec. 87 88		% Rec. Limit 72 - 128 72 - 128		QC Batch # QC00293 QC00293

		Blank		Spike Amount	Matrix Spike	%		% Rec	RPD	00
	Param	Result	Dil.	Added	Result	Rec. I	RPD	Limit	Limit	Batch #
LCS	MTBE (mg/Kg)	< 0.05	50	0.1	5.06	101		80 - 120	0 - 20	QC00355
LCS	Benzene (mg/Kg)	< 0.05	50	0.1	4.9	98		80 - 120	.0 - 20	QC00355
LCS	Toluene (mg/Kg)	<0.05	50	0.1	4.86	97		80 - 120	<b>0 -</b> 20	QC00355
LCS	Ethylbenzene (mg/Kg)	< 0.05	50	0.1	4.8	96		80 - 120	0 - 20	QC00355
LCS	M,P,O-Xylene (mg/Kg)	< 0.05	50	0.3	14.1	94		80 - 120	0 - 20	QC00355
Standa LCS LCS	rd Surrogate TFT (mg/Kg) 4-BFB (mg/Kg)		Dil. 50 50	Spike Amount 0.1 0.1	Result 5.1 5.21	% Rec. 102 104		% Rec. Limit 72 - 128 72 - 128		QC Batch # QC00355 QC00355
LCSD	MTBE (mg/Kg)	<0.05	50	0.1	5.1	102	1	80 - 120	0 - 20	QC00355
LCSD	Benzene (mg/Kg)	< 0.05	50	0.1	4.97	99	1	80 - 120	0 - 20	QC00355
LCSD	Toluene (mg/Kg)	<0.05	50	0.1	4.94	99	2	80 - 120	0 - 20	QC00355
LCSD	Ethylbenzene (mg/Kg)	< 0.05	50	0.1	4.88	98	2	80 - 120	0 - 20	QC00355
LCSD	M,P,O-Xylene (mg/Kg)	< 0.05	50	0.3	14.4	96	2	80 - 120	0 - 20	QC00355
Standa LCSD LCSD	rd Surrogate TFT (mg/Kg) 4-BFB (mg/Kg)		Dil. 50 50	Spike Amount 0.1 0.1	Result 5.09 5.16	% Rec. 102 103		% Rec. Limit 72 - 128 72 - 128		QC Batch # QC00355 QC00355

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	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO (mg/Kg)	<50	1	250	221	88		70 - 130	0 - 20	QC0029
LCSD	DRO (mg/Kg)	<50	1	250	188	75	16	70 - 130	0 - 20	QC0029
	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO (mg/Kg)	<50	1	250	179	72		70 - 130	0 - 20	QC0030
LCSD	DRO (mg/Kg)	<50	1	250	181	72	1	70 - 130	0 - 20	QC00303
<u></u>	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO (mg/Kg)	<50	1	250	176	70		70 - 130	0 - 20	QC0035
lćsd	DRO (mg/Kg)	<50	1	250	133	53	28	70 - 130	0 - 20	QC0035
	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	GRO (mg/Kg)	<5	1	1	0.907	91		80 - 120	0 - 20	QC00294
LCSD	GRO (mg/Kg)	<5	1	1	0.919	92	1	80 - 120	0 - 20	QC0029
	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	GRO (mg/Kg)	<5	50	1	< 5	93		80 - 120	0 - 20	QC0035
LCSD	GRO (mg/Kg)	<5	50	1	< 5	102	9	80 - 120	0 - 20	QC0035

Report Date: 1/21/00 786 Order ID Number: A00010811 Texaco South Eunice Gas Plant Page Number: 21 of 23 Eunice Plant

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## Quality Control Report Continuing Calibration Verification Standard

Stan	dard	Param	Flag	CCVs TRUE Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery	Date Analyzed	QC Batch #
		Benzene (mg/Kg)	1 lag	0.1	0.092	92	80 - 120	1/10/00	000293
ICV		Toluene (mg/Kg)		0.1	0.089	89	80 - 120	1/10/00	QC00273
ICV		Ethylbenzene (mg/Kg)		0.1	0.096	96	80 - 120	1/10/00	QC00293
ICV		M,P,O-Xylene (mg/Kg)		0.3	0.27	90	80 - 120	1/10/00	QC00293
CCV	/ (1	Benzene (mg/Kg)		0.1	0.098	98	<b>80 -</b> 120	1/10/00	QC00293
CCV	/ (1	Toluene (mg/Kg)		0.1	0.094	94	80 - 120	1/10/00	QC00293
CCV	/ (1	Ethylbenzene (mg/Kg)		0.1	0.094	94	<b>80 -</b> 120	1/10/00	QC00293
CCV	/ (1	M,P,O-Xylene (mg/Kg)		0.3	0.298	99	80 - 120	1/10/00	QC00293
CCV	/ (2	Benzene (mg/Kg)		0.1	0.093	93	<b>80 -</b> 120	1/10/00	QC00293
CCV	/ (2	Toluene (mg/Kg)		0.1	0.09	90	<b>80 -</b> 120	1/10/00	QC00293
CCV	/ (2	Ethylbenzene (mg/Kg)		0.1	0.09	90	80 - 120	1/10/00	QC00293
CCV	/ (2	M,P,O-Xylene (mg/Kg)		0.3	0.268	89	<b>80 -</b> 120	1/10/00	QC00293
Stan	dard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV		MTBE (mg/Kg)		0.1	0.097	101	80 - 120	1/13/00	QC00355
ICV		Benzene (mg/Kg)		0.1	0.096	95	<b>80 -</b> 120	1/13/00	QC00355
ICV		Toluene (mg/Kg)		0.1	0.096	93	<b>80 -</b> 120	1/13/00	QC00355
ICV		Ethylbenzene (mg/Kg)		0.1	0.094	94	80 - 120	1/13/00	QC00355
ICV		M,P,O-Xylene (mg/Kg)		0.3	0.276	89	<b>80 -</b> 120	1/13/00	QC00355
CCV	/ (1	MTBE (mg/Kg)		0.1	0.104	104	80 - 120	1/13/00	QC00355
CCV	/ (1	Benzene (mg/Kg)		0.1	0.098	98	80 - 120	1/13/00	QC00355
CCV	/ (1	Toluene (mg/Kg)		0.1	0.098	98	<b>80 -</b> 120	1/13/00	QC00355
CCV	V (1	Ethylbenzene (mg/Kg)		0.1	0.097	97	80 - 120	1/13/00	QC00355
CCV	<b>v</b> (1	M,P,O-Xylene (mg/Kg)		0.3	0.286	95	80 - 120	1/13/00	QC00355
CCV	V (2	MTBE (mg/Kg)		0.1	0.103	103	80 - 120	1/13/00	QC00355
CCV	V (2	Benzene (mg/Kg)		0.1	0.102	102	80 - 120	1/13/00	QC00355
CCV	V (2	Toluene (mg/Kg)		0.1	0.101	101	80 - 120	1/13/00	QC00355
CCV	V (2	Ethylbenzene (mg/Kg)		0.1	0.099	99	80 - 120	1/13/00	QC00355
CCV	V (2	M,P,O-Xylene (mg/Kg)		0.3	0.294	98	<b>80 -</b> 120	1/13/00	QC00355
Star	ndard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	/	CL (mg/Kg)		12.5	11.54	92	80 - 120	1/10/00	QC00320
CC	V (1	CL (mg/Kg)		12.5	11.61	93	80 - 120	1/10/00	QC00320

Report Date: 1/21/00 786 Order ID Number: A00010811 Texaco South Eunice Gas Plant

### **Quality Control Report Continuing Calibration Verification Standard**

			CCVs	CCVs	CCVs	Percent	Date	OC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	40 Baton #
ICV	CL (mg/L)	<u>.</u>	12.5	11.61	93	80 - 120	1/10/00	QC00321
CCV (1	CL (mg/L)		12.5	11.68	93	<b>80 -</b> 120	1/10/00	QC00321
			CCVs	CCVs	CCVs	Percent	<b>.</b> .	000.1
0/ 1 1	D		TRUE	Found	Percent	Recovery	Date Analyzed	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery			π
ICν	CL (mg/L)		12.5	11.74	94	80 - 120	1/11/00	QC00322
CCV (1	CL (mg/L)		12.5	11.66	93	80 - 120	1/11/00	QC00322
			CCVs	CCVs	CCVs	Percent		
<b>6</b> / 1 1			TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzeu	π
ICV	CL (mg/L)		12.5	11.53	92	<b>80 -</b> 120	1/19/00	QC00445
CCV (1	CL (mg/L)		12.5	11.74	94	80 - 120	1/19/00	QC00445
			CCVs	CCVs	CCVs	Percent		
			TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	#
ICV	CL (mg/L)		12.5	11.74	94	80 - 120	1/19/00	QC00446
CCV (1	CL (mg/L)		12.5	11.71	94	80 - 120	1/19/00	QC00446
	Handa an an an 1997 anns an Anns an Anns an Anns an Anns anns a	i i i i i i i i i i i i i i i i i i i	CCVs	CCVs	CCVs	Percent		
			TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	# 
ICV	CL (mg/L)		12.5	11.71	94	80 - 120	1/19/00	QC00447
CCV (1	CL (mg/L)		12.5	11.81	94	<b>80 -</b> 120	1/19/00	QC00447
			CCVs	CCVs	CCVs	Percent		
			TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	#
ICV	DRO (mg/Kg)		250	218	87	70 - 130	1/10/00	QC00298
CCV (1	DRO (mg/Kg)		250	246	98	70 - 130	1/10/00	QC00298
CCV (2	DRO (mg/Kg)		250	248	99	70 - 130	1/10/00	QC00298
4844-00-00-00-00-00-00-00-00-00-00-00-00-0	***************************************		CCVs	CCVs	CCVs	Percent		
_	_		TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzeu	#
ICV	DRO (mg/Kg)		250	292	117	70 - 130	1/11/00	QC00303
CCV (1	DRO (mg/Kg)		250	210	84	70 - 130	1/11/00	QC00303
CCV (2	DRO (mg/Kg)		250	215	86	<b>70 - 1</b> 30	1/11/00	QC00303

Report Date:1/21/00Order ID Number:A00010811Page Number:23 of 23786Texaco South Eunice Gas PlantEunice Plant

## Quality Control Report Continuing Calibration Verification Standard

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	#
ICV	DRO (mg/Kg)		250	245	98	<b>70 -</b> 130	1/13/00	QC00351
CCV (1	DRO (mg/Kg)		250	244	98	<b>70 -</b> 130	1/13/00	QC00351
			CCVs	CCVs	CCVs	Percent	D-4-	
			TRUE	Found	Percent	Recovery	Date	
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	Ħ
ICV	GRO (mg/Kg)		1	1.17	117	<b>80 -</b> 120	1/10/00	QC00294
CCV (1	GRO (mg/Kg)		1	0.971	97	<b>80 -</b> 120	1/10/00	QC00294
CCV (2	GRO (mg/Kg)		1	1.04	104	<b>80 -</b> 120	1/10/00	QC00294
			CCVs	CCVs	CCVs	Percent		
			TRUE	Found	Percent	Recovery	Date	QC Batch
Standard	Param	Flag	Conc.	Conc.	Recovery	Limits	Analyzed	#
ICV	GRO (mg/Kg)		1	1.05	105	<b>80 -</b> 120	1/13/00	QC00356
CCV (1	GRO (mg/Kg)		1	1	100	<b>80 -</b> 120	1/13/00	QC00356

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	Analvaia F		HIGHL		(815) 682-4556	CLIENT NAME: LEXO	PROJECT NO .: 786	LAB I.D. DATE TIM	138429 142000 10:3	30 11 10:4					REINQUISHED BY: (Supplum	THE ALL CASE	RELINQUISHED BY: (Signatur	ADDRESS ABORATORY: CIA	CONTACT: Hell	sample condition when re	Please Fill out all coples

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APPENDIX B

# **APPENDIX B**

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**Boring Logs** 

# Log: N-1

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: North Pond - Souheast Corner

Page: 1 of 1

SUBSURFACE PROFILE				SAMPLE					
Depth	Symbol	Description	Elev.	Number	Type	Recovery	Volatile Organic Concentration ppm 200 400	Well Data	Lab Analysis
0		Ground Surface	0			1			
0- 5- 10- 10- 15- 20- 25- 30- 35- 40- 45- 50-		Ground Surface <i>Fill</i> <i>Sand</i> 7.5YR 7/3, pink, very fine grained quartz sand, interbedded with caliche, moderately saft, dry 5YR 6/3, reddish yellow below 10 feet End of Borehole							
Drill I Drill I Hole	Drill Method: Rotary (Air)Highlander Environmental 1910 N. Big SpringDatum: Ground SurfaceDrill Date: 6-Jan-2000Midland, Texas 79705 (915) 682-4559Checked by: MJLHole Size: 6"								

### Log: N-2

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: North Pond - Souheast Corner

Page: 1 of 1



Log: N-3

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: North Pond - Southwest Corner

Page: 1 of 1



Log: N-4

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: North Pond - Southwest Corner

Page: 1 of 1



Log: S-1

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: South Pond - Southeast Corner

Page: 1 of 1

SUBSURFACE PROFILE			SAMPLE						
Depth	Symbol	Description	Elev.	Number	Type	Recovery	Volatile Organic Concentration 200 400	Well Data	Lab Analysis
		Ground Surface	0			<u> </u>			
5- - - - - - - - - - - - - - - - - - -		Fill Note: HDPE Liner at 2.5 Feet Caliche 10YR7/3, very pale brown, moderately hard, dry, sandy	-2.5			3	2		
			-14						
15- 20- 25- 30-		Sand 5YR 6/4, reddish yellow, very fine grained quartz sand, dry, soft Mosit at 35'	-35			1	9.2		
		End of Borehole		1					
40-								-	
Drill   Drill   Hole	Drill Method: Rotary (Air)Highlander Environmental 1910 N. Big SpringDatum: Ground Surface 1910 N. Big SpringDrill Date: 6-Jan-2000Midland, Texas 79705 (915) 682-4559Checked by: MJL MJL (915) 682-4559								

# Log: S-2

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: South Pond - Northeast Corner

Page: 1 of 1

Geologist: MJL

SUBSURFACE PROFILE			SAMPLE						
Depth	Symbol	Description	Elev.	Number	Type	Recovery	Volatile Organic Concentration 200 400	Well Data	Lab Analysis
0-		Ground Surface	0						
) -		Note: HDPE Liner at 2.0'	-2			]			
		Caliche 10YR7/3, very pale brown, moderately soft, dry, sandy	· · ·				43.6		
10			-11				31.9		
- - 15-		Sand 5YR 6/4 to 4/6, reddish yellow to yellowish red, very fine grained quartz sand, dry, loose							
20-							31.3 •		
25		Mosit at 35'							
30-			-35				13		
40-		End of Borehole							
Drill Method: Rotary (Air)Highlander Environmental 1910 N. Big Spring Midland, Texas 79705 (915) 682-4559Datum: Ground Surface Checked by: MJLDrill Date: 6-Jan-2000Midland, Texas 79705 (915) 682-4559Checked by: MJL									

Log: S-3

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: South Pond - Northwest Corner

Page: 1 of 1

Geologist: MJL

SAMPLE SUBSURFACE PROFILE Volatile Organic Concentration Lab Analysis Well Data Recovery Description Number Symbol Depth Type 200 <sup>ppm</sup> 400 Elev. Ground Surface 0 0. Fill -2 Note: HDPE Liner at 2.0' 20 Caliche 10YR7/3, very pale brown, moderately soft, dry, sandy -10 25 10 Sand 5YR 6/4, reddish yellow, very fine grained quartz sand, dry, loose 15 21.5 20 25 Mosit at 30' 26 30 -35 35 End of Borehole 40-Highlander Environmental 1910 N. Big Spring Midland, Texas 79705 (915) 682-4559 Drill Method: Rotary (Air) Datum: Ground Surface Checked by: MJL Drill Date: 6-Jan-2000 Hole Size: 6"

Log: S-4

Project: Eunice #1 (South) Gas Plant

Client: Texaco Exploration and Production Inc.

Location: South Pond - Souhwest Corner

Page: 1 of 1

Geologist: MJL

SAMPLE SUBSURFACE PROFILE Volatile Organic Concentration Lab Analysis Well Data Recovery Description Number Symbol 200 ppm Depth Elev. Type 400 0 Ground Surface 0 Fill Note: HDPE Liner at 3.0' 20 -3 Caliche 10YR7/3, very pale brown, moderately hard, dry, sandy 25 -15 15 Sand 5YR 6/4, reddish yellow, very fine grained quartz sand, dry, loose 21.5 20. 25 26 30 -35 27 35 End of Borehole 40-Highlander Environmental Drill Method: Rotary (Air) Datum: Ground Surface 1910 N. Big Spring Midland, Texas 79705 (915) 682-4559 Checked by: MJL Drill Date: 6-Jan-2000 Hole Size: 6"



# **APPENDIX C**

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**OVM** Calibration Log



Date: 2-14-00 4:15pm. Spaw Cas- 130butylence (75ppm) October 18, 1999 16:20 ho. Spon tos: cloobuly love (7500) Keeding 75.6 ppm Reading - 74ppm By: Mark Ravon by - IKE Tware 2 GL January 4, rag 2000 09:30 hrs 4-10.00 G9:28 Span Gas: Isoburty lene (75 Span Ea: esc bulylone (75004) Reach: 75.4 ppr Reading 76.9 ppm Ry: Mark Row-By Mark Raver -----January 7,2000 9:00 hrs 4-13-00 17:03 Span tras Iso buty lene (75ppm) Isobutylone (75pi Span Gas : Riady: 75.6 ppr Reach 76-2ppy By. Mark hars -Mark Rapon By: 15:40 hm Normany 31, 2000 5/3/00 Span thes: Isobytylene (75ppn) 11:32 Reading : 74.3 ppm Spon Gas; Isobutylene (75 p By: Mark Raron Beady: 76. TPHM Mark Kars + Mike As: 7/11/00 §: 25 Span for: Iso hutylene (75ppH) Readj 76.6 ppm Mark harm Bry.



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NATURAL GAS PLANT	ASTE WATER DI	0		EN RER
S A S DIVISION	DETAIL SPOSAL	IL CONSERVATIO	APR 2 1 19	
B-0010-81-5003	EUNICE #1 GAS PLANT	JN DIV.	681	
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	REFERENCI	E DRAWINGS		
DRAWING NO.	TITLE	DRAWING NO.	TITLE	THIS DRAWING HAS NOT BEE! PROPERTY OF
D-0010-72-5002	Partial Plot Plan-Waste Water Disposal			TEXAC
	Pond Area		ander <sub>e serie</sub> r det e date de la construction e a de la deserva de la deserva de la de la construction <sub>de la</sub> construction	AND IS LENT TO THE BORROWER FI
B-0010-81-5003	Sub-Grade Vent Detail			PROMISES AND AGREES TO RETUU THAT IT SHALL NOT BE REPRODUC
B-0010-81-5004	Sump Detail			DISPOSED OF DIRECTLY OR IN PURPOSE OTHER THAN THAT FURNISHED
B-0010-81-5005	Anchor Trench Detail			—————

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				HEATER NO.3	4'-6"E. 185'-0"S. S. 190'-0'' OIL HEATER 3- 41	INC/N.#1			· · · · · · · · · · · · · · · · · · ·
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# Received

FEB 1 2 1991 OIL CONSERVATION DIV. SANTA FE

SKELLY OIL COMPANY MANUFACTURING DEPT. TULSA OKLA. EUNICE GASOLINE PLANT No.2 ENVIRONMENTAL PLOT PLAN LOCATION Approx. 40 Acres In The SV2, SEVA, NEVA & NEVA, SEVA of Section 28, T-21-S, R-37-E. Lea Co. New Mexico DATE SEPT. 5, 1958 DRAWN Mc Elhaney & Whitt CHECKED Even L. McEthaney 8/62 SCALE 1"=20'-0" APPROVED R.E. mitchellegr. ) //G.<sup>#</sup>R-0020- 72-5001 APPROVED

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Highlander Environmental Corp.

Midland, Texas

December 17, 1998

Mr. William C. Olson, Hydrogeologist State of New Mexico Oil Conservation Division 2040 South Pacheco Santa Fe, New Mexico 87505

RECEN

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Environmontel Burdau Oil Concervation Division

### Re: Subsurface Environmental Assessment - Groundwater Plume Delineation, Texaco Exploration and Production, Inc., Former Eunice # 1 (South) Gas Plant, Lea County, New Mexico

Dear Mr. Olson:

Highlander Environmental Corp. (Highlander) has been retained by Texaco Exploration and Production, Inc. (Texaco) to delineate the extent of a groundwater contaminant plume at its Eunice # 1 (South) Gas Plant (Site), located approximately 4.5 miles south of Eunice, New Mexico. The Site is situated in the northwest quarter (NW/4) of the southwest quarter (SW/4), Section 27, Township 22 South, Range 37 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

### **Background**

During the period July 1996 through June 1997, Highlander was retained by Texaco to conduct subsurface environmental investigations at the Site that were required by the New Mexico Oil Conservation Division (NMOCD), in conjunction with renewal of the Site's Groundwater Discharge Plan. The investigations consisted of collection and analysis of soil samples from hand auger and rotary-drilled borings, installation of monitoring wells, collection and analysis of groundwater samples, phase-separated hydrocarbon (free product) assessment, hydraulic conductivity (slug) tests and pumping tests. The results of these investigations have been documented in reports titled, "Subsurface Environmental Assessment, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, New Mexico, July 1997".

During November 1997, Highlander prepared the document titled, "Subsurface Abatement Work Plan", which was prepared on behalf of Texaco and submitted to the NMOCD. The Subsurface Abatement Work Plan was approved by the NMOCD on March 4, 1998, under the condition that Texaco submit a work plan to complete the Mr. William C. Olson December 17, 1998 Page 2

definition of the extent of groundwater contamination at the Site. Specifically, the extent of benzene, toluene, ethylbenzene, and xylene (BTEX) and barium in groundwater near the southwest corner of the Site, and the chloride and total dissolved solids (TDS) in groundwater in the vicinity of the northeast corner of the Site. The work plan was due to the NMOCD by May 1, 1998, however, due to pending change in operatorship of the Gas Plant, an extension was granted by the NMOCD. On October 4, 1998, Highlander submitted a work plan to the NMOCD, on behalf of Texaco, that included installation of six (6) additional groundwater monitoring wells and collection of groundwater samples for laboratory analysis.

#### **Groundwater Plume Delineation**

From November 20-27, 1998, Highlander personnel supervised installation of six (6) monitoring wells (MW-13 through MW-18). Wells MW-13 and MW-14 were drilled south of the Site to delineate *the southern* extent of BTEX in groundwater. Wells MW-15 and MW-16 were drilled east of the Site to determine the eastern most downgradient concentration of chloride in groundwater. Wells MW-17 and MW-18 were drilled near the north boundary of the Site to determine the concentration of chloride upgradient and determine if there was a potential source for the chloride impact north of the Site. Figure 2 presents a Site drawing.

Scarborough Drilling, Inc. (Scarborough) drilled the wells using a truck-mounted water rotary drill rig. Samples of drill cuttings were collected every ten feet and at changes in lithology. The drill cuttings were visually examined for lithology and a borehole sample log was prepared for each boring. Appendix A presents the borehole sample logs. The drilling rig and all down-hole equipment (i.e., drill rods, bits, etc.) were thoroughly washed between boreholes using a high pressure hot water washer. The drill cuttings were placed on the ground adjacent to the borehole.

The wells were constructed of 4-inch diameter, screw threaded, schedule 40 PVC casing and 0.020 inch factory slotted screen. The well screen, approximately twenty (20) feet in length, was placed into the boring with approximately 5 feet of screen above groundwater and 15 feet below groundwater. The well screens were filter packed with graded (20-40) silica sand, which was placed in the annular space between the borehole wall and screen to a depth approximately two (2) feet above the screen. A seal consisting of bentonite pellets, approximately 2 feet thick was placed above the sand and hydrated. The remainder of the borehole annulus was filled to approximately 2 feet BGS with cement-bentonite grout. Each well was secured with a locking water-tight cap. The wells were secured with above-grade well covers, anchored in a concrete pad measuring approximately 3 x 3 feet. Table 1 presents a summary of monitor well completion details. Appendix B presents the monitor well completion records.

Mr. William C. Olson December 17, 1998 Page 3

Following installation, the wells were developed by Scarborough, using a three (3) inch diameter rig bailer. The bailer was thoroughly decontaminated between wells by washing with a high pressure washer. Groundwater displaced from the wells was contained in a portable tank, transferred to the Eunice #2 (North) Gas Plant and discharged into the wastewater and oil sump.

On December 3, 1998, Highlander personnel collected groundwater samples from the wells. The wells were purged prior to sampling by pumping with a stainless steel submersible pump. A minimum of three (3) casing volumes of groundwater was removed from each well and contained in a portable tank. The purged water was transferred to the Eunice #2 (North) Gas Plant and discharged to the wastewater and oil sump. The groundwater samples were collected using dedicated disposable polyethylene well bailers and line. The groundwater samples were carefully transferred to appropriately labeled and preserved sample containers, which were provided by the analytical laboratory (Trace Analysis, Inc., Lubbock, Texas). Groundwater samples from wells MW-13 and MW-14 were analyzed for BTEX and dissolved (filtered) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), chloride and TDS. Samples from wells MW-15 through MW-18 were analyzed for BTEX, chloride and TDS. Each well was checked for depth-to-groundwater and total depth before purging. Also, depth-to-groundwater and hydrocarbon product thickness measurements were obtained on all monitoring wells and water wells at the Site on December 7, 1998. Table 2 presents a summary of the depth-to-groundwater and hydrocarbon product thickness measurements. Table 3 presents a summary of the BTEX. Table 4 presents a summary of the metals, chloride, and TDS analysis. Appendix C presents the analytical laboratory reports, chain of custody control forms, and QA/QC documentation.

#### **Plume Delineation Results**

Depth-to-groundwater measurements collected from monitoring wells and water wells on December 7, 1998, were used to construct a groundwater potentiometric map (Figure 3). On December 7, 1998, the elevation of the groundwater surface ranged from approximately 3282.15 feet AMSL at monitor well MW-3 (up gradient) to 3278.95 feet AMSL at water well WW-4 (down gradient). Groundwater flow was generally from northwest to southeast at a gradient of approximately 0.001 feet per foot (ft/ft). The groundwater flow direction on December 7, 1998, was generally consistent with previous data presented on May 28, 1997 and the regional groundwater flow direction for the High Plains aquifer.

The only detectable concentration of benzene was reported in the groundwater from well MW-16, which reported 8 micrograms per liter (ug/L). The benzene concentration is below the New Mexico Water Quality Control Commission (WQCC) human health standard of 10 ug/L. These results conclude that the extent of the benzene

Mr. William C. Olson December 17, 1998 Page 4

impact has been defined. Figure 4 presents an isopleth map showing the distribution of benzene in groundwater at the Site. Toluene, ethylbenzene and xylene were below less than the test method detection limit in the groundwater samples from wells MW-13 through MW-18.

Groundwater samples from wells MW-13 and MW-14 were analyzed for dissolved metals. Barium, the only metal detected in the groundwater samples, was reported at 1.3 milligrams per liter (mg/L) in the sample from well MW-13. The barium concentration was slightly above the WQCC human health standard of 1.0 mg/L. However, the barium level reported in well WW-4 was less than the test method detection limit of 0.2 mg/L on August 22, 1996. These results conclude that the extent of dissolved metals in groundwater has been defined. Chloride levels ranged from 420 mg/L (MW-14) to 6,000 mg/L (MW-17), and TDS ranged from 1,100 mg/L (MW-13 and MW-14) to 11,000 mg/L (MW-17). The WOCC domestic water supply standards for chloride and TDS are 250 mg/L and 1,000 mg/L, respectively. Figure 5 presents an isopleth map showing the distribution of chloride in groundwater at the Site. Referring to Figure 5, chloride and TDS slightly exceeded the WQCC standards at wells MW-13 and MW-14. However, these levels are consistent with "background" levels of 430 mg/L (chloride) and 1.200 mg/L (TDS) reported in groundwater samples from well MW-3 (upgradient). These results conclude that the extent of chloride and TDS has been defined south of the Site. Chloride and TDS levels reported in groundwater samples from wells MW-15 through MW-18 exceed the WQCC domestic water supply standards. However, the distribution of these contaminants in groundwater indicates that a significant impact exists north (upgradient) of the Site and is migrating in groundwater onto the Site. The isopleth map for chloride indicates that the surface ponds located near the northeast corner of the Site are not the source for the chloride and TDS impact. Anadarko has operated high pressure saltwater injection wells north of the plant site and has had a history of saltwater leaks. In addition, Anadarko also had brine pits north and east of the plant. Both locations appear to have impacted the groundwater in the northeast corner of the Texaco plant site.

Based on the results of its investigations, Texaco feels that, it has delineated the extent of contaminants in groundwater from its Site, and, therefore, no further investigation is required. Please call if you have any questions.

Sincerely. Highlander Environmental Corp. Mark J. Larson

Senior Project Manager

Encl. cc:

Mr. Bob Foote, Texaco Exploration and Production, Inc. Mr.Wayne Price, OCD - Hobbs

TABLES

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# TABLES

Table 1:

Summary of Soil Boring, Monitor Well and Water Well Drilling and Completion Details Texaco Exploration and Production, Inc., Eunice #2 (South) Gas Plant Lea County, New Mexico

]	T	Т	T			<u> </u>	- <u></u> -	T	T	T	T	T	Т	T	T	-		T		Т	
Water Feet, TOC	:	:	1	:	:	:	:	ł	:	:	:	**53.63 (2.31)	+53.87 (2.50)	57.74	51.73	**52.62 (2.68)	50.95		49.01		49.70
Interval Feet, BGL				:		1	:			1	;	45.00 - 60.00	46.00 - 61.00	46.40 - 66.40	46.69 - 66.69	46.54 - 66.54	46.64 - 66.54		46.70 - 66.70		46.76 - 66.76
Diameter Inches	:		1	1	ŧ		1	:	Ĩ		8	2	2	4	4	4	4		4		4
Elev. Feet, MSL		1	1	t	1	l	L	t	· 1	ţ	-	3335.32	3335.50	3339.89	3333.50	3334.11	3332.6		3330.66		3330.91
Elevation Feet, MSL	3336.11	3336.4	1	1	1	:	3336.39	3335.34	3334.64	3337.09	3332.58	3335.52	3335.79	3337.87	3333.69	3331.83	3330.74		3328.71		3328.92
Feet, BGS	57.00	17.00	10.80	3.5	4.0	4.0	5.6	57	57	5.0	42	60	61	66.40	66.69	66.54	66.64		66.70		66.76
Drilled	8/20/96	8/21/96	8/6/96	6/6/97	6/6/97	6/6/97	8/6/96	8/21/96	7/26/96	8/22/96	8/20/96	8/19/96	8/20/96	5/5/97	5/6/97	5/5/97	5/8/97		5/7/98		8/8/97
Monitor Well No.	BH-3	BH-1	I-HA	AH-2	AH-3	AH-4	BH-1	BH-1	BH-1	Trench	BH-1	MW-1 (BH-1)	MW-2 (BH-2)	MW-3	MW-4	S-WM	9-MW		1-WM		MW-8
Drilling Area	let Turbine Skid	Engine Sump #30					Engine Sump #31	Oil & Water Sump	Slop Oil Sump	Emergency Flare Sump	H2S Flare Sump	Jet Turbine Skid	Jet Turbine Skid	Background	Background	Down Gradient of Process Area	Down Gradient of Surface	Impoundments	Down Gradient of Surface	Impoundments	Down Gradient of Facility

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1. BGS: Notes:

Denotes depth in feet below ground surface.

Denotes elevation in feet above mean sea level. 2. MSL:

Denotes depth in feet below top of casing. 3. TOC:

Denotes open hole completion.

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Depth-to-Groundwater corrected for phase separated hydrocarbons, assuming

assuming specific gravity of 0.75. Parenthisis denotes apparent product thickness.

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No data available.

6. <u>|</u>

Summary of Soil Boring, Monitor Well and Water Well Drilling and Completion Details (continued) Texaco Exploration and Production, Inc., Eunice #2 (South) Gas Plant Lea County, New Mexico Table 1 (Continued):

	Soil Boring/	Date	Drilled Depth	Ground	<ul> <li>Top of Casing</li> </ul>	Well	Well Screen		
rilling Area	Monitor Well No.	Drilled	Feet, BGS	Elevation Feet. MSI	A Elev. Feet. MSL	Diameter Inches	Interval Feet, BGL	Water Feets TOC 12/1/98	
de la construction.	o-mu	79/97	66.80	3332.64	3335.02	4	46.80 - 66.80	54,12	
of fet Turbine Skid	MW-10	5/12/97	66.40	3335.13	3334.88	4	46.40 - 66.40	53.16	
or of the second s	MW-11	5/13/97	66.79	3335.55	3335.16	4	46.79 - 66.79	53.32	
	MW-12	5/14/97	67.12	3334.44	3334.15	4	47.12 - 67.12	52.26	
of Facility	MW-13	10/20/88	68.00	3334.16	3336.15	4	48.00 - 68.00	56.84	
of Facility	MW-14	10/21/98	65.00	3330.50	3333.04	4	45.00 - 65.00	53.10	
of Facility	MW-15	10/26/98	68.00	3326.89	3328.98	4	45.99 - 65.35	48.07	
of Facility	MW-16	10/26/98	68.00	3328.1	3330.2	4	46.54 - 65.90	49.09	
of Facility	MW-17	10/27/98	68.00	3332.21	3334.32	4	47.15 - 66.50	52.84	
of Facility	MW-18	10/27/98	68.00	3333.85	3336.10	4	45.64 - 65.00	54.33	
ell (inactive)	WW-1	1	149.4	3331.53	3332.04	10		51.21	
ell (inactive)	WW-2		91.44	3330.86	3331.46	8	1	50.31	
di (inactive)	WW-3	:	80.30	3334.33	334.45	80	;	53.44	
di (inactive)	4-WW			3333.93	3335.40	9	91.00 - 111.00	56.45	
all (inactive)	ww-5	1	93.24	3332.62	3334.18	80	75.00 - 111.00	53.9	
ell (inactive)	9-MM	-	116.74	3329.69	3329.98	8.5	*100.00 - 148.00	50.64	
ell (inactive)	2-WW	1	60.83	3331.73	3332.5	6.25	147.00 - 167.00	51.45	
	RW-I	8/12/98	110.00	•	•	6	50.00 - 110.00	53.66	

Denotes depth in feet below ground surface.	Denotes elevation in feet above mean sea level.	Denotes depth in feet below top of casing.	Denotes open hole completion.	Depth-to-Groundwater corrected for phase separ-
1. BGS:	2. MSL:	3. TOC:	4. *:	5. **:

Notes:

rated hydrocarbons, assuming noin-m-man

assuming specific gravity of 0.75. Parenthisis denotes apparent product thickness.

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No data available. . 9. <del>. :</del> .

Table 1 (Continued):

Summary of Soil Boring, Monitor Well and Water Well Drilling and Completion Details Texaco Exploration and Production, Inc., Eunice #2 (South) Gas Plant Lea County, New Mexico

						_	 	 	 	
Depth-to-Ground Water Feet, TOC 12//98.	55.82	**56.51 (0.01)	54.87	53.98	53.57					
Well Screen Interval Feet, BGL	48.00 - 67.50	47.00 - 66.50	48.00 - 67.50	47.00 - 66.50	48.00 - 67.50					
Well Diameter Inches	4	4	4	4	4					
Top of Casing Elev. Feet, MSL	3337.91	3338.51	3336.88	3335.88	3335.58					
Ground Elevation Feet, MSL	3335.86	3335.54	334.75	3332.99	3335.72					
Drilled Depth Feet, BGS	68.00	67.00	68.00	67.00	68.00					-
Date Drilled	12/5/95	11/28/95	11/29/95	11/27/98	12/4/95					
Soil Boring/ Monitor Well No.	1-WMT	TMW-2	TMW-3	TMW-5	9-MWL					
Drilling Area	Vest of NNG	Vest of NNG	south of NNG	southeast of NNG	couthwest of NNG					

Denotes depth in feet below ground surface.	Denotes elevation in feet above mean sea level.	Denotes depth in feet below top of casing.
1. BGS:	2. MSL:	3. TOC:

Notes:

- Denotes depth in feet below top of casing.

  - Denotes open hole completion. ج. <del>ب</del> \* \* .
- Depth-to-Groundwater corrected for phase separated hydrocarbons, assuming
- assuming specific gravity of 0.75. Parenthisis denotes apparent product thickness. No data available.
  - 6. <u>1</u>.

Table 3:	Summary of	f Volatile, Semi-Volatile O	rganic, and TPH A	nalysis of Groundwater	Samples				
	Texaco Expl	loration and Production, I	nc., Eunice #1 (Sou	ith) Gas Plant					
	Lea County,	New Mexico							
Well	Sample	1,1-Dichloroethane	Benzene	Carbon disulfide	1,1,2,2 - Tetrachloroethane	Vinyl accetate	Toluene	Ethylbenzene no/1.	Xyle 19/
Number	Steel ate	ug/L	T/2n	ng/L	ug/L	Tr/An			
I-WM	8/26/96	<100	7,370	<100	<100	<100	6,020	867	1,5
MW-3	5/30/97	1>	29	Þ	1>	1>	22	11	Ĩ
MW-4	5/30/97	₽	47	Þ	1>	l>	-	4	V

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	Les County,	, New INLEXICO	ALL								
Well	Sample	1,1-Dichloroethane	Benzene	Carbon disulfide	1,1,2,2 - Tetrachloroethane	Vinyl accetate	Toluene	<b>Ethylbenzene</b>	Aylene		
Number	🔬 Date	ug/L	ug/L	ugL	ug/L	ug/L	ng/L	ugu	7/8n		
I-WM	8/26/96	<100	7,370	<100	<100	<100	6,020	867	1/2,1	0.034	-
MW-3	5/30/97	\7	29	1>	<	<1	22	11	8	100:0>	
MW-4	5/30/97	⊽	47	₽	1>	<1	1	4	⊽	<0.001	
MW-5	5/30/97	<50	1,700	<50	<50	<50	320	280	510	<0.01	_
MW-6	2/30/97		2		Þ	₽	1	<1	2	<0.001	
MW-7	2/30/97		2		⊽	4	2	1	1	<0.001	
NTU- 2	LONCIA		- 6	V	4	4	2	₽	₽	<0.001	
MUN 0	1010210		7 900	<60	0\$>	<50	800	600	610	0.002	
6-M M	LOIDUS	012	4 100	<10	<10	<10	280	280	359	0.023	
01-WW	1616716	100	30.000	<100	<100	<100	4.700	780	1,320	0.018	
	1616710	2001	13 300	<500	<500	600	24,000	5,200	10,400	0.013	
71-M M	1414710		1000			:	V	Þ	⊽	•	
61-WW	86/5/11		7				⊽	<b> </b> ⊽	⊽		
MW-14	11/3/98	:	7				1		1		
MW-15	11/3/98	:	8			;	7	7			
MW-16	11/3/98	1	<1	1	<b>;</b>	-	V	7	√ .	÷.	
MW-17	11/3/98	:	1>	1	1	1	1	⊽	⊽	-	
MW-18	11/3/98	:	₽	3	1	:	₽	7	⊽		
TMW-1	6/2/97	2	6	₽	<1	Þ	2	1	3	<0.002	
CTMAT	10/019	<10	2.700	<10	<10	<10	<10	810	1,290	<0.01	
TMW-3	19101		428	2	5	₽	3	1,100	154	<0.001	
TANV	10/07	-   ⊽	480	Ş	2	\$	\$	270	73	<0.01	
- MAL	10/01	<10	2 100	<10	<10	<10	<10	500	630	<0.01	
- M MT	VOIYUN	×10	105	<10	<10	<10	14	23	53	<0.01	
1-M M	L0/0/3	<10	021	<10	<10	<10	<10	18	24	<0.005	
- 1111	JUIJUIO		°: ₽		V	₽	4	1>	⊽	<0.001	
7-M M	L0/02/2	7 5	/ ⊽		<1	⊽	₽	⊽	⊽	<0.001	_
C MMM	YO/YUS	, I>	33	₽	₽	7	₽	₽	m	<0.001	
	6/30/07		11		₽	₽	₽	1	⊽	<0.001	
WTW-4	8/22/96		V	<b>↓</b>	⊽	1>	₽	V	1>	<0.010	
	4/1/98		<10	•		•	<10	<10	<10	-	
2-WW	6/30/97	⊽	18	<1	₽	₽	4	1	<1	<0.001	
	4/1/98		6		-		41	2	4	<0.001	
MW.6	6/30/97	Þ	\ ₽		4	Þ	4	<1	₽	<0.001	
	4/1/98		⊽		-	•	4	4	⊽		
7-WW	6/30/97		₽	<1	₽	Þ	4	57	22	<0.001	
	3/20/98		⊽			-	<1	43	11	•	
											•
Notes:	All analysis F	performed by Trace Analysi	is, Inc., Lubbock, Te	xas							
	1. ug/L:	Denotes volatile organic au	nalytic concentration	n in micrograms per liter							
	2. mg/L:	Denotes semi-volatile orga	anic and TPH concer ation below the analy	ntration in milligrams per vrical test method detection	uter an limit						
	V' '	Denotes analytic concentre No data available									
	r i F i	Totalizate Cample for MW	5 1								
		Dupiicate Saiipie ivi ivi	2								

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(continued) Summary of Volatile, Semi-Volatile Organic, and TPH Analysis of Groundwater Samples

Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant

Lea County, New Mexico

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Table 3:

30 √	⊽ ⊽		2 and 1	12 12		<ul> <li></li> <li><!--</th--></li></ul>
			2	⊽	⊽	
	⊽	<1 <1	⊽	⊽	∠	-

All analysis performed by Trace Analysis, Inc., Lubbock, Texas Notes:

Denotes volatile organic analytic concentration in micrograms per liter 1. ug/L:

Denotes semi-volatile organic and TPH concentration in milligrams per liter 2. mg/L:

Denotes analytic concentration below the analytical test method detection limit .; У

No data available . . . . . . .

Duplicate Sample for MW-3

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(Continued) Summary of Volatile, Semi-Volatile Organic, and TPH Analysis of Groundwater Samples Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant

Table 3: 

	rneno!	mg/L	<0.01	<0.01	<0.001	<0.01	<0.001	<0.001	<0.001	0.013	0.033	0.017	<0.01	:	-	:	-	:	1	<0.002	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	-	<0.001		<0.001	L	<0.001	<0.001	I	-
	Di-n-butyl-phalate	mg/L	<0.01	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	0.001	<0.005	<0.05	<0.1	1	1	-	1	1	1	<0.002	<0.01	<0.001	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001		0.011	•	0.003		<0.001		<0.001	<0.001	ı	-
	Acetophenone	mg/L	<0.05	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	0.006	<0.025	<0.25	<0.50	1	1	1	ł	1	1	<0.01	<0.05	<0.005	<0.05	<0.05	<0.05	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	'	<0.005		<0.005		<0.005	<0.005	I	
	TRPHC	mg/L	45.7	-		,	ſ		1	'		'	1	1	1	1	1	:	1	ı	ł	'	1	ŀ	4.8	'	0.277	'	2.16	F	1	-	,	-		•	•	-	<0.005	<0.005	I	-
	2-methlynaphthalene	mg/L	<0.01	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	0.003	0.005	<0.05	<0.1	-	-	-	-			<0.002	0.016	<0.001	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	0.001	<0.001	<0.001	-	<0.001	-	<0.001		<0.001		<0.001	<0.001	-	
	Naphthalene	mg/L	<0.01	<0.001	<0.001	0.018	<0.001	<0.001	<0.001	0.004	0.007	<0.05	<0.10	-			-	-	-	<0.002	0.019	0.002	0.011	0.018	<0.01	<0.005	<0.001	<0.001	0.001	<0.001	<0.001	·	<0.001		<0.001	ŀ	<0.001	I	<0.001	<0.001	-	
	Anthracene	mg/L	0.015	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.1	-	:	:	:	:	-	<0.002	<0.01	<0.001	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	•	<0.001	1	<0.001	1	<0.001	ı	<0.001	<0.001	-	-
ew Mexico	4-methylphenol/	3-methylphenol (mg/L)	0.038	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	0.003	0.011	0.31	0.016							<0.002	<0.01	<0.001	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	0.001	<0.001	<0.001		<0.001	1	<0.001	-	<0.001	4	<0.001	<0.001		1
Lea County, N	Sample	Date	8/26/96	5/30/97	5/30/97	5/30/97	5/30/97	5/30/97	6/20/97	5/30/97	5/29/97	5/29/97	5/29/97	11/3/98	11/3/98	11/3/98	11/3/98	11/3/98	11/3/98	6/2/97	6/2/97	6/2/97	6/2/97	6/2/97	8/26/96	6/2/97	8/26/96	6/30/97	8/26/96	6/30/97	8/22/96	4/1/98	6/30/97	4/1/98	6/30/97	4/1/98	6/30/97	3/20/98	5/29/97	5/30/97	5/29/97	5/30/97
	Well	Number	MW-1	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	6-MM	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	71-WM	MW-18	1-WMT	TMW-2	TMW-3	TMW-5	TMW-6	MW-1		WW-2		WW-3		WW-4		WW-5		9-WW		WW-7		Equipment Blank	*Duplicate (MW-3A)	Trip Blank	

Notes:

All analysis performed by Trace Analysis, Inc., Lubbock, Texas 1. ug/L: Denotes volatile organic analytic concentration in micrograms per liter 2. mg/L: Denotes semi-volatile organic and TPH concentration in milligrams per liter 3. <: Denotes analytic concentration below the analytical test method detection limit 4. -: No data available 5. \*: Duplicate Sample for MW-3

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(Continued) Summary of Volatile, Semi-Volatile Organic, and TPH Analysis of Groundwater Samples Table 3:

Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant

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Lea County, New Mexico

Well	Sample	4-methylphenol/	Anthracene	Naphthalene	2-methlynaphthalene	TRPHC	Acetophenone	Di-n-butyl-phalate	Phenol
Number	Date	3-methylphenol (mg/L)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Equipment			-						
Blank	5/29/97	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001
*Duplicate									
(MW-3A)	5/30/97	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001
Trip Blank	5/29/97	-	-	•	-		1	ŀ	1
	5/30/97	-	-	-	-	-	•		

All analysis performed by Trace Analysis, Inc., Lubbock, Texas Notes:

- Denotes volatile organic analytic concentration in micrograms per liter 1. ug/L: 2. mg/L:
- Denotes semi-volatile organic and TPH concentration in milligrams per liter
- Denotes analytic concentration below the analytical test method detection limit

  - €. 4. 3. 2. : ¥.
- No data available Duplicate Sample for MW-3

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Table 4: Summary of Dissolved Metals and General Inorganic Analysis of Groundwater Samples Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant

Lea County, New Mexico

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SOL	mg/L	:	1	1,200	10,000	4,000	6,600	1,300	4,200	1,200	1,400	2,800	3,000	1,100	1,100	4,700	3,700	11,000	9,500	
· #1	- 40) - 4 4													-			_			
Chloride	mg/L	1	1	430	5,500	1,500	3,000	330	1,900	340	530	750	1,300	430	420	2,300	2,000	6,000	5,700	
Silver	mg/L	<0.01	1	<0.05	<0.05	0.28	<0.05	<0.05	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	:	1			
Selenium	mg/L	<0.10	:	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		1	1		
Mercury	mg/L	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1		1	1	
* Lead	mg/L	<0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.01	<0.10	I	-	1	1	
Chromium	mg/L	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1		ŗ	:	
Cadmium	, mg/L	<0.02		<0.20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02					
Barium -	mg/L	0.51		<0.20	0.2	<0.20	0.2	<0.20	<0.20	2.7	0.5	1.5	<0.20	1.3	<0.1			-		
Arsenic	mg/L	<0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	0.1		1			
Śamnie	Date .	90/96/8	90/90/8	10/02/5	5/30/97	5/30/97	5/30/97	5/30/97	6/02/97	5/30/97	5/29/97	5/29/97	5/29/97	11/03/98	11/03/98	11/03/98	11/03/98	11/03/98	11/03/98	
Well	Number	MW-1	C-WW	5-MW	MW-4	MW-5	9-MM	MW-7	MW-8	6-MW	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	MAN_18	01- M M

All analysis performed by Trace Analysis, Inc., Lubbock, Texas Notes:

Denotes analytic concentration in milligrams per liter 1. mg/L:

Denotes analytic concentration below test method detection limit No data available

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(continued) Summary of Dissolved Metals and General Inorganic Analysis of Groundwater Samples Texaco Exploration and Production, Inc., Eunice #1 (South) Gas Plant Table 4:

Lea County, New Mexico

_				_	_	_	_	_	_	_	_		_	_	_	_	_	_	_
TDS	mg/L	1,300	2,000	2,200	8,100	2,100		6,300	1	550	:	420	ł	2,900	2,500	1,400	1,300		
Chloride	mg/L	460	730	870	4,300	730	1	4,500	1	200		120	I	1,200	970	490	390		
Silver	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	1.4	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05		
Selenium	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.01	<0.10	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10		
Mercury	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
Lead	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Chromium	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Cadmium	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Barium	mg/L	<0.20	3	1.0	0.9	1.3	0.97	0.6	0.49	0.6	2	0.8	<0.20	0.3	0.3	0.3	<0.20		
Arsenic	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Sample	Date	6/02/97	6/02/97	6/02/97	6/02/97	6/02/97	8/26/96	6/02/97	8/26/96	6/03/97	8/26/96	6/03/97	8/22/96	6/03/97	6/03/97	6/03/97	5/30/97		
Well	Number	TMW-1	TMW-2	TMW-3	TMW-5	TMW-6	WW-1		WW-2		WW-3		WW-4	WW-5	9-MM	WW-7	*MW-3A		

All analysis performed by Trace Analysis, Inc., Lubbock, Texas Notes:

Denotes analytic concentration in milligrams per liter 1. mg/L:

Denotes analytic concentration below test method detection limit No data available Denotes duplicate sample of MW-3 (5/30/97) 2. ☆

FIGURES



Highlander Environmental Corp.

Midland, Texas





₩₩-5 ©		4	///	MW-U         3333.02         3332.64           wNW-10         3334.88         3335.13           wNW-11         3335.16         3335.55           wNW-12         3334.15         3334.44           wNW-13         3335.15         3334.16           wNW-14         3333.04         3330.50           wNW-15         3328.98         3326.89
	W-14 420			wfw-16         3330.20         3328.10           wfw-17         3334.32         3332.21           wfw-18         3336.10         3333.85           TMW-1         3337.91         3336.21           TMW-2         3338.51         3335.76           TMW-3         3336.88         3333.99           TMW-5         3335.88         3333.30           TMW-6         3335.58         3335.81           ENRDN MW-1         3337.77         3335.79           ENRDN MW-2         3336.53         3334.55           ENRCN MW-3         3337.50         3335.45
	k30 ₩-13 ©	· . •	·	ENRISH MW-4         3335.73         3335.99           ENRISH MW-5         3333.96         3334.11           ENRISH MW-6         3334.00         3334.05           ENRISH MW-6         3334.51         3334.55           WATER WELL         TOP OF CASING FEET AMSL         GROUND ELEVATION ELEVATION, FEET AMSL           WW-1         3332.04         3331.56           WW-2         3331.46         3333.84           WW-3         3334.45         3333.93           WW-4         3335.40         3333.93           WW-5         3334.18         3332.62           WW-6         3329.98         3329.72           WW-7         3329.01         3329.72
ww-4	LEGEND RECOVERY WELL LOCATION PROPOSED BORING LOCATION	ENVIRONMENTAL INVESTIGATION AREAS () - JET TURBINE SKID	DEC 2 4 1998	FIGURE NO. 5 LEA COUNTY, NEW MEXICO
	BH-1 BOREHOLE LOCATION 330 MW-7 MONITOR WELL LOCATION AND CHLORIDE CONCENTRATION IN GROUNDWATER, Mg/L, 5/29/97-11/3/96 WW-1 © WATER WELL LOCATION (NACTIVE) - LOCATION OF CHLORIDE CONCENTRATION IN GROUNDWATER	$\begin{array}{c} (2) & - & \text{SLOP OIL SUMP} \\ \hline (3) & - & \text{OIL AND WATER SUMP} \\ \hline (4) & - & \text{SUMP #30} \\ \hline (5) & - & \text{SUMP #31} \\ \hline (6) & - & \text{EMERGENCY FLARE} \end{array}$	ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION	TEXACO EXPLORATION & PRODUCTION, INC. EUNICE #1 (SOUTH) GAS PLANT ISOPLETH MAP OF CHLORIDE CONCENTRATION GROUNDWATEP
	Mg/L 5/29/97-11/3/98	$\bigcirc$ - H2S FLARE SUMP ( $\bigcirc$ - CONCRETE SUMP (WEST OF TANK #14)	(IN FRET) 50 0 100 200 File: 50 0 100 200	5/29/97-11/3/98 HIGHLANDER ENVIRONMENTAL MIDLAND. TEXAS



	Com-14 SI		///	MW-11         3335.16         3335.55           MW-12         3334.15         3334.44           MW-13         3336.15         3334.16           MW-14         3333.04         3330.50           MW-15         3328.98         3326.89           MW-16         3330.20         3328.10           MW-17         3334.32         3332.21           MW-18         3336.10         3333.85           TMW-1         3337.91         3336.21           TMW-2         3338.51         3335.76           TMW-3         3335.88         3333.30           TMW-5         3335.88         3333.30           TMW-6         3335.77         3335.79           ENRON MW-1         3337.77         3335.79           ENRON MW-2         3336.53         3334.55           ENRON MW-3         3337.50         3335.45           ENRON MW-3         3337.50         3335.45           ENRON MW-4         3335.73         3335.99           ENRON MW-5         3334.00         3334.05           ENRON MW-6         3334.00         3334.05           ENRON MW-6         3334.00         3334.05           ENRON MW-6         3334.00 <t< th=""></t<>
€uw-13 <1	LEGEND	WW-S CT	RECEIVED	WATER WELL         DATA           WATER WELL         TOP OF CASING FEET AMSL         GROUND ELEVATION ELEVATION, FEET AMSL           WW-1         3332.04         3331.56           WW-2         3331.46         3330.84           WW-3         3334.45         3334.37           WW-4         3335.40         3333.93           WW-5         3334.18         3332.62           WW-6         3329.98         3329.72           WW-7         3332.50         3331.73
	BH-1 BOREHOLE LOCATION WW-3 CONCENTRATION IN GROUNDWATER, 29 WW-1 WATER WELL LOCATION (INACTIVE) AND BENZENE CONCENTRATION IN 170 GROUNDWATER, Ug/L, 5/29/97 - 12/3/98	ENVIRONMENTAL INVESTIGATION AREAS 1 - JET TURBINE SKID 2 - SLOP OIL SUMP 3 - OIL AND WATER SUMP	DEC 2 4 1998 ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION	FIGURE NO. 4 LEA COUNTY, NEW MEXICO TEXACO EXPLORATION & PRODUCTION, INC.
	-250 BOPLETH OF BENZENE CONCENTRATION IN GROUNDWATER, ug/L 6/20/97 - 12/3/96 < LESS THAN TEST METHOD DETECTION LIMIT	<ul> <li>(4) - SUMP #30</li> <li>(5) - SUMP #31</li> <li>(6) - EMERGENCY FLARE</li> <li>(7) - H2S FLARE SUMP</li> <li>(8) - CONCRETE SUMP (WEST OF TANK #14)</li> </ul>	SCALE         DATE:           (IN FEET)         12/15/9           50 0 100 200         JDA           FILE:         C:\SOUTH\78           787E         787E	EUNICE #1 (SOUTH) GAS PLANT BENZENE CONCENTRATION IN GROUNDWATER, 5/29/97 - 12/3/9 HIGHLANDER ENVIRONMENTAL MIDLAND, TEXAS





₩₩-5 ©	€ <sub>MW-14</sub>	Υ	[1]	MW-11         3335.16         3335.55           MW-12         3334.15         3334.44           MW-13         3336.15         3330.50           MW-15         3328.98         3326.89           MW-16         3330.20         3328.10           MW-17         3334.32         3332.21           MW-18         3336.10         3333.85           TMW-1         3337.91         3336.21           TMW-2         3338.51         3335.76           TMW-3         3335.88         3333.30           TMW-5         3335.88         3333.30           TMW-6         3335.58         3335.81           ENRON MW-1         3337.77         3335.79           ENRON MW-1         3337.50         3335.45           ENRON MW-3         3337.50         3335.45           ENRON MW-4         3335.73         3335.99           ENRON MW-6         3334.00         3334.05           ENRON MW-6         3334.51         3334.55
€ MW-13	™~-¢ ⊚	ENVIRONMENTAL_INVESTIGATION	RECEIVED	WATER WELL         DATA           WATER WELL         TOP OF CASING         GROUND ELEVATION           NUMBER         FEET AMSL         ELEVATION, FEET AMSL           WW-1         3332.04         3331.56           WW-2         3331.46         3330.84           WW-3         3334.45         3333.93           WW-4         3335.40         3333.93           WW-5         3334.18         3332.62           WW-6         3329.98         3329.72           WW-7         3332.50         3331.73
WW-4	COVERY WELL LOCATION	<u>AREAS</u>	DEC 24 1998	FIGURE NO. 2
. 🤍 BH-1 I BOR	INHOLE LOCATION	2 - SLOP OIL SUMP	ENVIRONMENTAL BUREAU	LEA COUNTY, NEW MEXICO
<sup>MW-7</sup> №01	ITOR WELL LOCATION	(3) - OIL AND WATER SUMP (4) - SUMP #30	UIL CONSERVATION DIVISION	I LAACU EXPLORATION & PRODUCTION, INC.
₩₩~1 ⊚ ₩4T	TER WELL LOCATION (INACTIVE)	5) - SUMP #31 6) - Emergency flare 7) - H2S flare sump	SCALE 11/25/	EUNICE #1 (SOUTH) GAS PLANT 98 SITE MAP
		8 - CONCRETE SUMP (WEST OF TANK #14)	50 0 100 200 JDA FILE: C:\South\7/ SITE-MAP	87 HIGHLANDER ENVIRONMENTAL MIDLAND, TEXAS

# APPENDIX A

Sample Logs

Boring/Well:MW-13Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:68'Date Installed:10/20/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Sand, brown and tan, fine grained, traces of white caliche, dense
10-20	Sand, tan, fine grained, loose, layers of cemented sandstone
20-30	Sand, tan, fine grained, loose, trace of cemented sandstone layers
30-40	Sand, tan, fine grained, loose, layers of cemented sandstone, dense
40-50	Sand, tan, fine grained, loose, trace of cemented sandstone (layers)
60-68	Sand, tan, fine grained, loose, trace of cemented sandstone (layers)
TD: 68'	
<u> </u>	

Boring/Well:MW-14Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:65'Date Installed:10/21/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Sand, brown and tan, fine grained, white caliche encountered at 3.5'
10-20	Sand, tan, fine grained, loose, trace of caliche, thin layers of cemented sandstone
20-30	Sand, tan, fine grained, loose, thin layers of cemented sandstone
30-40	Sand, tan, fine grained, loose, layers of cemented sandstone, dense
40-50	Sand, tan, fine grained, loose, layers of cemented sandstone
60-65	Sand, tan, fine grained, loose, trace of cemented sandstone (layers)
TD: 65'	

Boring/Well:MW-15Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:68'Date Installed:10/26/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Silty Sand, 10YR 5/3 to 5/4. yellowish brown to brown, fine grained from 0 to 2 feet Caliche, 10YR 7/4, very pale brown, dense from 2 to 10 feet
10-20	Caliche, 10YR 7/4, very pale brown, dense from 10 to 12 feet Sandstone, 5YR 5/6, yellowish red, fine grained quartz, well sorted, moderately well cemented below 12 feet
20-30	Sandstone, 10YR 5/6, yellowish red, fine grained quartz, moderate to poorly sorted, poorly to well cemented
30-40	Sandstone, 10YR 5/6, yellowish red, fine grained, moderately to poorly sorted, moderately well cemented
40-50	Sandstone, 10YR 5/6, yellowish red, fine grained quartz, poorly sorted, moderately well cemented
50-60	Sandstone, 10YR 5/6, yellowish red, fine grained quartz, poorly sorted, moderately well cemented
60 - 68	Gravelly Sand, 5YR 5/6 to 2.5YR 4/6, yellowish red to red, coarse to very coarse grained quartz and gravel from 60 to 62 feet Shale, 2.5 YR 4/6, red, silty, soft below 62 feet
TD: 68'	
·	

Boring/Well:MW-16Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:68'Date Installed:10/26/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Silty Sand, 10YR 5/3 to 5/4, yellowish brown to brown, fine grained quartz, from 0 to 2 feet Caliche, 10YR 7/4, very pale brown, dense, from 2 to 10 feet
10-20	Sandstone, 7.5YR 6/6 to 5YR 5/6, reddish yellow to yellowish red, very fine grained quartz, moderate to poorly sorted, moderately hard
20-30	Sandstone, 7.5YR 6/6 to 5YR 5/6, reddish yellow to yellowish red, very fine grained quartz, moderate to poorly sorted, moderately hard
30-40	<ul> <li>Sandstone, 7.5YR 6/6 to 5YR 5/6, reddish yellow to yellowish red, very fine grained quartz, moderate to poorly sorted, moderately hard, from 30 to 37 feet</li> <li>Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderately well sorted, loose, from 38 to 40 feet</li> </ul>
40-50	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderately well sorted, loose
50-60	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderately well sorted, loose
60-68	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderately well sorted, loose, from 60 to 62 feet Shale, 2.5YR 4/6, red, silty soft below 62 feet
TD: 68'	

Boring/Well:MW-17Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:68'Date Installed:10/26/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Sand, 10YR 5/3 to 5/4, brown to yellowish brown, very fine grained quartz, silty, from 0 to 3 feet
	Caliche, 10YR 7/4, pale brown, dense, from 2 to 10 feet, sandy below 8 feet
10-20	Caliche, 10YR 7/4, pale brown, sandy, dense, from 10 to 11 feet
	Sandstone, 7.5YR 6/6 to 5YR 5/6, reddish yellow to yellowish red, very fine grained quartz, moderately well sorted, moderately to poorly cemented below 11 feet
20-30	Sandstone, 7.5YR 6/6 to 5YR 5/6, reddish yellow to yellowish red, very fine grained quartz, moderately well sorted, moderately to poorly cemented, from 20 to 23 feet
	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderate to poorly sorted, loose below 23 feet
30-40	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderate to poorly sorted, loose
40-50	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderate to poorly sorted, loose
50-60	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderate to poorly sorted, loose
60-68	Sand, 5YR 6/6, reddish yellow, very fine grained quartz, moderate to poorly sorted, loose
TD: 68'	
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# SAMPLE LOG

Boring/Well:MW-18Site Location:Texaco - Eunice # 1 (South) Gas PlantLocation:Lea County, New MexicoTotal Depth:68'Date Installed:10/27/98

DEPTH (Ft)	SAMPLE DESCRIPTION
0-10	Sand, 10YR 5/3 to 5/4, brown to yellowish brown, very fine grained quartz, poorly sorted, round, from 0 to 0.5 feet
	Caliche, 10YR 7/4, very pale brown, indurated, hard, from 0.5 to 9 feet
	Sandstone, 7.5YR 5/6 to 6/6, yellowish red, very fine grained quartz, poorly sorted, moderately to poorly cemented below 9 feet
10-20	Sandstone, 7.5YR 5/6 to 6/6, yellowish red, very fine grained quartz, poorly sorted, moderately to poorly cemented
20-30	Sand, 5YR 5/6 to 6/6, reddish yellow to yellowish red, , very fine to fine grained quartz, poorly sorted, loose
30-40	Sand, 5YR 5/6 to 6/6, reddish yellow to yellowish red, , very fine to fine grained quartz, poorly sorted, loose
40-50	Sand, 5YR 5/6 to 6/6, reddish yellow to yellowish red, , very fine to fine grained quartz, poorly sorted, loose, moderately well cemented sandstone stringers below 40 feet
50-60	Sand, 5YR 5/6 to 6/6, reddish yellow to yellowish red, , very fine to fine grained quartz, poorly sorted, loose, moderately well cemented sandstone stringers
60-68	Sand, 5YR 5/6 to 6/6, reddish yellow to yellowish red, , very fine to fine grained quartz, poorly sorted, loose, moderately well cemented sandstone stringers
TD: 68'	
	1



# **APPENDIX B**

# Well Completion Records















# **APPENDIX C**

# Trace Analysis, Inc. Reports

Date: Nov O Date Rec: 1 Project: 7 Proj Name: 7 Proj Loc: E	6, 1998 1/5/98 86 'exaco South Eunic	ANAL High Atter 1910 Midlé Ce Gas Plant	YTICAL RESUL lander Envi ntion Mark Lar N. Big Spirng and	rs FOR ronmenta son St. TX 7	l Servic 9705	es Lab Recei Sampling Sample Co Sample Re	ving # : 98 Date: 11/3 ndition: 1 ceived By:	311000075 /98 intact and VW	Cool
TA# Fiel(	d Code	MATI	RIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL- BENZENE (mg/L)	M, P, O XYLENE (mg/L)	TOTAL BTEX (mg/L)	
111914 MW-13 111915 MW-14 111916 MW-15		Wat Wat	er er	<0.001 <0.001 0.008	<0.001 <0.001 <0.001	<0.001<0.001<0.001	<0.001 <0.001 <0.001 <0.001	<0.001 <0.001 0.008	
111917 MW-16 111918 MW-17 111919 MW-18		Wat Wat Wat	er er	<pre>&lt;0.001 &lt;0.001 &lt;0.001 </pre>	<pre>&lt;0.001 &lt;0.001 &lt;0.001 </pre>	<pre><c.001< pre=""></c.001<></pre>	<pre>&lt;0.001 &lt;0.001 &lt;0.001 </pre>	<pre>&lt;0.001 &lt;0.001 &lt;0.001 &lt;0.001</pre>	
Method Blank Reporting Lim QC	i t			<0.001 0.001 0.125	<0.001 0.001 0.115	<0.001 0.001 0.108	<0.001 0.001 0.314		
RPD % Extraction % Instrument	Accuracy Accuracy			129 125	2 120 115	2 111 108	112 105		
TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANAL COMP	YSIS C	HEMIST	QC: (mg/L)	SPIKE: (mg/L)	ļ — —
BTEX	EPA 5030	11/5/98	EPA 8021B	11/	5/98	CS	0.100 ea	0.1 ea	<del></del>
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D	irector, Dr. Bla	air Leftwich		Dat	e t				

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	JULLII AULUULUULUULUULUULUULU	TRACE Lubbock, T	ANAL exas 79424	VSIS, 1 806-794	NC MU	MULULU FAX 806 • 794 •				
November 1 Receiving Dá Sample Typé Project Local	1, 1998 ate: 11/05/98 2: Water 786 tion:	ANALYTICAL R HIGHLANDER I Attention: Mark 1910 N. Big Spr Midland, Texas	ESULTS FOI ENVIRONME Larson ing 79705	R INTAL CORP		sampling Date sample Condit sample Receiv Project Name:	11/03/98 on: Intact & C ed by: VW Eunice #1 (So	:ool buth) Plant		
		DISSOLVED								
TA#	FIELD CODE	As (mg/L)	Se (mg/L)	Cd (mg/L)	Cr (mg/L)	Pb (mg/L)	Ag (mg/L)	Ba (mg/L)	Hg (mg/L)	
T111914	MW-13	<0.01	<0.01	0.003	<0.01	<0.005	<0.002	1.5	<0.0010	
N C C C C		5.0 4.8	5.1 5.0	4.8 4.9	5.0 4.9	4.9 4.8	1.0 1.0	5.1 5.1	0.0052 0.0052	
REPORTING	) LIMIT	0.01	0.01	0.001	0.01	0.005	0.002	0.01	0.0010	
RPD % Extraction % Instrumen	Accuracy t Accuracy	0 85 98	5 95 100	90 96	5 95 98	0 85 96	0 75 100	0 90 102	2 93 104	
PREP DATE ANALYSIS C	ATE	11/5/98 11/6/98	11/5/98 11/6/98	11/5/98 11/6/98	11/5/98 11/6/98	11/5/98 11/6/98	11/5/98 11/6/98	11/5/98 11/6/98	11/8/98 11/9/98	

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: BP TOTAL METALS SPIKE: 2.0 mg/kL As, Se Cd, Cr, Pb, Ba: 1.0 mg/kg Ag TOTAL METALS CV: 5.0 mg/L As, Se Cd, Cr, Pb, Ba: Ag: 1.0 mg/L Hg SPIKE: 0.0050 mg/L Hg CV: 0.0050 mg/L METHODS: EPA SW-846 6010, 3005A, 7470A

Director, Dr. Blair Leftwich

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Date

11-11-98

Sent By: TR	ACEANALYSIS;	Ag Ba Hg Ig/L) (mg/L) (mg/L)	0.05 <0.10 <0.0010	7941298; \$ <b>60000</b> 0:00000 0:1 00000 0:1 00000	.05 0.10 0.0010	) 5 2	98 100 86 <sup>4</sup>	16 06 66 001	12/9/98 12/9/98 12/9/98 12/9/98 12/9/98 12/9/98 12/9/98 86, 28	8:34AM;Job 244;Page 1/2
ALLALALALALALALALALALALALALALALALALALA	Sampling Date: 11/0 Sample Condition: I Sample Received by Project Name: Eunio	(u) (u) (u	<0.10	1.0 0.93 (	0.10	ų	8	36	12/9/98 12 12/9/98 12	ر <sup>ب</sup> کرچ
5, INC.		Cr (mg/L)	<0.05	1.0 0.97	0.05	ŭ	8	98	12/9/98 12/9/98	/2./
IALYSIC	R NTAL CORP. DISSOLVED	Cd (mg/L)	<0.02	1.0 0.97	0.02	ï	, 95 95	<del>8</del> 8	12/9/98	Ö
ACEAN	RESULTS FO ENVIRONME K Larson ring 5 79705	Se (mg/L)	<0.10	1.0	0.10	ъ	105	100	12/9/98	ery in MS & A 0 mg/L Ag. 0.20 mg/L Ag
ULLUIUTR Weedeer Avenue	ANALYTICAL I HIGHLANDER Attention: Mer 1910 N. Big Sp Midland, Texes	As (mg/L)	<0.10	1.0	0.10	Ľ	100	26	12/9/98 12/9/98	KEA due to poor recov RR Hg: BP Se Cd, Cr, Pb, Ba: 0.5 e Cd, Cr, Pb, Ag Ba: 0 050 mg/L
LULULULULULUL	14, 1998 Date: 11/05/98 pe: Water : 786 : ation: Eunice Plant	FIELD CODE	MW - 14		YG LIMIT		m Accuracy	ent Accuracy	re : date	SD were used for RPD & 1 S: EPA 200.7 As, Se, Cd, Cr, Pb, Ag, Ba: FTALS SPIKE: 2.0 mg/L As, S FTALS CV: 1.0 mg/L As, S 0.0050 mg/L Hg CV: 0.00
	December Receiving Sample T <sub>3</sub> Project Lo	TA#	T111915	SC C	REPORTI		% Extracti	% Instrum	PREP DA	LCS & LU METHOD: CHEMIST TOTAL MI Hg SPIKE

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1910 N. Big Spring Street Attention: Mark Larson HIGHLANDER SERVICES CORP. **RNALYTICAL RESULTS FOR** 

80797 XT , bnslbiM

fineI9 (dfuo2) Project Name: Eunice #1 Sample Received by: VW Sample Condition: Intact & Cool Sampling Date: 11/03/98

Project Location: Project No: 786 Sample Type: Water Receiving Date: 11/05/98 November 11, 1998

% Extraction Accur	scy Scy	100	001	201 901	401 201
RPD		0	0	0	0
<b>КЕРОКТІИЄ LIMIT</b>		01		5 <sup>.</sup> 0	ð.0
CCA		266	٥.٢	13.61	81.61
ICA		886	0.7	12.83	12.41
616111T	81-WM	009'6	0.7		002'9
819111T	21-WM	000,11	6.9		000'9
710111T	91-WM	00Z,E	£.7	2,000	
916111T	SI-WM	00L,4	0.7	5,300	
916111T	41-WM	001,1	٤.٢	450	
<b>410111</b>	E1-WM	001,1	5.7	430	
# <b>A</b> T	FIELD CODE	(J/ɓɯ)	('n's)	(ר) (J/ɓɯ)	(IJ/ɓɯ)
		SQT	Hq	CHLORIDE	CHLORIDE

10/21/98

10/21/98

CHLORIDE SPIKE: 625 mg/L CHLORIDE. CHEMIST: pH: SA SA :SOT CHLORIDE: JS METHODS: EPA 160.1, 150.1, 300.0

CHLORIDE CV: 12.5 mg/L CHLORIDE.

**ANALYSIS DATE** 

**TAD 4389** 

86/90/11

86/90/11

Date

86/60/11

86/60/11

85-11-11

86/01/11

86/01/11

Director, Dr. Blair Leftwich

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PAGE: 1 OF: 1 ANALYSIS REQUEST	(Circle or Specify Method No.)	05 8 20 25 8 26 20	H Pd	/9529 /054 /055 /054 /054 /057	88270 8870 88	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	PLM (Asbe PLM (Asbe Gamma Sp Camma Sp C	· · · · · · · · · · · · · · · · · · ·	······································	•••	> 	~	·>			Wirlen Br. Print & Sign Con Date: 1/2:00	AMPLE SHIPPED BY: (Circle) A ARBILL (SLL 15938440)	AND DELIVERED UPS A DUTLAR OF AND	Mark With Markey PLCH	Yes No	
istody Record	TAT CORP	· WON TUT	Far (015) 682-3046	I AA (010) 002 0010	NETHOD	/602 /602 . CONTA	ALBE MLBE 8050 BLEX 8050 ICE HACI HCC NOMBEE 01	5 22 22	4 × × ×	4 ~ ~ ~			ZNV VV V			JUCK Date: 41/4 14	ture) Date:SA	tture) Date:H	ure) ( hi undhau	THRE 9:00 A	CT T-11.3 REMARKS:
t and Chain of Cu	ENIVIPONMEN	0 N. Big Spring St.	lland, Texas 79705	STTE MANACER.	M. Fan	NAME: Eurie # 1 (Sour Hr)	SAMPLE IDENTIFICATION	12- B	J 7 L	Hw - 15	TW-16	1-75	81 - ML		1.1.1	ate: 14:15 RECEIVED BY: (960a	ate: <u>11/11/17</u> RECEIVED BY: (Signa ime: 5:00/2/14	ate:	Carpio, IT RECEIVED BY: (Signay	00 373- 1246 DATE: 11-5-98	MATRIX: O
Analysis Request			Mic		CLIENT NAME:	PROJECT NO .: 786 PROJECT	LAB I.D. NUMBER DATE TIME TRIX NUMBER COMP.	111914 11/2/08 10 W 2	× 1/3/2 con con	16 W \$98 10.15 W 2	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	18 14 48 12.30 V	19 W3/8 13:55 W			REMINIQUISHED BY: (Signature)	RELINQUISHED BY: (Signature)	RELINQUISHED BY: (Signature) D. Ti	RECEIVING LABORATORY: UTCLEL CIC ADDRESS: CATO I CATALLE	CUTY: LUDY TIC STATE: LEX CONTACT: No.11 PHONE: (S	CANTER FONDITION WHEN RECEIVED.

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**Texaco Exploration and Production Inc** 

P O Box 1929 Eunice NM 88231 1929

February 14,1996

Chris E. Eustice State of New Mexico Oil Conservation Division 2040 S. Pacheco Santa Fe, New Mexico 87505

RE: GROUND WATER DISCHARGE PLAN RENEWAL

Enclosed is Texaco Exploration and Productions Inc.'s Eunice South Gas Processing Plant's Groundwater Discharge Plan. The plan is being submitted for renewel.

If you have any questions please call me at 505-394-2516.

Sincerely,

Redwey G BAiley

Rodney G. Bailey Eunice Complex EHS Coordinator

# **GROUNDWATER DISCHARGE PLAN**

# TEXACO EXPLORATION & PRODUCTION EUNICE SOUTH GAS PROCESSING PLANT LEA COUNTY, NEW MEXICO

February 14, 1996

## GENERAL INFORMATION

I.

A. Name of Discharge or Legally Responsible Party.

Texaco Exploration and Production Inc.'s Eunice South Gas Processing Plant PO Box 1929 Phone: (505) 394-2516

## B. <u>Name of Local Representative or Contact Person</u>

Plant Superintendent:

L. A. Brzowski (Same as above)

EH&S Coordinator:

R. G. Bailey (Same as above)

## C. Location of Discharge

SW/4, SW/4, Section 27, Township 22 South, Range 37 East, Lea County, New Mexico.

A topographic map and a facility plot plan are included in Appendix 4.

## D. <u>Type of Natural Gas Operation</u>

The plant is cryogenic natural gas processing plant designed to process 139.5 million cubic feet per day. At present the plant is processing approximately 110 million cubic feet per day and producing about 12,000 bbls/day of demethanized product (ethane, propane, butanes, pentanes, and heavier).

### E. <u>Affirmation</u>

"I hereby certify that I am familiar with the information contained in and submitted with this application and that such information is true, accurate, and complete to the best of my knowledge and belief."

Signature: C. R. Color	Date: 02-14-96
Printed Name: (.R. AAKison)	Title: Complex Manager

## II. PLANT PROCESS

- A. Sources and Quantities of Effluent and Process Fluids
  - 1. Scrubbers and Separators: The plant utilizes the following scrubbers and separators with the indicated discharge:

a)	1st stage scrubber to turbine compressors:	30 gal/day
b)	2nd stage scrubber to turbine compressors:	40 gal/ day
c)	four interstage scrubbers on the turbine	
•	compressors	10 gal/day/scrubber
d)	tanks #12, #13 separators:	1200 gal/day
e)	inlet scrubber on booster inlet gas:	40 gal/day
f)	high pressure inlet gas scrubber:	20 gal/day
g)	high pressure discharge gas scrubber:	10gal/day
h)	hydrogen sulfide separator:	20 gal/day
i)	gas to treater scrubber:	5 gal/day
j)	gas to treater scrubber	5 gal/day
k)	gas treater discharge scrubber:	5 gal/day
1)	1st stage discharge scrubbers on	
-	compressors:	10 gal/day
m)	raw gas inlet scrubbers:	15 gal/day
	Total:	1410 gal/day

The scrubber water may typically be high in Total Dissolved Solids (TDS) and may contain dissolved hydrocarbons.

- 2. Boilers: The Eunice South Gas Processing Plant utilizes one Erie City boiler, one Nebraska boiler and four Lookout-Eclipse boilers in its operations. The combined blowdown rate varies from 15,000 gal/day to 20,000 gal/day. Additives include Unichem 3030 corrosion inhibitor, Unichem 3270 neutralizer and Unichem 3141 an oxygen scavenger. The Material Safety Data Sheets (MSDS) are included in Appendix 1. The blowdown can be expected to be high in TDS
- 3. Engine Cooling Water: Auxiliary engines 1-4, 5-9 and gas compressors 17-25 have their own closed loop cooling system. The cooling water is not routinely discharged but should mechanical failure occur, the water is collected in the engine room sump and is then placed in the scrubber oil tank at the Eunice North processing plant. Additives include Unichem 2010 and 2310, both corrosion inhibitors. MSDS is included in Appendix 1.

- 4. Cooling Tower: The cooling tower water is continuously discharged into pit # 4 through a buried 4 inch polyethylene line. The discharge rate varies from 20,000 gallons per day to 25,000 gallons per day. The discharge water can be expected to contain high TDS. Additives include Unichem 1304 biocide and sulfuric acid for pH control. MSDS's are included in Appendix 1.
- 5. Sewage: The sewage system at the Eunice South Gas Processing Plant consists of a septic tank and lateral lines. This system is completely separate from and independent of all other plant waste systems.
- 6. Others:
  - a) Used engine oil: Used engine oil from the auxiliary engines and from engines 23-25 are removed from the engine room sumps by vacuum truck and the placed in the scrubber oil tanks at the Eunice North Gas Processing Plant for recycling. The used engine oil from the remainder of the engines is pumped to tank #21 and then removed by vacuum truck to the Eunice North Gas Processing Plant scrubber oil tanks for recycling. There are no additives used in the engine oil.
  - b) Equipment Cleaning Solution: The plant uses a mixture of water and Adams Chemical Company's "Adams Special" Industrial soap. Industrial Cleaner for engine and equipment cleaning. The MSDS is included in appendix 1. The discharge averages approximately 40 gallons per day and may contain some oil and grease.
  - c) Water Softener Wastewater: The water softener wastewater can be expected to be high in TDS and sodium chloride as a result of the regeneration process. The average discharge is 806 gallons per day. There are no additives in this waste water stream.
- B. Quality Characteristics

All plant wastewater, except the aforementioned engine room sumps, are commingled at pit # 4. (See the Wastewater Block Flow Diagram included in Appendix 3.) All wastewater transfer, storage and collection units are constructed of either reinforced concrete or steel piping therefore minimizing any risk of ground water contamination. (See Item #II-C for additional details.) Because of the low risk of groundwater contamination we have elected to treat all sources discharged into the waste water pit as a commingled source.

Sample points will include the pit # 4 discharge line and the plants freshwater well. Full TCLUP test will be conducted on all samples.

- 1. WQCC 1-101.uu: Since this facility does not manufacture chemical compounds (including herbicides, pesticides and chlorinated hydrocarbons) we would expect to find only those hydrocarbon compounds that are naturally occurring such as benzene, toluene and xylene. Benzene, toluene, and xylene which have been guantified under item #2 above.
- 2. Sampling Location, Methods, and Procedures: The sampling locations include the following.

Fresh water well - Freshwater faucet.

Waste Water Pit - Discharge line to the injection well.

All samples were unfiltered grab samples that were preserved and analyzed in accordance with EPA SW 846 and/or Standard Methods for the Examination of Water and Wastewater (17th edition). The samples were then transported, on ice, to Cardinal Lab in Hobbs, NM for analysis.

- 3. Variability in Flow Rates and Concentration: During normal operations we anticipate no significant fluctuations in flow rate or concentration in the plant effluents. However, if there is a mechanical malfunction at off-site gas gathering locations there is a possibility of increased volumes of produced water and oil following to the plant. We would not anticipate an increase in concentration of the parameters of concern.
- C. Transfer and Storage of Process Fluids and Effluents
  - 1. Water and Wastewater Flow Schematics: See Wastewater Block Flow Diagram in Appendix 3.
  - 2. Description of Equipment Associated with Wastewater Production and Handling.

- a) Raw Gas Inlet Scrubbers -The scrubbers are pressurized vessels which discharge by pump into tank #21. The discharge lines are constructed with a solid connection to the drains and are fabricated with 4 inch schedule 40 carbon steel pipe. The drain lines and a section of the dump lines are buried.
- b) Tank #21- This vessel operates at atmospheric pressure and is used to provide storage for scrubber oil and water from the engine sumps and inlet scrubbers. Scrubber oil and water mixture is trucked from tank # 21 to the Eunice North Gas Processing Plant for recovery of the oil. This tank is a standard welded tank with capacity of 20,000 gallons and wall thickness of .3125 inches. The tank is 40 feet in diameter and 10 feet in diameter.
- c) Engine Sumps The engine sumps are constructed of reinforced concrete. The sumps for engines # 17-22 are pumped to tank # 21 through a 4 inch schedule 40 carbon steel pipe. All connections are of solid construction. In addition to used engine oil and any escaping coolant, the sumps also collect any soap and wash water that is used in the engine room.
- d) The sump liquids from the auxiliary engines and engines #23-25 are removed by vacuum truck and taken directly to the Eunice North Gas Processing Plant for oil recovery.
- e) 1st Stage Discharge Scrubbers on Compressors These scrubbers are pressured vessels which separate gas and liquids by gravity. The liquids are discharged to tank # 21 through a 2 inch schedule 40 carbon steel line that is constructed with solid connections. With the exception of the last 50 feet, these lines are installed above ground.
- f) Gas to Amine Treater / Scrubber The scrubbers are pressurized vessels which separate gas and liquids by gravity. The liquids are discharged to tank # 21 through a 2 inch schedule 40 carbon steel line that is constructed with solid connections. With the exception of the last 50 feet, these lines are installed above ground.
- g) Gas Treater Gas Discharge Scrubber This is a pressurized vessel which seperates gas and monoethylamine (MEA) by gravity. The MEA liquid discharges back to the MEA surge

tank through a 2 inch carbon steel line. This line is constructed with solid connections and is above ground.

- h) MEA Filter This is a pressurized vessel that discharges liquids to the drain system once every month when the filters are changed. Discharge is through a 4 inch polyethylene line that is of solid construction and is installed above ground. The 4 inch line is then discharged into an underground 6 inch schedule 40 carbon steel line that is discharged to the plant skimmer tank.
- i) MEA Reclaimer This pressurized vessel discharges liquid every 3 months upon cleaning of the reclaimer. The liquid is discharged through 4 inch polyethylene line into a bell riser that is connected to a buried 6 inch drain line. The 6 inch line discharges to the plant skimmer tank.
- j) MEA Surge Tank This pressurized vessel discharges to the 4 inch drain line ( described in (g) above) only in the event of an emergency.
- k) Zeolite Treaters Both of the zeolite treaters discharge high TDS water into a buried 4 inch carbon steel line which in turn discharges into a buried 4 inch polyethylene line. The 4 inch polyethylene line discharges into pit # 4.
- I) Boilers The plant utilizes one Erie City boiler, one Nebraska boiler and four Lookout-Eclipse boilers. The Nebraska boiler is rated a 30,000 lbs/hr. The Erie City boiler is rated at 58,000 lbs/hr and each Lookout-Eclipse boiler is rated at 12,000 lbs/hr. The continuous and manual blowdown from all boilers is discharged to a buried 4 inch carbon steel line. The 4 inch line then discharges to a buried 4 inch polyethylene line. The polyethylene line then discharges to pit # 4.
- m) H2S Flare Sump This is an atmospheric vessel used to separate gas and liquid. The liquid is pumped from the sump to the waste water pit through a buried 2 inch carbon steel line. All connections are of solid construction.
- n) Saltwater Tank Overflow This tank is for the storage of saltwater that is used in the regeneration cycle of the zeolite treaters. The overflow line is constructed of buried 2 inch carbon steel with solid connections to within 15 feet of pit #

4. The last 15 feet is above ground 2 inch polyethylene line. The saltwater is discharged into the waste water pit.

- cooling Tower Blowdown The blowdown originates at the discharge of the coil shed circulation pumps. The water is discharged into a 4 inch polyethylene line that is buried and of solid construction which in turn discharges into pit # 4.
- p) Skimmer Tank This is a 6 foot diameter by 19 foot 8 inch deep underground process tank that is constructed of 7/16 inch welded steel. This tank receives wastewater from several sources (see Waste water Block Flow Diagram in Appendix 3). After the reclaimable hydrocarbons are removed, the effluent is pumped to pit # 4 through a buried 4 inch polyethylene line.
- q) Sump The sump pit is constructed of reinforced concrete and measures 4'8" x 4'8" x 7' deep. This sump receives waste water from the waste heat boilers, interstage scrubbers, 1st and 2nd stage scrubbers and the drains from tanks 12-14. The sump is gravity drained to the skimmer tank through a solid buried 6 inch scheduled 40 carbon steel line.
- r) Tanks 12-13 The pressurized vessels are used for NGL storage for rerun purposes. The drain for tank 13 is a 2 inch carbon steel that connect to a 4 inch carbon steel line. The drain for tank #12 is a 2 inch carbon steel line that discharges into a 4 inch carbon steel riser. The 4 inch line for both drains is routed into a 4 inch carbon steel line that discharges to the sump.
- s) Regenerator Gas Separator This pressurized vessel is used to separate gas and liquid from the regeneration beds. The drain line is a solid, buried 2 inch carbon steel line. The separator is equipped with a level control that automatically drains this vessel to tank # 12.
- Water Knockout on Glycol Reboiler Overhead This vessel is used to separate gas and liquid. The liquid is pumped through a solid, buried, 2 inch carbon steel line that is discharged to tank # 12.
- u) Interstage Scrubbers These pressurized vessels are used to separate the gas from the liquid as the gas travels from the 1st stage to the 2nd stage on the turbine compressors.

The liquid is automatically drained to a solid, buried, 2 inch carbon steel line that discharges into a solid, buried, 6 inch carbon steel line. The 6 inch line is then discharged to the sump.

- v) 2nd Stage Scrubber This pressurized vessel is used to separate liquid from the raw gas prior to the turbine compressors. The drain line consists of a 2 inch carbon steel line that is connected to a 6 inch schedule 40 carbon steel line. Approximately 15 feet of the line is above ground while the remaining 5 feet is buried. The vessel automatically discharges liquid to the drain which discharges to the sump.
- w) 1st Stage Scrubbers This pressurized vessel is used to separate the liquid from the raw gas prior to the 2nd stage turbine compressors. The vessel drains automatically to an above ground, solid 4 inch carbon steel line that, in turn discharges to a buried 6 inch scheduled 40 carbon steel line that discharges to tank # 21.
- x) Flare Water Knockout Condensed water from the flare gravity flows into an aboveground process tank. The tank is pumped to the treater/stabilizer condensate tank.
- D. Spill/Leak Prevention and Housekeeping Procedures
  - 1. Containment and Cleanup of Spills: Texaco's Eunice South Gas Processing Plant is manned 24 hours per day, 7 days per week. After hours, from 3:30pm until 7:00am, there are four operators at the plant site. The plant is visually inspected on an hourly basis by the Operators.

In the event of a spill that cannot be handled with personnel and equipment on site, the Plant Superintendent or his designated representative will call a trained and experienced local contractor who can provide the equipment necessary to contain and remove the spill. The contractor's equipment may include, but is not limited to, vacuum trucks, dump trucks, backhoes, hand tools, and absorbent material.

The Eunice South Gas Processing Plant has in effect a plan for prevention of significant spills that could lead to groundwater contamination. This plan calls for the installation of curbing, diking and/or other acceptable containment measures around all ground level storage vessels.

This plan also provides that any future ground level storage tanks will be installed on curbed pads constructed of concrete or other impervious material that will facilitate the detection of leaks.

Any spill contaminated materials will be disposed of in a manner that is consistent with all applicable local, state, and federal regulations.

In the event of a reportable spill, leak, or release, notification will be provided in accordance with New Mexico Oil Conservation Division Rule 116 and any other applicable rules or regulations.

2. Housekeeping Procedures: Empty chemical drums are rinsed until clean and then stored for return to the providing vendor of for proper disposal. Where practical the plant utilizes bulk storage tanks in lieu of drums.

Oily rags are accumulated in closed lid containers placed at strategic locations throughout the plant. The oily rags are then returned to the vendor for cleaning and reuse.

Trash Is stored in a dumpster as it is generated. Waste Management of Southeast New Mexico removes the trash for disposal at the City of Hobbs Landfill.

Oil filters and other filters used in the plant process are stored in metal containers until they are completely drained of fluid. They are then placed in a special waste container provided by Quell Petroleum Services, Inc. which are removed for disposal at their location in Monahans Tx.

The plant has a spill program in effect that calls for the installation of drip/leak collection pads or vats around or under all sources that have a history of leaking or have a high potential to leak. The sources that will be controlled will include certain pumps, valves, flanges, chemical pots, and blowdown lines.

The plant has drip vats under the chemical drum racks. The vats or containers are emptied on an as-needed basis.

Should a spill or leak occur, any contaminated soil is removed and disposed of in accordance with applicable local, state, and federal regulations.

3. Leak Detection: The plant operators conduct hourly walk-through inspections of the entire facility. If a leak is discovered the plant operator will initiate corrective action. In the event of a serious or catastrophic leak the plant operator may initiate emergency procedures as outlined in Item II.D.1.

Any problems encountered are noted in the operators log book or remarks section of the daily work sheets.

Additionally, the plant plans to leak test all buried wastewater lines within 2 years from this date, All pressurized lines will be hydrostatically tested at 1.5 times their operating pressure. Open end lines will be tested by pneumatic or other acceptable nondestructive testing techniques. Records of the leak testing will be maintained in the plant files.

- 4. Injection Wells Alternate Disposal: Should the on-site injection well become unserviceable, the plant's waste water will be stored in pit # 4. Pit # 4 has a total capacity of approximately 52,000 bbls. Should the need for storage exceed the pit capacity, the plant waste water will be transported by truck to any of a number of permitted locally available commercial disposal wells.
- III. Effluent Disposal
  - A. Existing Operations
    - 1. On-site Facilities:
      - a) Description
        - (1) Surface Impoundment's: The Eunce South Gas Processing Plant does not utilize any surface impoundments for disposal. However pit # 4 is used for wastewater storage pending disposal in the plants injection well. The following information is relevant to pit # 4:
          - Date of use: Construction in 1989. The pit is still being utilized as of this date.

- Type and volume of effluents stored: All liquid plant waste as described in previous sections are stored in pit # 4 prior to disposal. The volume of liquid wastes averages approximately 50,000 bbls per month.
- Area (inside dimensions): 190' x 240'
- Volume: 52,000 bbls.
- Depth ( top of dike to bottom of pit) : 15'
- Slope: 1:3 ( inside and outside)
- Sub-grade description: Sand directly beneath secondary liner followed by compacted earth.
- Liner type: High density polyethylene
- Liner thickness: 60 Mil primary and secondary
- Compatibility of liner and effluents: See the chemical resistance information provided in Appendix 6.
- Installation method: The liners were installed by welding the approximate 20' width sheets of polyethylene together using fusion welding machines. Vents were installed under the secondary liner and between the primary and secondary liner to vent any gas that may form.
- Leak detection methods: A network of 4 1/2 inch O.D. perforated polyethylene pipe wrapped in Geotextile that empties into a 4 inch collector pipe which in turn empties into a 30 inch concrete sump. The perforated pipe is situated between the primary and secondary liner. Each perforated pipe has been graveled in with clean pea gravel. (See drawing in Appendix 7)
- Freeboard: 3'

- Run-on / run-off protection: Run-on and run-off is prevented by the conpacted earthen dikes that extend approximately 7 1/2' above grade.
- (2) Off-Site Facilities
  - (a) Sludge's and Solids-The plant disposes of sludge's and solids on an as needed basis.
     When disposal is required, the transporter and disposal site utilized will meet all local, state, and federal requirements.
- (3) Injection wells:
  - Effluent injected: All liquid plant wastes as described in previous sections.
  - Volume: Approximately 1.98 million gallons/month.
  - Depth: 4550"
  - Formation: San Andres
  - OCD order number: SWD-29
  - Approval date: November 25, 1961

The injected wastes are not classified as hazardous wastes. The majority of the plant liquid wastes are covered under EPA's Exploration, Production, Gas Processing and Geothermal exemptions for RCRA hazardous wastes.

- b) Protection from Groundwater Contamination
  - (1) See item above (Surface Impoundment's)
  - (2) Samples of pit #4 may be acquired from the pit discharge line. Any leaks occurring through the primary liner will be collected in the leak detection sump located adjacent to the pit.
  - (3) The monitoring system is described in item above (surface Impoundments).

- (4) Should a leak be detected, the Oil Conservation Division (OCD) District Office will be provided written notice within 10 working days. Additionally, any needed corrective action will be coordinated through the OCD District Office.
- 2. Off-site Disposal: There are no industrial wastes that are routinely disposed of off-site. However, sludge's from the wastewater pit or various plant processes may be disposed of on an as-needed basis.

Should the need for off-site disposal arise, the Oil Conservation Division, and all other applicable regulatory agencies, will be notified prior to disposal. Additionally, any required testing and / or permits will be secured prior to disposal.

The Eunice South Gas Plant transports its' used lube oil and certain slop oils to the Eunice North Gas Plant for reclamation and reintroduction into the Texas-New Mexico Crude Oil Pipeline. The used oil is transported by vacuum truck.

### IV. SITE CHARACTERISTICS

- A. Hydrological Features
  - 1. There are no known bodies of water, streams or other water course within a one mile radius of the plant. There are two known water wells within a one mile radius of the plant:
    - a) The John Able water well is located 3/4 mile North of the plant on the West side of State Highway # 207. Texaco purchases water from this well for domestic and industrial use.
    - b) Texaco's water well # 17, Township 22 South, Range 37 East, Lea County, New Mexico. This well is used exclusively for industrial use.
  - 2. The depth to the first usable groundwater averages 85-100 feet. On 2-14-96 the plant's freshwater well (the Able well) was sampled for water quality analyses. The analysis are included in Appendix 2.

- B. Geological Description of Discharge Site
  - 1. Soil Types: According to local well logs, the soils in the area of the plant are typically:

surface to 45'	Caliche
- 130'	sand, shale and occasionally, Redbeds
- 430'	Triassic Redbeds

- 2. Name of Aquifer: According to groundwater maps of the area, the groundwater is on the extreme south/southwestern fringe of the Ogallala aquifer.
- 3. Composition of Aquifer Material: The composition of the aquifer material is an alluvium composed of various sands, shale and occasionally Redbed clays.
- 4. Depth to Rock at Base of Alluvium: The Triassic Redbeds are encountered at approximately 130'. The Triassic Redbeds and various sands are present from 130' to 1196' where anhydrite is encountered.
- C. Flood Protection
  - 1. After an exhaustive search of governmental agencies, specific flooding information could not be located. However, during the operating history of the plant there have been no known flooding events.



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Section: 01 PRODUCT IDENTIFICATION	
UNICHEM INTERNATIONAL INC. Emergency Telep P.O. BOX 1499 Previous Versio 707 N. LEECH Date Prepared HOBBS, NM 88241-1499 Version: 000000 Product Name: UNICHEM 3030 Chemical Description: Proprietary boiler water scale and corrosion inhi	ohone 505-393-7751 on Date 2/10/91 9/21/93 02
Section: 02 HAZARDOUS INGREDIENTS	
<u>Component Name</u> sodium nitrate ethylenediaminetetraacetic acid, tetrasodium salt potassium hydroxide trisodium nitrilotriacetate	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
Section: 03 PHYSICAL DATA	
Freezing Point: 10 Deg.F. Boiling Point, 760 mm Hg: 212 Deg.F Specific Gravity(H2O=1) : 1.300 Solubil Appearance and Odor: Light brown liquid; no signi	ity in water: Complete ficant odor.
Section: 04 FIRE AND EXPLOSION HAZARD DATA	
Flash Point (Test Method): None	
Extinguishing Media Material is not combustible. Keep containers coo fire fighting liquids for proper disposal.	Dl. Contain
Special Fire Fighting Procedures Do not enter confined fire space without proper protective equipment including NIOSH approved se breathing apparatus with full facepiece operated positive pressure demand mode. Do not inject a s of water or foam into hot, burning pools; this m splattering and increase fire intensity. Evacuat to a safe area. Keep unnecessary people away.	personal elf-contained l in the solid stream may cause se personnel
Unusual Fire and Explosion Hazards None	
Section: 05 HEALTH HAZARD DATA	·

#### Product Name: UNICHEM 3030

#### Section: 05 HEALTH HAZARD DATA

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#### CONTINUED

- Eye contact: vapors, liquid, and mists are extremely corrosive to the eyes. Brief contact of the vapors will be severely irritating. Brief contact of the liquid or mists will severely damage the eyes and prolonged contact may cause permanent eye injury which may be followed by blindness.
- Skin contact: vapors, mists, and liquid are extremely corrosive to the skin. Vapors will severely irritate the skin and liquid and mists will severely burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body.
- Inhalation: vapors and mists are extremely corrosive to the nose, throat, and mucous membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain, and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. Breathing high concentrations may result in death.
- Ingestion: vapors, mists, and liquid are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting, and collapse. Swallowing large quantities can cause death.
- Chronic effects of exposure: may result in area of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues and also increasing susceptibility to respiratory illness.
- Systemic & Other Effects: very small amounts of nitrilotriacetic acid acid (NTA) are present in this product. NTA is a component listed by the IARC as a possible human carcinogen (Group 2B). While current data regarding human exposures to NTA is inadequate, large dietary doses of NTA have caused urinary tumors in laboratory animals.

Emergency and First Aid Procedures

#### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

#### EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if

ection: 05 HEALTH HAZARD DATA CONTINUED	
not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.	
INGESTION	
Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.	
Section: 06 REACTIVITY DATA	,
Stable (Y=Yes/N=No): Y	
Stability Conditions to Avoid None known.	
Incompatibility (Materials to Avoid) Avoid contact with strong oxidizers or acidic materials.	
Hazardous Decomposition Products Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.	
Hazardous Polymerization May Occur(Y=Yes/N=No): N	
Hazardous Polymerization Conditions to Avoid None	<u> </u>
Section: 07 SPILL OR LEAK PROCEDURES	
Steps to be Taken if Material is Released or Spilled	
Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has	
been completed. Shut off source of spill if possible to do	
watercourses. Provide adequate ventilation. Contain spilled	
material with sand or earth. Recovered undamaged or	
minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into	
DOT approved containers.	
Advise authorities. If this product is an EPA hazardous	
National Response Center. Additional notification pursuant	
to SARA Section 302/304 (40 CFR 355) may also be required.	
Waste Disposal Method	
accordance with EPA or State regulations under authority of	
the Resource Conservation and Recovery Act (40 CFR 260-271).	
# Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

used with adequate ventilation.

#### Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's). سد ب د د د د

#### Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

#### Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

#### Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

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#### Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes. FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

## Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311

SAFETY DATA MATERIAL SHEET PAGE 5 Product Name: UNICHEM 3030 Section: 10 REGULATORY INFORMATION CONTINUED \_\_\_\_\_ and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are: Component Name RQ % Range TPO \*\*NONE\*\* Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: Sudden Release of Pressure X Acute Health Hazard Fire \_ Reactive X Chronic Health Hazard Section 313-List of Toxic Chemicals (40 CFR 372) This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. CAS # % Range Component Name \*\*NONE\*\* CERCLA, 40 CFR 261 AND 302 The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.) Component Name CAS # CERCLA RQ ethylenediaminetetraacetic acid, tetrasodium salt 00064-02-8 5000 01310-58-3 1000 potassium hydroxide OSHA Exposure Limits Component Name \*\*NONE\*\* National Fire Protection Agency 2 Health 0 Fire 0 Reactive ALK Other

ction: 10 REGULATORY INFORMATION CONTINUED	
epartment of Transportation Shipping Information	
Proper Shipping Name: Corrosive liquids, n.o.s.	
Hazard Class: 8 Identification: UN1760	
Packaging Group: PG II	
Contains: etnylenediaminetetraacetic acid, potassium hydroxide	<b>`</b>
Hazardous Substance RQ: 20000# Emergency Response Guide Number: 6	
ovic Substances Control Act (TSCA) 40 CEP 261	
Oxic Substances Control Act (TSCA), 40 CFR 261	
oxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA.	
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<pre>'oxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA.  Section 10 information is to remain attached to the material safety data sheet for this product.</pre>	
<pre>'oxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA.  Section 10 information is to remain attached to the material safety data sheet for this product. </pre>	
<pre>'oxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA.  Section 10 information is to remain attached to the material safety data sheet for this product.  While UNICHEM INTERNATIONAL believes that the above data is</pre>	
<pre>'oxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA.  Section 10 information is to remain attached to the material safety data sheet for this product.  While UNICHEM INTERNATIONAL believes that the above data is correct. UNICHEM INTERNATIONAL expressly disclaims liability</pre>	
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ection: 01 PRODUCT IDENTIFICAT	210N	
UNICHEM INTERNATIONAL INC. P.O. BOX 1499 707 N. LEECH HOBBS, NM 88241-1499	Emergency Telephone 505-393-7751 Previous Version Date 2/10/91 Date Prepared 9/21/93 Version: 0000002	
Product Name: UNICHEM 3270		
Chemical Description: Proprietary neutralizing amine	blend	
ection: 02 HAZARDOUS INGREDIEN	TS	
Component Name cyclohexylamine	<u>CAS# % Range</u> 00108-91-8 < 25%	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi	212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor.	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION	212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. 	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): 12	212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): 12 Extinguishing Media CO2, dry chemical, water spra	212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC y or fog, or foam. Use water to	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi  ection: 04 FIRE AND EXPLOSION  Flash Point (Test Method): 12 Extinguishing Media CO2, dry chemical, water spra keep containers cool. Isolate Contain fire fighting liquids	<pre>212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC y or fog, or foam. Use water to "fuel" supply from fire. for proper disposal.</pre>	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi  ection: 04 FIRE AND EXPLOSION  Flash Point (Test Method): 12 Extinguishing Media CO2, dry chemical, water spra keep containers cool. Isolate Contain fire fighting liquids Special Fire Fighting Procedur	<pre>212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC y or fog, or foam. Use water to "fuel" supply from fire. for proper disposal. es</pre>	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): 12 Extinguishing Media CO2, dry chemical, water spra keep containers cool. Isolate Contain fire fighting liquids Special Fire Fighting Procedur Do not enter confined fire sp protective equipment includin	<pre>212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC y or fog, or foam. Use water to "fuel" supply from fire. for proper disposal. es ace without proper personal g NIOSH approved self-contained</pre>	
Freezing Point: 15 Deg.F. Boiling Point, 760 mm Hg: init Specific Gravity(H2O=1) : 0 Appearance and Odor: Water whi  ection: 04 FIRE AND EXPLOSION  Flash Point (Test Method): 12 Extinguishing Media CO2, dry chemical, water spra keep containers cool. Isolate Contain fire fighting liquids Special Fire Fighting Procedur Do not enter confined fire sp protective equipment includin breathing apparatus with full	<pre>212 Deg.F .970 Solubility in water: Complete te to light yellow, clear liquid; amine odor. HAZARD DATA 0 Deg.F TCC y or fog, or foam. Use water to "fuel" supply from fire. for proper disposal. es ace without proper personal g NIOSH approved self-contained facepiece operated in the</pre>	
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WATERTAT SALFIT DALA SHEFT	PAGE	4 _
Product Name: UNICHEM 3270		î
Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED		·
explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.		
Section: 05 HEALTH HAZARD DATA		
Effects of Overexposure	<u></u>	
Eye Contact: contact with the eyes causes severe irritation		
and burns.		
contact: Severely irritating and corrosive upon skin contact. Can cause dermatitis. Material is well absorbed through skin.		
Inhalation: excessive inhalation of vapors can cause nasal and respiratory irration.		
Ingestion: toxic; can cause severe gastrointestinal		
irritation, vomiting, diarrhea, sweating, weakness, headache.		
The primary routes of exposure are by inhalation of vapors and skin contact.		

Emergency and First Aid Procedures

#### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

#### EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

#### INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

:

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

roduct Name: UNICHEM 3270		
ection: 06 REACTIVITY DATA	CONTINUED	
Incompatibility (Materials to A	void)	
Avoid contact with strong oxid.	izers or acidic materials.	
Hazardous Decomposition Products	3	·····
Smoke, carbon dioxide, carbon n	nonoxide, oxides of nitrogen.	•
Hazardous Polymerization May Occ	cur(Y=Yes/N=No): N	
Hazardous Polymerization Cond None	litions to Avoid	<u></u>
ection: 07 SPILL OR LEAK PROCED	JRES	
Steps to be Taken if Material is	Released or Spilled	
Eliminate sources of ignition.	Persons not wearing suitable	
personal protective equipment a	should be excluded from area	
of spill if possible to do so t	vithout hazard. Prevent mater-	
ial from entering sewers or wat	cercourses. Provide adequate	
ventilation. Contain spilled ma	aterials with sand or earth.	
Recover undamaged and minimally	y contaminated material for	
reuse or reclamation. Place al.	collected material and spill	
absorbents into DOT approved co	ontainers.	
substance (see Section 10) not	ify the U.S.EPA and/or the	
National Response Center. Addit	cional notification pursuant	
to SARA Section 302/304 (40 CF)	R 355) may also be required.	
Waste Disposal Method		
Treatment, storage, transportat	cion and disposal must be in	
the Resource Conservation and 1	Recovery Act (40 CFR 260-271).	
ection: 08 SPECIAL PROTECTIVE I	VFORMATION	
Respiratory Protection		
If workplace exposure limit(s)	of product or any component	
is exceeded, an NIOSH/MSHA app	coved air supplied respirator	
is advised in absence of proper	r environmental control. OSHA	
Inegative pressure organic war	NIUSH/MSHA RESpirators	
conditions. Engineering or adm	inistrative controls should	
be implemented to reduce exposi-	ire.	
Vențilation		
The use of mechanical dilution	ventilation is recommended	
whenever this product is used	in confined spaces, is heated	
above ambient temperatures on	a saitstat When smaller a	

employee exposures below safe working limits (TWA's).

#### Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

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**DUTIU** 

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#### Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

#### Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

#### Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

#### Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

#### Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes. FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

#### Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

c) \$

ion: 10 REGULATORY INFORMATION	CONTINUED
Component Name	<u>RQ TPQ % Range</u>
cyclohexylamine	1 10000 < 25%
Section 311/312 Chemical Inventory Re	porting Requirements (40 CFR 370)
The Superfund Amendments and Reautho	prization Act (SARA) may
require submission of reports (chemi	cal list, MSDS, Tier I &
Emergency Response Committee and the	bonse commission, Local
The SARA physical and health hazards	s related to this product
are:	-
X Acuto Health Hazard	Sudden Pelezge of Pressure - X Fire
X Chronic Health Hazard	Reactive
	-
Section 313-List of Toxic Chemicals	(40 CFR 372)
to the reporting requirements of Sec	tion 313 of the
Emergency Planning and Community Ric	ht-to-Know Act of 1986
(40 CFR 372). This information shoul	d be included in all
MSDSs that are copied and distribute	d for this material.
Component Name	CAS # % Range
**NONE**	<u> </u>
CEDOLA 40 CED 201 NUE 202	
The Comprehensive Environmental Rest	conse. Compensation, and
Liability Act of 1980 (CERCLA) requi	res notification of the
National Response Center 1-800-424-8	802 of any release of a
Hazardous Substances equal to or gre	ater than the reportable
quantities (RQs) listed in 40CFR 302	.4. Values are given in
pounds for the component and not the	e mixture, if applicable.
should be consulted to verify currer	and the regulations
Component Name	CAS # CERCLA RQ
**NONE**	
HA Exposure Limits	
omponent Name	
yclohexylamine	
TWA ppm: 10.0 TWA MG/M3: 40.0	
tional Fire Protection Agency	
2 Health 2	Fire ·
<u>O</u> Reactive	LK Other
partment of Transportation Shipping 1	nformation
parement of franchoreacton bhipping i	le flammable n o e
roper Shipping Name: Corrosive liquid	
roper Shipping Name: Corrosive liquic azard Class: 8	Identification: UN2920

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Section: 10 REGULATORY INFORMATION

CONTINUED

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Hazardous Substance RQ: \*NONE\* Emergency Response Guide Number: 60 Labels: Corrosive Flammable liquid

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Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA. --Section 10 information is to remain attached to the material safety data sheet for this product. --While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated. --END OF MSDS -----

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Product Name: UNICHEM 3141

с

UNICHEM INTERNATIONAL INC.	Emergency Telephone 505-393-7751
P.O. BOX 1499	Previous Version Date 2/10/91
107 N. LEECH Nords NM 98341-1499	Version, 0000002
NOBBS, NM 88241-1499	Version: 0000002
Product Name: UNICHEM 3141	
Chemical Description:	
Proprietary boiler water oxygen	scavenger
ection: 02 HAZARDOUS INGREDIENT	s
	-
Component Name	CAS# <u>% Range</u>
sodium bisulfite	07631-90-5 < 30%
ection: 03 PHYSICAL DATA	
Freezing Point: 13 Deg.F.	Dog F
Specific Gravity(N2O=1) , 1	200 Solubility in water: Complete
Appearance and Odor: Water whit	e. clear liquid: slight musty odor.
	e, ereas reduce, evelop meet
ection: 04 FIRE AND EXPLOSION H	AZARD DATA
ection: 04 FIRE AND EXPLOSION H	AZARD DATA
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None	AZARD DATA
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media	AZARD DATA
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. K	AZARD DATA
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. K fire fighting liquids for prop	AZARD DATA eep containers cool. Contain er disposal.
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. Ko fire fighting liquids for prop- Special Fire Fighting Procedure	AZARD DATA eep containers cool. Contain er disposal.
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ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. Ko fire fighting liquids for prop Special Fire Fighting Procedure Do not enter confined fire space protective equipment including	AZARD DATA eep containers cool. Contain er disposal. g ce without proper personal NIOSH approved self-contained
ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. Ka fire fighting liquids for prop Special Fire Fighting Procedure Do not enter confined fire space protective equipment including breathing apparatus with full	AZARD DATA eep containers cool. Contain er disposal. s ce without proper personal NIOSH approved self-contained facepiece operated in the
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ection: 04 FIRE AND EXPLOSION H Flash Point (Test Method): None Extinguishing Media Material is not combustible. K fire fighting liquids for prop Special Fire Fighting Procedure Do not enter confined fire spa protective equipment including breathing apparatus with full positive pressure demand mode. of water or foam into hot, bur splattering and increase fire to a safe area. Keep unnecessa Unusual Fire and Explosion Haza None ection: 05 HEALTH HAZARD DATA	AZARD DATA eep containers cool. Contain er disposal. s ce without proper personal NIOSH approved self-contained facepiece operated in the Do not inject a solid stream ning pools; this may cause intensity. Evacuate personnel ry people away. ards

WETERTUR PERTI UAIA SUFFT LUCE Product Name: UNICHEM 3141 Section: 05 HEALTH HAZARD DATA CONTINUED Skin Contact may cause irritation. Inhalation: may cause irritation of upper respiratory tract. Ingestion: may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Emergency and First Aid Procedures SKIN Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops. EYES Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention. INHALATION Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention. INGESTION Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person. \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ Section: 06 REACTIVITY DATA Stable (Y=Yes/N=No): Y Stability -- Conditions to Avoid None known. Incompatibility (Materials to Avoid) Avoid contact with oxidizers or alkaline materials. Hazardous Decomposition Products Oxides of sulfur. Hazardous Polymerization May Occur(Y=Yes/N=No): N Hazardous Polymerization -- Conditions to Avoid None Section: 07 SPILL OR LEAK PROCEDURES Steps to be Taken if Material is Released or Spilled

Persons not wearing suitable personal protective equipment

Section: 07 SPILL OR	LEAK PROCEDURES	CONTINUED	
should be excluded	from area of spill	until clean-up has	

PAGE

3

been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled material with sand or earth. Recovered undamaged or minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.

Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

#### Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

**Respiratory Protection** 

A respirator is normally not required if this product is used with adequate ventilation.

#### Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

#### Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

#### Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

#### Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

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MATERIAL SAFEII	NATA SUPPI	rnyt	* <b>*</b>
Product Name: UNICHEM 3141			
ection: 09 SPECIAL PRECAUTIONS	CONTINUED		
Other Precautions			
Containers of this material may be hazard	ous when emptied.		
Since emptied containers retain product r	esidues (vapor,		
liquid, and/or solid), all hazard precaut	ions given in the		
data sheet must be observed. Do not trans	fer to improperly		
Do not cut heat weld or expose contain	empty container.		
other sources of ignition. Keep container	closed. Use with		
adequate ventilation. Wash thoroughly aft	er handling.		
Containers should be grounded and bonded	to receiving		
container(s) when being emptied. Containe	rs should not be		
washed out and used for other purposes.			
FOR INDUSTRIAL USE ONLY			
ection: 10 REGULATORY INFORMATION			
Superfund Amendments and Reauthorization A	ct Of 1986(SARA) Title	III	
Section 302/304-Extremely Hazardous Subs	tances (40 CFR 355)		_
SARA requires emergency planning based (	on Threshold Planning		
Quantities (TPQs) and release reporting	based on Reportable	•	
Quantities (RQs) in 40 CFR 355 (used for	SARA 302, 304, 311		
and 312). These values are subject to cl	hange and the		
requirements	ty current statutory		
Components present in this product a	at a level which		
could require reporting under the statut	ce are:		
Component Name	RQ I	PQ % Range	
**NONE**			
Section 311/312 Chemical Inventory Report	ing Requirements (40 C	FR 370)	
The Superfund Amendments and Reauthoriza	ation Act (SARA) may		
require submission of reports (chemical	list, MSDS, Tier I &		
Tier II) to the State Emergency Response	e Commission, Local		
The SARA physical and health hazards re	lated to this product		
are:	lated to this product		
X Acute Health Hazard Suc	lden Release of Pressur	e Fire	
Chronic Health Hazard Rea	active		
Section 313-List of Toxic Chemicals (40	CFR 372)		
This product contains the following tox:	c chemicals subject		
to the reporting requirements of Section	1 313 of the		
Emergency Planning and Community Right-1	co-know ACT OI 1986		
MSDSs that are copied and distributed for	or this material.		
Component Name	CAS #	% Range	
**NONE**			

	NICHEM 3141	
ction: 10 REGULA	TORY INFORMATION	CONTINUED
CERCLA, 40 CFR	261 AND 302	
The Comprehens	ive Environmental	Response, Compensation, and
Liability Act	of 1980 (CERCLA) r	requires notification of the
National Respo	nse Center 1-800-4	124-8802 of any release of a
Hazardous Subs	tances equal to or	greater than the reportable
pounds for the	s inscent and not	the mixture, if applicable.
(These values	are subject to cha	ange and the regulations
should be cons	ulted to verify cu	irrent statutory levels.)
Component Name		
sodium bisulfi	te	07631-90-5 5000
SHA Exposure Lim	its	
Component Name		
BOGIUM DISUIFICE	- 	
	IWA 167115. 5.0	, ,
ational Fire Pro	tection Agency	
$\frac{2}{2}$ Health		<u>0</u> Fire
0 Reactive		ACID Other
epartment of Tra	nsportation Shippi	ing Information
Proper Shipping	Name: Bisulfites,	inorganic, aqueous solutions, n.o.s.
Hazard Class: 8		Identification: UN2693
Packaging Group: Contains: sodium	PG III bigulfite	
Hazardous Substa	nce RO: 16700#	Emergency Response Guide Number: 60
Labels: Corrosiv	e	
oxic Substances	Control Act (TSCA)	. 40 CFR 261
This product (or	components if pro	oduct is a mixture) is in
compliance with	TSCA.	
section 10 infor	mation is to remain the for this module	In attached to the material
Parech nata Ruee 	c for this product	·•
While UNICHEM IN	TERNATIONAL believ	ves that the above data is
correct, UNICHEM	INTERNATIONAL exp	pressly disclaims liability
for any loss or	injury arising out	of the use of this
information or t	he use of any mate	erials designated.
 END OF MSDS		
END OF MSDS		

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ection: 01 PRODUCT IDENTIFICA	TION	
UNICHEM INTERNATIONAL INC. P.O. BOX 1499 707 N. LEECH HOBBS, NM 88241-1499	Emergency Telephone Previous Version Date Date Prepared Version: 0000003	505-393-7751 9/21/93 10/07/93
Product Name: UNICHEM 2310		
Chemical Description: Proprietary Corrosion Inhibit	or Blend	
ection: 02 HAZARDOUS INGREDIE	NTS	
Component Name sodium nitrite	<u>CA</u> 07632-	<u>S# % Range</u> 00−0 < 25%
ection: 03 PHYSICAL DATA		
Freezing Point: 22 Deg.F. Boiling Point, 760 mm Hg: 21 Specific Gravity(H2O=1) : Appearance and Odor: Light ye	2 Deg.F 1.160 Solubility in w llow to water-white, clear l	vater: Complete iquid; very slight odor
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#### Section: 05 HEALTH HAZARD DATA

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Skin Contact: may cause irritation with symptoms of redness, itching and pain. Prolonged contact may cause irritation and chronic dermatitis. Material absorbed through broken skin produces symptoms similar those for ingestion.

- Inhalation: heated or agitated product may cause irritatation of the respiratory tract. Symptoms may include coughing, shortness of breath.
- Ingestion: may cause gastroenteritis and abdominal pains. Purging and diuresis can be expected. Can cause nausea, vomiting, diarrhea, weakness, depression, headaches, skin rashes, dry skin, loss of hair, cracked lips, shock.

Emergency and First Aid Procedures

#### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

#### EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

#### INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

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Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid None known.

Incompatibility (Materials to Avoid)

Acids and strong reducing agents.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization Conditions to Avoid None ection: 07 SPILL OR LEAK PROCEDURES Steps to be Taken if Material is Released or Spilled Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled material with sand or earth. Recovered undamaged or minimally contaminated material for reuse or reclamation. Place all collected material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers. Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required. Waste Disposal Method Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271). ection: 08 SPECIAL PROTECTIVE INFORMATION Respiratory Protection If a respirator is determined to be necessary, respirators approved by NIOSH and MSHA and selected for the hazard by qualified persons shall be used. Conditions unique to the workplace may allow air purifying devices selected for the contamine(s) of concern, or require supplied air or self- contained breathing apparatus. Engineering or administrative controls should be implemented to reduce exposures. Ventilation The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's). Protective Gloves	ection: 06 REACTIVITY DATA	CONTINUED
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Protective Gloves	Treatment, storage, transportati accordance with EPA or State reg the Resource Conservation and Re ection: 08 SPECIAL PROTECTIVE INF <u>Respiratory Protection</u> If a respirator is determined to approved by NIOSH and MSHA and a qualified persons shall be used. workplace may allow air purifyin contaminate(s) of concern, or re contained breathing apparatus. E controls should be implemented t <u>Ventilation</u> The use of mechanical dilution w whenever this product is used in above ambient temperatures or is sufficient local ventilation sho	Lon and disposal must be in gulations under authority of ecovery Act (40 CFR 260-271). FORMATION D be necessary, respirators selected for the hazard by Conditions unique to the ng devices selected for the equire supplied air or self- Engineering or administrative to reduce exposures. Ventilation is recommended in confined spaces, is heated is agitated. When applicable, build be provided to maintain Derking limits (TWD La)
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MATERIAL

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SAFETY

DATA

SHEET

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Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also

HATERIC PERT PALA SUPE	FAGE 4
Product Name: UNICHEM 2310	з,
Section: 08 SPECIAL PROTECTIVE INFORMATION <u>CONTINUED</u>	
permits safety glasses under certain conditions. The use of contact lenses is not recommended.	
Other Protective Equipment	
Eye wash and salety shower	
Section: 09 SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling and Storing Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.	
Other Precautions Containers of this material may be hazardous when emptied.	
Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container.	
Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes.	
FOR INDUSTRIAL USE ONLY	
Section: 10 REGULATORY INFORMATION	
Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III	
Section 302/304-Extremely Hazardous Substances (40 CFR 355)	
SARA requires emergency planning based on Threshold Planning Quantities (TPOs) and release reporting based on Reportable	
Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311	
and 312). These values are subject to change and the	
regulations should be consulted to verify current statutory	
Components present in this product at a level which	
could require reporting under the statute are:	
Component Name RQ TPQ % Ran **NONE**	nge
Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)	<u> </u>
The Superfund Amendments and Reauthorization Act (SARA) may	
Tier II) to the State Emergency Response Commission, Local	
Emergency Response Committee and the local fire department.	
The SARA physical and health hazards related to this product are:	
X Acute Health Hazard Sudden Release of Pressure Fi	ire

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tion: 10 REGULATORY INFORMATION	CONTINUED
Section 313-List of Toxic Chemic This product contains the follo to the reporting requirements o Emergency Planning and Communit (40 CFR 372). This information MSDSs that are copied and distr	cals (40 CFR 372) owing toxic chemicals subject of Section 313 of the cy Right-to-Know Act of 1986 should be included in all cibuted for this material.
Component Name **NONE**	CAS # % Range
CERCLA, 40 CFR 261 AND 302 The Comprehensive Environmental Liability Act of 1980 (CERCLA) National Response Center 1-800- Hazardous Substances equal to o quantities (RQs) listed in 40CF pounds for the component and no (These values are subject to ch should be consulted to verify o	Response, Compensation, and requires notification of the -424-8802 of any release of a or greater than the reportable FR 302.4. Values are given in of the mixture, if applicable. hange and the regulations current statutory levels.)
<u>Component Name</u> sodium nitrite	$\frac{CAS \#}{0.7522} = 0.0 = 0$
HA Exposure Limits	07832-00-0 100
HA Exposure Limits component Name **NONE** tional Fire Protection Agency	07832-00-0 100
HA Exposure Limits component Name **NONE** tional Fire Protection Agency 2 Health 0 Reactive	<u>0</u> Fire Other
HA Exposure Limits         Component Name         **NONE**         Ational Fire Protection Agency         2 Health         0 Reactive         Partment of Transportation Shipp         Proper Shipping Name: Environment         Maximum Class:         9         Ackaging Group:         Partments:         Marine Pollutant         Maximum Substance RQ:         400#         Abels:         Class	<u>O</u> Fire <u>Other</u> Other Ding Information Constant in the second substance, liquid, n.o.s. Identification: UN3082 Emergency Response Guide Number: 31

Section: 10 REGULATORY INFORMATION

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END OF MSDS

ection: 01 PRODUCT IDENTIFICAT	lon
UNICHEM INTERNATIONAL INC. P.O. BOX 1499 707 N. LEECH HOBBS, NM 88241-1499	Emergency Telephone 505-393-7751 Previous Version Date 3/01/87 Date Prepared 10/13/93 Version: 0000002
Product Name: UNICHEM 2010	· ·
Chemical Description: Proprietary Corrosion and Scal	e Inhibitor Blend
ection: 02 HAZARDOUS INGREDIEN	
<u>Component Name</u> sodium molybdate	<u>CAS# % Range</u> 10102-40-6 < 25%
ection: 03 PHYSICAL DATA	
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi	Deg.F 200 Solubility in water: Complete .te, clear liquid; slightly sweet odor.
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION	Deg.F .200 Solubility in water: Complete te, clear liquid; slightly sweet odor. HAZARD DATA
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): NON	Deg.F 200 Solubility in water: Complete .te, clear liquid; slightly sweet odor. HAZARD DATA
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): NON Extinguishing Media This material is non-combusti involved in a fire, use an ex to surrounding materials. Wat containers of this material e extinguishing materials shoul determination of proper dispo	Deg.F .200 Solubility in water: Complete te, clear liquid; slightly sweet odor. HAZARD DATA E ble. If this material is tinguishing agent appropriate er spray may be used to cool exposed to a fire. Fire d be collected for osal.
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): NON Extinguishing Media This material is non-combusti involved in a fire, use an ex to surrounding materials. Wat containers of this material e extinguishing materials shoul determination of proper dispo Special Fire Fighting Procedur Fire fighters should wear sel with a full facepiece operate	<pre>Deg.F .200 Solubility in water: Complete te, clear liquid; slightly sweet odor. HAZARD DATA TE ble. If this material is ttinguishing agent appropriate ter spray may be used to cool exposed to a fire. Fire d be collected for osal. Tes f-contained breathing apparatus ed in the pressure-demand or</pre>
Freezing Point: 25 Deg.F. Boiling Point, 760 mm Hg: 212 Specific Gravity(H2O=1) : 1 Appearance and Odor: Water whi ection: 04 FIRE AND EXPLOSION Flash Point (Test Method): NON Extinguishing Media This material is non-combusti involved in a fire, use an ex to surrounding materials. Wat containers of this material e extinguishing materials shoul determination of proper dispo Special Fire Fighting Procedur Fire fighters should wear sel with a full facepiece operate positive-pressure mode. Unusual Fire and Explosion Haz May release toxic or corrosiv destroyed in a fire.	<pre>Deg.F .200 Solubility in water: Complete te, clear liquid; slightly sweet odor. HAZARD DATA TE ble. If this material is thinguishing agent appropriate er spray may be used to cool exposed to a fire. Fire d be collected for osal. tes f-contained breathing apparatus ed in the pressure-demand or tards re material if container is</pre>

#### Section: 05 HEALTH HAZARD DATA

### CONTINUED

eyes. Brief contact with vapors or liquid will be severely irritating. Brief contact of the liquid or mists can severely damage the eyes and prolonged contact may cause permanent eye injury which may be followed by blindness.

·- .. .

- Skin Contact: vapors, mists and liquid are corrosive to the skin. Vapors or mists can irritate or burn. Prolonged liquid contact will burn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body. Prolonged contact may cause chronic dermatitis. Absorption of this material through broken skin produces symptoms similar those for ingestion.
- Inhalation: can cause irritation of nasal and respiratory passages. Vapors and mists are corrosive to the nose, throat and mucous membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain, and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. Breathing high concentrations may result in death.
- Ingestion: vapors, mists and liquid are corrosive to the mouth and throat. Swallowing the liquid turns the tissues, causes severe abdominal pain, nausea, vomiting and collapse. Swallowing large quantities can cause death. Can cause nausea, vomiting, diarrhea, weakness, depression, headaches, skin rashes, dry skin, loss of hair, cracked lips and shock.
- Chronic Effects of Exposure: may result in area of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues and also increasing susceptibility to respiratory illness.

Emergency and First Aid Procedures

### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

#### EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

ection: 05 HEALTH HAZARD DATA	CONTINUED	 
INGESTION		 •
Do NOT induce vomiting unless instr	ructed by a physician or	
poison control center. Never give a	nything by mouth to an	
unconscious person.		
ection: 06 REACTIVITY DATA		 <b></b>
Stable (Y=Yes/N=No): Y		 
Stability Conditions to Avoid		
None known.		
Incompatibility (Materials to Avoid)	r acidio matorialo	
Avoid contact with strong oxidizers o	r acidic Materials.	
Hazardous Decomposition Products		
Smoke, carbon dioxide, carbon monoxid	e, oxides of nitrogen.	
Hazardous Polymerization May Occur(Y=Y	es/N=No): N	
Hazardous Polymerization May Occur(Y=Y	<u>es/N=No): N</u>	
Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None	es/N=No): <u>N</u> to Avoid	
Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None	es/N=No): <u>N</u> to Avoid	
Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None ection: 07 SPILL OR LEAK PROCEDURES	es/N=No): <u>N</u> to Avoid	 
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Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None ection: 07 SPILL OR LEAK PROCEDURES Steps to be Taken if Material is Relea Persons not wearing suitable personal should be excluded from area of spill	es/N=No): N to Avoid sed or Spilled protective equipment until clean-up has	 
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Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None ection: 07 SPILL OR LEAK PROCEDURES Steps to be Taken if Material is Relea Persons not wearing suitable personal should be excluded from area of spill been completed. Shut off source of sp so without hazard. Prevent material f watercourses. Provide adequate ventil material with sand or earth. Recovere minimally contaminated material for r Place all collected material and spil DOT approved containers. Advise authorities. If this product i substance (see Section 10), notify th National Response Center. Additional to SARA Section 302/304 (40 CFR 355) Waste Disposal Method Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover	<pre>es/N=No): N to Avoid sed or Spilled protective equipment until clean-up has ill if possible to do rom entering sewers or ation. Contain spilled d undamaged or euse or reclamation. l absorbents into s an EPA hazardous e U.S.EPA or the notification pursuant may also be required. d disposal must be in ons under authority of v Act (40 CFR 260-271).</pre>	
Hazardous Polymerization May Occur(Y=Y Hazardous Polymerization Conditions None ection: 07 SPILL OR LEAK PROCEDURES Steps to be Taken if Material is Relea Persons not wearing suitable personal should be excluded from area of spill been completed. Shut off source of sp so without hazard. Prevent material f watercourses. Provide adequate ventil material with sand or earth. Recovere minimally contaminated material for r Place all collected material and spil DOT approved containers. Advise authorities. If this product i substance (see Section 10), notify th National Response Center. Additional to SARA Section 302/304 (40 CFR 355) Waste Disposal Method Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover	<pre>es/N=No): N to Avoid sed or Spilled protective equipment until clean-up has ill if possible to do rom entering sewers or ation. Contain spilled d undamaged or euse or reclamation. 1 absorbents into s an EPA hazardous e U.S.EPA or the notification pursuant may also be required. d disposal must be in ons under authority of y Act (40 CFR 260-271).</pre>	

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# Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

approved by NIOSH and MSHA and selected for the hazard by qualified persons shall be used. Conditions unique to the workplace may allow air purifying devices selected for the contaminate(s) of concern, or require supplied air or selfcontained breathing apparatus. Engineering or administrative controls should be implemented to reduce exposures.

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#### Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

#### Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

#### Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

#### Section: 09 SPECIAL PRECAUTIONS

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Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

#### Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes. FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act ()f 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Ł

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Quantities (RQs) in 40 CFR 355 (used for and 312). These values are subject to consultations should be consulted to veri- requirements. Components present in this product could require reporting under the statu	r SARA 302, 304, 311 hange and the fy current statutory at a level which te are:	
Component Name **NONE**	RQ	TPQ % Range
ection 311/312 Chemical Inventory Report The Superfund Amendments and Reauthoriza require submission of reports (chemical Tier II) to the State Emergency Response Emergency Response Committee and the log The SARA physical and health hazards re- are:	ting Requirements (40 ation Act (SARA) may list, MSDS, Tier I & e Commission, Local cal fire department. lated to this product	CFR 370)
X Acute Health Hazard Su Chronic Health Hazard Re	dden Release of Pressu active	re Fire
Emergency Planning and Community Right-4 (40 CFR 372). This information should be MSDSs that are copied and distributed for	to-Know Act of 1986 e included in all or this material.	
Component Name **NONE**	<u>CAS</u> #	% Range
ERCLA, 40 CFR 261 AND 302 The Comprehensive Environmental Response Liability Act of 1980 (CERCLA) requires National Response Center 1-800-424-8802	e, Compensation, and notification of the of any release of a r than the reportable	
Hazardous Substances equal to or greate quantities (RQs) listed in 40CFR 302.4. pounds for the component and not the min (These values are subject to change and should be consulted to verify current so	Values are given in xture, if applicable. the regulations tatutory levels.)	
Hazardous Substances equal to or greate quantities (RQs) listed in 40CFR 302.4. pounds for the component and not the min (These values are subject to change and should be consulted to verify current so <u>Component Name</u> **NONE**	Values are given in xture, if applicable. the regulations tatutory levels.) <u>CAS #</u>	CERCLA RQ
Hazardous Substances equal to or greate quantities (RQs) listed in 40CFR 302.4. pounds for the component and not the min (These values are subject to change and should be consulted to verify current s <u>Component Name</u> **NONE** <u>A Exposure Limits</u> <u>mponent Name</u> dium molybdate TWA MG/M3: 5.0	Values are given in xture, if applicable. the regulations tatutory levels.) <u>CAS #</u>	CERCLA RQ

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Section: 10 REGULATORY INFORMATION	CCINTINUED
Department of Transportation Ship	ping Information
Proper Shipping Name: Corrosive	liquids, n.c.s.
Hazard Class: 8	Identification: UN1760
Packaging Group: PG III	
Contains: sodium molybdate	
Hazardous Substance RQ: *NONE*	Emergency Response Guide Number: 60
Labels: Corrosive	

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Toxic Substances Control Act (TSCA), 40 CFR 261 This product (or components if product is a mixture) is in compliance with TSCA. - -Section 10 information is to remain attached to the material safety data sheet for this product. - -While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated. - -

END OF MSDS

MATERIAL SAFETY DATA SHEET Product Name: UNICHEM 1304 Section: 01 PRODUCT IDENTIFICATION \_\_\_\_\_\_ ------UNICHEM INTERNATIONAL INC. Emergency Telephone 505-393-7751 Previous Version Date P.O. BOX 1499 4/12/93 9/21/93 707 N. LEECH Date Prepared HOBBS, NM 88241-1499 Version: 0000002 Product Name: UNICHEM 1304 Chemical Description: Proprietary cooling water treatment blend \_\_\_\_\_\_ Section: 02 HAZARDOUS INGREDIENTS Component Name CAS# % Range 01310-58-3 < 15% potassium hydroxide Section: 03 PHYSICAL DATA \_\_\_\_\_ \_\_\_\_\_ Freezing Point: 5 Deg.F. Boiling Point, 760 mm Hg: 212 Deg.F Specific Gravity(H2O=1) : 1.340 Solubility in water: Soluble Appearance and Odor: Clear, amber liquid; sweet odor. \_\_\_\_\_ Section: 04 FIRE AND EXPLOSION HAZARD DATA Flash Point (Test Method): None Extinguishing Media This material is non-combustible. If this material is involved in a fire, use an extinguishing agent appropriate to surrounding materials. Water spray may be used to cool containers of this material exposed to a fire. Fire extinguishing materials should be collected for determination of proper disposal. Special Fire Fighting Procedures Fire fighters should wear self-contained breathing apparatus with a full facepiece operated in the pressure-demand or positive-pressure mode. Unusual Fire and Explosion Hazards May release toxic or corrosive material if container is destroyed in a fire. Section: 05 HEALTH HAZARD DATA \_\_\_\_\_ Effects of Overexposure Eye Contact: vapors, liquid and mists are corrosive to the

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# Section: 05 HEALTH HAZARD DATA

#### CONTINUED

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eyes. Brief contact of the vapors will be cause irritation while brief contact of the liquid or mists will cause damage the eyes. Prolonged contact may cause permanent eye injury which may be followed by blindness.
Skin Contact: vapors, mists and liquid are corrosive to the skin. Vapors will irritate the skin and liquid will burn the skin. Prolonged liquid contact will turn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body. Some skin absorption may occur.
Inhalation: vapors and mists are corrosive to the nose, throat, and mucous membranes. Bronchitis, pulmonary edema and chemical provmenitie may accur.

edema and chemical pneumonitis may occur. Irritation, coughing, chest pain, difficulty in breathing, headache and nausea may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. Breathing high concentrations may result in death.

- Ingestion: vapors, mists and liquid are corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting and collapse. Swallowing large quantities can cause death.
- Chronic Effects of Exposure: may result in area of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues and also increasing susceptibility to respiratory illness.

# Emergency and First Aid Procedures

#### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

# EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

#### INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

MAT	ERIAL	SAFETY	DATA	SHEET

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Section: 05 HEALTH HA	ZARD DATA	CONTINUED	
Section: 06 REACTIVIT	Y DATA		
Stable (Y=Yes/N=No):	<u>Y</u>		
Stability Conditi	ons to Avoid		
None known.			
Incompatibility (Mat	erials to Avoid)		
Strong oxidizing ag	ents and strong	acids.	
Hazardous Decomposit	ion Products		
Smoke, carbon dioxi	de, carbon monox	ide, oxides of nitrogen.	
Hazardous Polymeriza	tion May Occur(Y	=Yes/N=No): N	
Hazardous Polymeriza None	tion Conditio	ns to Avoid	
Steps to be Taken if Persons not wearing should be excluded	Material is Rel suitable person from area of spi	eased or Spilled al protective equipment 11 until clean-up has	
Section: 07 SPILL OR Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material for material and sp ners. If this product ion 10), notify enter. Additiona	eased or Spilled al protective equipment 11 until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the 1 notification pursuant	
Section: 07 SPILL OR Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C to SARA Section 302	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material for material and sp ners. If this product ion 10), notify enter. Additiona /304 (40 CFR 355	eased or Spilled al protective equipment ll until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the l notification pursuant ) may also be required.	
Section: 07 SPILL OR Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C to SARA Section 302 Waste Disposal Metho Treatment, storage, accordance with EPA the Resource Conser	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material for material and sp ners. If this product ion 10), notify enter. Additiona /304 (40 CFR 355 d transportation or State regula vation and Recov	eased or Spilled al protective equipment 11 until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the 1 notification pursuant ) may also be required. and disposal must be in tions under authority of ery Act (40 CFR 260-271).	
Section: 07 SPILL OR Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C to SARA Section 302 Waste Disposal Metho Treatment, storage, accordance with EPA the Resource Conser Section: 08 SPECIAL P	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material for material and sp ners. If this product ion 10), notify enter. Additiona /304 (40 CFR 355 d transportation or State regula vation and Recov	eased or Spilled al protective equipment 11 until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the 1 notification pursuant ) may also be required. and disposal must be in tions under authority of ery Act (40 CFR 260-271).	
Section: 07 SPILL OR Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C to SARA Section 302 Waste Disposal Metho Treatment, storage, accordance with EPA the Resource Conser Section: 08 SPECIAL P Respiratory Protecti	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material and sp ners. If this product ion 10), notify enter. Additiona /304 (40 CFR 355 d transportation or State regula vation and Recov ROTECTIVE INFORM	eased or Spilled al protective equipment 11 until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the 1 notification pursuant ) may also be required. and disposal must be in tions under authority of ery Act (40 CFR 260-271).	
Steps to be Taken if Persons not wearing should be excluded been completed. Shu so without hazard. watercourses. Provi material with sand minimally contamina Place all collected DOT approved contai Advise authorities. substance (see Sect National Response C to SARA Section 302 Waste Disposal Metho Treatment, storage, accordance with EPA the Resource Conser ection: 08 SPECIAL P Respiratory Protecti If a respirator is	Material is Rel suitable person from area of spi t off source of Prevent material de adequate vent or earth. Recove ted material and sp ners. If this product ion 10), notify enter. Additiona /304 (40 CFR 355 d transportation or State regula vation and Recov ROTECTIVE INFORM on determined to be	eased or Spilled al protective equipment 11 until clean-up has spill if possible to do from entering sewers or ilation. Contain spilled red undamaged or reuse or reclamation. ill absorbents into is an EPA hazardous the U.S.EPA or the 1 notification pursuant ) may also be required. and disposal must be in tions under authority of ery Act (40 CFR 260-271). ATION	

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# Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

contained breathing apparatus. Engineering or administrative controls should be implemented to reduce exposures.

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#### Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

#### Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

#### Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

#### Other Protective Equipment

Eye wash and safety shower

#### Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes. FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

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#### Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

MATERIAL SAFETY DATA SHE	S E	$\mathbf{T}$
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Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       RQ TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Health Hazard       _ Reactive         Y Acute Health Hazard       _Sudden Release of Pressure _ Fire Y Chronic Chemicals (Qo CFR 201 AND 302       Y Reactive _ Fise A Range         Case # Component And		CONTINUED
Component Name **NONE**       RQ       TPQ       * Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)       The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard       _Sudden Release of Pressure	Components present in this p could require reporting under the	product at a level which le statute are:
Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission for prots (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard	Component Name **NONE**	RQ TPQ % Range
X Acute Health Hazard	Section 311/312 Chemical Inventor The Superfund Amendments and Rear require submission of reports (cl Tier II) to the State Emergency I Emergency Response Committee and The SARA physical and health haz are:	y Reporting Requirements (40 CFR 370) Authorization Act (SARA) may chemical list, MSDS, Tier I & Response Commission, Local I the local fire department. Fards related to this product
Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # & Range         **NONE**       **NONE**         EERCLA, 40 CFR 261 AND 302         The Comprehensive Environmental Response, Compensation, and         Liability Act of 1980 (CERCLA) requires notification of the         National Response Center 1-800-424-8802 of any release of a         Hazardous Substances equal to or greater than the reportable         quantities (RQs) listed in 40CFR 302.4. Values are given in         pounds for the component and not the mixture, if applicable.         (These values are subject to change and the regulations         should be consulted to verify current statutory levels.)         Component Name         potassium hydroxide         Cas #         Celling MG/M3       2.0         tional Fire Protection Agency         2 Health       0 Fire         0 Reactive       ALK Other	$\underline{X}$ Acute Health Hazard $\underline{X}$ Chronic Health Hazard	_ Sudden Release of Pressure _ Fire _ Reactive
Component Name       CAS #       % Range         **NONE**       SERCLA, 40 CFR 261 AND 302       The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)         Component Name potassium hydroxide       CAS #       CERCLA RQ 01310-58-3       1000         IA Exposure Limits mponent Name reasoname	Section 313-List of Toxic Chemica This product contains the follow to the reporting requirements of Emergency Planning and Community (40 CFR 372). This information sl MSDSs that are copied and distril	ls (40 CFR 372) ying toxic chemicals subject Section 313 of the Right-to-Know Act of 1986 should be included in all buted for this material.
CERCLA, 40 CFR 261 AND 302         The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)         Component Name potassium hydroxide       CAS # CERCLA RQ 01310-58-3 1000         MA Exposure Limits mponent Name btassium hydroxide       Celling MG/M3 2.0         Component Fire Protection Agency       0 Fire ALK Other	Component Name **NONE**	CAS # % Range
Component Name       CAS #       CERCLA RQ         potassium hydroxide       01310-58-3       1000         IA Exposure Limits	CERCLA, 40 CFR 261 AND 302 The Comprehensive Environmental I Liability Act of 1980 (CERCLA) re National Response Center 1-800-42 Hazardous Substances equal to or quantities (RQs) listed in 40CFR pounds for the component and not (These values are subject to chan should be consulted to verify cu	Response, Compensation, and requires notification of the 24-8802 of any release of a greater than the reportable 302.4. Values are given in the mixture, if applicable. ange and the regulations arrent statutory levels.)
A Exposure Limits pmponent Name ptassium hydroxide Ceiling MG/M3 2.0 tional Fire Protection Agency 2 Health 0 Fire 0 Reactive ALK Other	<u>Component Name</u> potassium hydroxide	<u>CAS #</u> <u>CERCLA RQ</u> 01310-58-3 1000
Ceiling MG/M3 2.0 ional Fire Protection Agency 2 Health 0 Fire 0 Reactive ALK Other	HA Exposure Limits omponent Name otassium hydroxide	
2 Health     0 Fire       0 Reactive     ALK Other	Ceiling MG/M3	2.0
2 Health 0 Fire 0 Reactive ALK Other	tional Fire Protection Agency	
0 Reactive ALK Other		0 Fire
	2 Health	

Product Name:	UNICHEM	1304
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Section: 10 REGULATORY INFORMATION

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Hazard Class:8Identification:UN1760Packaging Group:PG IIContains:potassium hydroxideHazardous Substance RQ:6700#Emergency Response Guide Number:60Labels:Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA. ---Section 10 information is to remain attached to the material safety data sheet for this product. ---While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated. ---END OF MSDS

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Section: 01 PRODUCT IDENTIFIC	ATION
UNICHEM INTERNATIONAL INC. P.O. BOX 1499 707 N. LEECH HOBBS, NM 88241-1499	Emergency Telephone 505-393-7751 Previous Version Date 3/09/92 Date Prepared 9/21/93 Version: 0000002
Product Name: UNICHEM 4500 Chemical Description: Proprietary resin cleaner	
Section: 02 HAZARDOUS INGREDI	ENTS
<u>Component Name</u> sodium carbonate	<u>CAS# % Range</u> 00497-19-8 < 10%
Section: 03 PHYSICAL DATA	
Section: 04 FIRE AND EXPLOSIC	IN HAZARD DATA
Flash Point (Test Method): N	one
Extinguishing Media Material is not combustible fire fighting liquids for p	. Keep containers cool. Contain proper disposal.
Special Fire Fighting Proced	lures
Fire fighters should wear s with a full facepiece opera positive-pressure mode.	elf-contained breathing apparatus ited in the pressure-demand or
Unusual Fire and Explosion H None	lazards
Section: 05 HEALTH HAZARD DAT	'A
Effects of Overexposure Eye Contact: can cause irri	tation or burns and permanent
Skin Contact: prolonged or irritation, even a burn.	repeated exposure may cause skin
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#### MATERIAL SAFETY DATA SHEET

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#### Product Name: UNICHEM 4500

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Section:	05	HEALTH	HAZARD	DATA	C	CNTINUEL

Ingestion: can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Systemic and Other Effects: excessive exposure may cause

liver and kidney effects.

Emergency and First Aid Procedures

#### SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

#### EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

#### INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

#### INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

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Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid) Avoid contact with strong oxidizers or acidic materials.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=Nc): N

Hazardous Polymerization -- Conditions to Avcid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Persons not wearing suitable personal protective equipment

CION: 07 SPILL OR LEAK PROCEDURES <u>CONTINUED</u>	
should be excluded from area of spill until clean-up has	
peen completed. Shut off source of spill if possible to do	
so without hazard. Prevent material from entering sewers or	
vatercourses. Provide adequate ventilation. Contain spilled	
naterial with sand or earth. Recovered undamaged or	
inimally contaminated material for reuse or reclamation.	
Place all collected material and spill absorbents into	
OT approved containers.	
Advise authorities. If this product is an EPA hazardous	
substance (see Section 10), notify the U.S.EPA or the	
National Response Center. Additional notification pursuant	
o SARA Section 302/304 (40 CFR 355) may also be required.	
aste Disposal Method	
reatment, storage, transportation and disposal must be in	
accordance with EPA or State regulations under authority of	
the Resource Conservation and Recovery Act (40 CFR 260-271).	
tion: 08 SPECIAL PROTECTIVE INFORMATION	
espiratory Protection	
f a respirator is determined to be necessary, respirators	
approved by NIOSH and MSHA and selected for the hazard by	
pualified persons shall be used. Conditions unique to the	
orkplace may allow air purifying devices selected for the	
contaminate(s) of concern, or require supplied air or self-	
ontained breathing apparatus. Engineering or administrative	
controls should be implemented to reduce exposures.	
entilation	
The use of mechanical dilution ventilation is recommended	
whenever this product is used in confined spaces, is heated	
above ambient temperatures or is agitated. When applicable,	
sufficient local ventilation should be provided to maintain	
employee exposures below safe working limits (TWA's).	
cotective Gloves	
Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl	
chloride (PVC)	
ye Protection	
Chemical splash goggles or face shield in compliance with	
SHA regulations is advised; however OSHA regulations also	
permits safety glasses under certain conditions. The use of	
contact lenses is not recommended.	
ther Protective Equipment	
lye wash and safety shower .	

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing
tion: 09 SPECIAL PRECAUTIONS  apors or mist.  her Precautions  ontainers of this material may be hazardous when emptied. ince emptied containers retain residues (vapor, liquid, or olid), all hazard precautions given in this data sheet must a observed. Do not transfer to improperly marked container.  sep container closed. Use with adequate ventilation. Wash horoughly after handling. Containers should not be washed to rused for other purposes. DR INDUSTRIAL USE ONLY  befund Amendments and Reauthorization Act of 1986(SARA) Title III  section 302/304-Extremely Hazardous Substances (40 CFR 355) SARA requires emergency planning based on Threshold Planning Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:  Component Name **NORE**  Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commistion, Local Emergency Response Committee and the local fire department. The SARA physical and health hazard selated to this product are:  X Acute Health Hazard Sudden Release of Pressure _ Fire Chronic Health Hazard (A CFR 372) This product contains the following toxis subject to the reporting remements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDS that are copied and distributed for this material. Component Name	tion: 09 SPECIAL PRECAUTIONS  apors or mist:  her Precautions  notainers of this material may be hazardous when emptied. ince emptied containers retain residues (vapor, liquid, or olid), all hazard precautions given in this data sheet must s observed. Do not transfer to improperly marked continer. sep container closed. Use with adequate ventilation. Wash noroughly after handling. Containers should not be washed it or used for other purposes. NR INDUSTRIAL USE ONLY  tion: 10 REGULATORY INFORMATION  serfund Amendments and Reauthorization Act 0f 1986(SARA) Title III  section 302/304-Extremely Hazardous Substances (40 CFR 355) SARA requires emergency planning based on Rhreshold Planning Quantities (FQG) and release reporting based on Reportable Quantities (FQG) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to varify current statutory reguirements. Components present in this product at a level which could require reporting under the statute are:  Component Name **NONE**  section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:  X Acute Health Hazard	duct Name: UNICHEM 4500		
Appors or mist.  her Precautions Ontainers of this material may be hazardous when emptied. ince emptied containers retain residues (vapor, liquid, or olid), all hazard precautions given in this data sheet must e observed. Do not transfer to improperly marked container. eep container closed. Use with adequate ventilation. Wash horoughly after handling. Containers should not be washed ut or used for other purposes. OR INDUSTRIAL USE ONLY  tion: 10 REGULATORY INFORMATION  perfund Amendments and Reauthorization Act <u>3f</u> <u>1986(SARA)</u> <u>Title III</u> Section 302/304-Extremely Hazardous Substanzes (40 CFR 355) SARA requires emergency planning based on Fhreshold Planning Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify turrent statutory requirements. Components present in this product at a level which could require reporting under the statute are:  Component Name	apors or mist.         her Precautions         ontainers of this material may be hazardous when emptied.         Ince emptied containers retain residues (vapor, liquid, or olid), all hazard precautions given in this data sheet must a observed. Do not transfer to improperly marked container.         sep container closed. Use with adquate ventilation. Wash noroughly after handling. Containers should not be washed it or used for other purposes.         R INDUSTRIAL USE ONLY         mion: 10 REGULATORY INFORMATION         section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Reportable Quantities (TPQ) in all release reporting based on Reportable Quantities (TPQ) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory require ments. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE***       RQ TPQ & Range **NONE***         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Baregeong Response Commission, Local Emergency Response Commistee and the local fire department. The SARA physical and health hazard	tion: 09 SPECIAL PRECAUTIONS	CONTINUED	
Sher Precautions         Containers of this material may be hazardous when emptied.         Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container.         Seep container closed. Use with adequate venilation. Wash thoroughly after handling. Containers should not be washed but or used for other purposes.         OR INDUSTRIAL USE ONLY         Ition: 10 REGULATORY INFORMATION         pperfund Amendments and Reauthorization Act 0f 1985(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Threshold Planning Quantities (TRQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify surrent statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       EQ TPQ & Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Commitsee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard       Sudden Release of Pressure       Fire Reactive         Section 313-List of Toxic Chemicals (40 CFR 372) <td>her Precautions         Ontainers of this material may be hazardous when emptied.         ince emptied containers retain residues (vapor, liquid, or         Did), all hazard precautions given in this data sheet must         a observed. Do not transfer to improperly marked container.         sep container closed. Use with adequate ventilation. Wash         horoughly after handling. Containers should not be washed         it or used for other purposes.         RENUSTRIAL USE ONLY         Section 302/304-Extremely Hazardous Substanzes (40 CFR 355)         SARA requires emergency planning based on Reportable         Quantities (TPGs) and release reporting based on Reportable         Quantities (TPGs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         requirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name       RQ TFQ % Range         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The SARP requirements.         Component Name         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The SARP hysical and health hazards related to this product         are:       Sudden Release of Press</td> <td>vapors or mist.</td> <td></td> <td></td>	her Precautions         Ontainers of this material may be hazardous when emptied.         ince emptied containers retain residues (vapor, liquid, or         Did), all hazard precautions given in this data sheet must         a observed. Do not transfer to improperly marked container.         sep container closed. Use with adequate ventilation. Wash         horoughly after handling. Containers should not be washed         it or used for other purposes.         RENUSTRIAL USE ONLY         Section 302/304-Extremely Hazardous Substanzes (40 CFR 355)         SARA requires emergency planning based on Reportable         Quantities (TPGs) and release reporting based on Reportable         Quantities (TPGs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         requirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name       RQ TFQ % Range         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The SARP requirements.         Component Name         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The SARP hysical and health hazards related to this product         are:       Sudden Release of Press	vapors or mist.		
Containers of this material may be hazardous when emptied.         Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container.         See pontainer closed. Use with adequate ventilation. Wash choroughly after handling. Containers should not be washed out or used for other purposes.         FOR INDUSTRIAL USE ONLY         Section 10 REGULATORY INFORMATION         "perfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substanzes (40 CFR 355)         SARA requires emergency planning based on Threshold Planning         Quantities (TQG) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       EQ TPQ % Range **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local         Emergency Response Commistee (40 CFR 372)         The SARA physical and health hazards related to this product are:         X       Acute Health Hazard	Interes of this material may be hazardous when emptied.         ince emptied containers retain residues (vapor, liquid, or         olid), all hazard precautions given in this data sheet must         a observed. Do not transfer to improperly marked container.         sep container closed. Use with adequate ventilation. Wash         horoughly after handling. Containers should not be washed         at or used for other purposes.         RINDUSTRIAL USE ONLY	ther Precautions		
Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes. FOR INDUSTRIAL USE ONLY	<pre>ince emptied containers retain residues (vapor, liquid, or oblid), all hazard precautions given in this data sheet must a observed. Do not transfer to improperly marked container. sep container closed. Use with adequate ventilation. Wash horoughly after handling. Containers should not be washed it or used for other purposes. DR INDUSTRIAL USE ONLY </pre>	Containers of this material may be hazardo	ous when emptied.	
Solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container.         Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes.         FOR INDUSTRIAL USE ONLY	Did), all hazard precautions given in this data sheet must         a observed. Do not transfer to improperly marked container.         sep container closed. Use with adequate ventilation. Wash         horoughly after handling. Centainers should not be washed         it or used for other purposes.         RINDUSTRIAL USE ONLY         scion: 10 REGULATORY INFORMATION         serfund Amendments and Reauthorization Act 0f 1986(SARA) Title III         section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Phreshold Planning         Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         regulations should be consulted to verify current statutory         regulations should be consulted to verify current statutory         components present in this product at a level which         could require reporting under the statute are:         Component Name       EQ         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tis roduct contains the following toxic chemicals subject         the SARA physical and health hazards rela	Since emptied containers retain residues	(vapor, liquid, or	
De Unserveil of Not Citality of Not adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes.         FOR INDUSTRIAL USE ONLY	Bigs of the indext in the dequate ventilation. Wash obsorpting after handling. Containers should not be washed it or used for other purposes.         DR INDUSTRIAL USE ONLY         Determine indext in the dequate ventilation. Wash obsorpting after handling. Containers should not be washed it or used for other purposes.         DR INDUSTRIAL USE ONLY         Determine indext indext indext ventilation.         Determine indext indext indext indext ventilation.         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Rhreshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       EQ TPQ & Range **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)       The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical lite, MSDS, Tier I & Tier II) to the State Emergency Response Commistee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health HazardSudden Release of Pressure Fire	solid), all hazard precautions given in the observed. Do not transfor to improperly	nis data sheet must	
thoroughly after handling. Containers should not be washed out or used for other purposes. FOR INDUSTRIAL USE ONLY 	horoughly after handling. Containers should not be washed the or used for other purposes. RR INDUSTRIAL USE ONLY         tion: 10 REGULATORY INFORMATION         perfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Enceshold Planning Quantities (ROS) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the requirenents.         Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard - Chronic Health Hazard - Chronic Health Hazard - Chronic Health Hazard - Reactive         Section 313-List of Toxic Chemicals (40 CFR 372) This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.         Component Name **NONE**       CAS # & Range	Keep container closed. Use with adequate	ventilation. Wash	
out or used for other purposes.         FOR INDUSTRIAL USE ONLY         ction: 10 REGULATORY INFORMATION         uperfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Rhoreshold Planning         Quantities (TPQs) and release reporting based on Reportable         Quantities (TQS)       The state Emergency Response Commons are statutory         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product are:         X Acute Health Hazard	th or used for other purposes. OR INDUSTRIAL USE ONLY tion: 10 REGULATORY INFORMATION perfund Amendments and Reauthorization Act Of 1986(SARA) Title III Section 302/304-Extremely Hazardous Substances (40 CFR 355) SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (TPQs) and release reporting texture statutory requirements. Components should be consulted to verify current statutory require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: X Acute Health Hazard	thoroughly after handling. Containers show	ild not be washed	
FOR INDUSTRIAL USE ONLY  ction: 10 REGULATORY INFORMATION  uperfund Amendments and Reauthorization Act <u>0f</u> 1986(SARA) Title III  Section 302/304-Extremely Hazardous Substances (40 CFR 355)  SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (TPQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are: Component Name	PR INDUSTRIAL USE ONLY         iion: 10 REGULATORY INFORMATION         perfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Phreshold Planning         Quantities (RQs) and release reporting based on Reportable         Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         requirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Commitsed release of Pressure         _ Sudden Release of Pressure       _ Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       _ Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       _ Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       _ Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       _ Fire	out or used for other purposes.		
ction: 10 REGULATORY INFORMATION         uperfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Fhreshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.         Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard 	<pre>tion: 10 REGULATORY INFORMATION perfund Amendments and Reauthorization Act 0f 1986(SARA) Title III Section 302/304-Extremely Hazardous Substances (40 CFR 355) SARA requires emergency planning based on Threshold Planning Quantities (TRQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are: Component Name</pre>	FOR INDUSTRIAL USE ONLY		
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uperfund Amendments and Reauthorization Act Of 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Reportable Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       RQ TFQ & Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDs, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:         X Acute Health Hazard Chronic Health Hazard Chronic Health Hazard Chronic contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.	perfund Amendments and Reauthorization Act 0f 1986(SARA) Title III         Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Threshold Planning         Quantities (TPQs) and release reporting based on Reportable         Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         component Name       RO         **NONE**       RO         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local	ction: 10 REGULATORY INFORMATION		
Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Phreshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:       Fire         X       Acute Health Hazard Chronic Health Hazard Section 313-List of Toxic Chemicals (40 CFR 372)       Fire         This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.	Section 302/304-Extremely Hazardous Substances (40 CFR 355)         SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)       The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:       Fire Reactive         X       Acute Health Hazard Chronic Health Hazard Chronic Health Hazard Chronic Health Hazard Chronic J13-List of Toxic Chemicals (40 CFR 372)       Fire Reactive         This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.         Component Name **NONE**       CAS # % Range	uperfund Amendments and Reauthorization Ac	ct Of 1986(SARA) Title III	
SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (TPQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are: <u>Component Name</u> **NONE** <u>Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)</u> The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: <u>X</u> Acute Health Hazard <u>Chronic Health Hazard</u> <u>Section 313-List of Toxic Chemicals (40 CFR 372)</u> This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> <u>Chronet Name</u> <u>Chronet Name</u> <u>Cas # % Range</u>	SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements. Components present in this product at a level which could require reporting under the statute are: <u>Component Name</u> **NONE** Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370) The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Commission, Local Exercised and health hazards related to this product are: X Acute Health Hazard	Section 302/304-Extremely Hazardous Subst	cances (40 CFR 355)	
Quantities (TPQs) and release reporting based on Reportable         Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         reguirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name       RQ         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDs, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         _ Sudden Release of Pressure       Fire         _ Chronic Health Hazard       Sudden Release of Pressure       Fire         Section 313-List of Toxic Chemicals (40 CFR 372)       This product contains the following toxic chemicals subject       to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986       (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for	Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         reguirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name       RQ         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard	SARA requires emergency planning based of	on Threshold Planning	
Qualities (Ngs) in 40 Crr 353 (used for ShA 302, 51)         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         requirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         _ Sudden Release of Pressure       Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure         _ Fire       Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject       to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986       (40 CFR 372). This information should be included in all         MSDs that are copied and distributed for this material.       Consponent Name	Qualitities (RQS) in 40 GFR 353 (used for only and 502, 504, 514         and 312). These values are subject to change and the         regulations should be consulted to verify current statutory         requirements.         Components present in this product at a level which         could require reporting under the statute are:         Component Name       RQ         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         _ Chronic Health Hazard       Sudden Release of Pressure         _ Chronic Health Hazard       _ Sudden Release of Pressure         _ Chronic contains the following toxic chemicals subject       to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986       (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.       CAS # Range	Quantities (TPQs) and release reporting	based on Reportable	
and J12): These values are subject to only our statutory requirements.         Components present in this product at a level which could require reporting under the statute are:         Component Name       RQ       TPQ & Range         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard       Sudden Release of Pressure       Fire         Chronic Health Hazard       _ Sudden Release of Pressure       Fire         Section 313-List of Toxic Chemicals (40 CFR 372)       This product contains the following toxic chemicals subject       to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986       (40 CFR 372). This information should be included in all         MSDs that are copied and distributed for this material.       Component Name       CAS # Range	and 312). These varies are subject to only our that the statutory regulations should be consulted to verify current statutory requirements.         Components present in this product at a level which could require reporting under the statute are:         Component Name       RQ       TPQ % Range         **NONE**         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product are:         X       Acute Health Hazard         _ Sudden Release of Pressure       Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       Fire         Section 313-List of Toxic Chemicals (40 CFR 372)       This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the       Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all       MSDSs that are copied and distributed for this material.         Component Name       _ CAS # Range         **NONE**       _ CAS # Range	Quantities (RQS) in 40 CFR 355 (used ion	SARA 302, 304, 311	
requirements.       Components present in this product at a level which could require reporting under the statute are:         Component Name       RQ       TPQ % Range         **NONE**       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)       The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Active are:         X       Acute Health Hazard       Sudden Release of Pressure       Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       Fire         _ Chronic Health Hazard       _ Sudden Release of Pressure       Fire         _ Chronic Health Hazard       _ Sudden Release subject       Fire         _ Chronic Health Hazard       _ Sudden Release subject       Fire         _ Chronic Health Hazard       _ Subject       Fire         _ Chron	requirements. Components present in this product at a level which could require reporting under the statute are: <u>Component Name</u> **NONE** <u>Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)</u> The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: <u>X</u> Acute Health HazardSudden Release of PressureFire Chronic Health HazardReactive <u>Section 313-List of Toxic Chemicals (40 CFR 372)</u> This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> **NONE**	regulations should be consulted to verif	fv current statutory	
Components present in this product at a level which could require reporting under the statute are:         Component Name       RQ       TPQ % Range         **NONE**       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X         Acute Health Hazard       Sudden Release of Pressure         Chronic Health Hazard       Sudden Release of Pressure         Fire       Reactive         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right+to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # Range	Components present in this product at a level which could require reporting under the statute are:         Component Name **NONE**       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:       Fire         X Acute Health Hazard Chronic Health Hazard Chronic Health Hazard Chronic to the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.         Component Name **NONE**       CAS # % Range	requirements.		
Could require reporting under the statute are:       RQ       TPQ       Range         **NONE**       RQ       TPQ       Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard       _Sudden Release of Pressure _ Fire         Chronic Health Hazard       _Sudden Release of Pressure _ Fire         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # Range	could require reporting under the statute are:         Component Name       RQ       TPQ % Range         **NONE**       Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         _ Chronic Health Hazard       Sudden Release of Pressure         _ Fire         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDss that are copied and distributed for this material.         Component Name       CAS # & Range         **NONE**       YERCIA 40 CFR 261 NND 202	Components present in this product a	at a level which	
Component Name       RQ       TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard       _Sudden Release of Pressure         Chronic Health Hazard       _Sudden Release of Pressure         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDss that are copied and distributed for this material.	Component Name       RQ TPQ % Range         Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard	could require reporting under the statut	ce are:	
Component Name       Ng       Frg       Change         **NONE**       Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         _ Chronic Health Hazard       _ Sudden Release of Pressure         _ Chronic Health Hazard       _ Reactive         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # Range	Component Name       No       Frg       Change         ***NONE**       Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X         X Acute Health Hazard       _Sudden Release of Pressure _ Fire         _ Chronic Health Hazard       _Reactive         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name	Component Name	RO TPO & Rance	
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Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard	Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)         The Superfund Amendments and Reauthorization Act (SARA) may         require submission of reports (chemical list, MSDS, Tier I &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard       _Sudden Release of Pressure			
The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: <u>X</u> Acute Health Hazard	The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are: <u>X</u> Acute Health Hazard	Section 311/312 Chemical Inventory Report	ing Requirements (40 CFR 370)	<u> </u>
require submission of reports (chemical fist, MSDS, fiel f &         Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X Acute Health Hazard       Sudden Release of Pressure _ Fire         Chronic Health Hazard       Reactive         Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS #       % Range	Tier II) to the State Emergency Response Commission, Local         Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product         are:         X       Acute Health Hazard         Chronic Health Hazard       Sudden Release of Pressure       Fire         Section 313-List of Toxic Chemicals (40 CFR 372)	The Superfund Amendments and Reauthoriza	Ation Act (SARA) may	
Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product are:         X       Acute Health Hazard	Emergency Response Committee and the local fire department.         The SARA physical and health hazards related to this product are:         X       Acute Health Hazard	Tier II) to the State Emergency Response	Commission, Local	
The SARA physical and health hazards related to this product are: X Acute Health Hazard	The SARA physical and health hazards related to this product are: <u>X</u> Acute Health Hazard	Emergency Response Committee and the loc	cal fire department.	
are: X Acute Health HazardSudden Release of PressureFire Chronic Health HazardReactiveFire Section 313-List of Toxic Chemicals (40 CFR 372) This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. Component Name CAS # % Range	are: X Acute Health HazardSudden Release of PressureFire Chronic Health HazardReactiveReactive Section 313-List of Toxic Chemicals (40 CFR 372) This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. Component Name **NONE**	The SARA physical and health hazards rel	lated to this product	
X Acute Health Hazard	X       Acute Health Hazard	are:		
X Acute Health Hazard	X Acute Health Hazard		Han Delegan of Dessence	
Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # % Range	Section 313-List of Toxic Chemicals (40 CFR 372) This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> **NONE** XERCIA 40 CFR 261 AND 302	<u>X</u> Acute Health Hazard _ Suc	Iden Release of Pressure _ File	
Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # % Range	Section 313-List of Toxic Chemicals (40 CFR 372)         This product contains the following toxic chemicals subject         to the reporting requirements of Section 313 of the         Emergency Planning and Community Right-to-Know Act of 1986         (40 CFR 372). This information should be included in all         MSDSs that are copied and distributed for this material.         Component Name       CAS # % Range         **NONE**			
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Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.	Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> **NONE** TERCIA 40 CFR 261 AND 302	to the reporting requirements of Section	n 313 of the	
(40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> <u>CAS # % Range</u>	(40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material. <u>Component Name</u> **NONE** YERCLA 40 CFR 261 AND 302	Emergency Planning and Community Right-t	to-Know Act of 1986	
Component Name <u>CAS # % Range</u>	Component Name       CAS #       % Range         **NONE**       **	(40 CFR 372). This information should be	e included in all	
Component Name CAS # % Range	Component Name     CAS #     % Range       **NONE**     **	mouse that are copied and distributed in	JI LHIB MALEIIAI.	
	**NONE**	Component Name	CAS # % Range	
A SNONE A S	YERCIA 40 CER 261 AND 302	**NONE**		
	The Comprehensive Environmental Response, Compensation, and	The Comprehensive Environmental Response	e, Compensation, and	

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Contractor and structure

tion: 10 REGULATORY INFORM	ATION <u>CONTINUED</u>
Liability Act of 1980 (CE National Response Center Hazardous Substances equa quantities (RQs) listed i pounds for the component (These values are subject should be consulted to ve	RCLA) requires notification of the 1-800-424-8802 of any release of a 1 to or greater than the reportable n 40CFR 302.4. Values are given in and not the mixture, if applicable. to change and the regulations crify current statutory levels.)
Component Name	CAS # CERCLA RQ
**NONE**	
SHA Exposure Limits	
Component Name	
**NONE**	
ational Fire Protection Age	ncy
2 Health	<u>0</u> Fire
<u>0</u> Reactive	ALK Other
epartment of Transportation	Shipping Information
	mulated material
Proper Shipping Name: Nonre	gulated material
Proper Shipping Name: Nonre Hazardous Substance RQ: *NO Labels: None	NE* Emergency Response Guide Number: 31
Proper Shipping Name: Nonre Hazardous Substance RQ: *NO Labels: None oxic Substances Control Act	(TSCA), 40 CFR 261
Proper Shipping Name: Nonre Hazardous Substance RQ: *NO Labels: None <u>oxic Substances Control Act</u> This product (or components compliance with TSCA.	(TSCA), 40 CFR 261 if product is a mixture) is in
Proper Shipping Name: Nonre Hazardous Substance RQ: *NO Labels: None oxic Substances Control Act This product (or components compliance with TSCA.  Section 10 information is t safety data sheet for this	(TSCA), 40 CFR 261 if product is a mixture) is in o remain attached to the material product.

#### MATERIAL SAFETY DATA SHEET

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Product Name: UNICHEM 9850

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PAGE 1

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D 0 BOY 1/00	Emergency Telephone Providure Version Date	505-393-7751
707 N. LEECH	Date Prepared	9/28/93
HOBBS, NM 88241-1499	Version: 0000003	
Product Name: UNICHEM 9850		
Chemical Description: Proprietary Antifoam Blend		
Section: 02 HAZARDOUS INGREDIENTS	;	
<u>Component Name</u> **NONE**	. <u>CA</u>	S# % Range
Section: 03 PHYSICAL DATA		<b>_</b>
Appearance and Odor: White, opag	ue liquid; characteristic	odor
Appearance and Odor: White, opac Section: 04 FIRE AND EXPLOSION HA	zard DATA	odor
Appearance and Odor: White, opaq         Section: 04 FIRE AND EXPLOSION HA         Flash Point (Test Method):	Tue liquid; characteristic ZARD DATA Deg.F TCC	odor
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media	ZARD DATA Deg.F TCC	odor
Appearance and Odor: White, opac Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl	ZARD DATA Deg.F TCC	odor
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water	ZARD DATA Deg.F TCC .e. If this material is .nguishing agent appropria	dor 
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp	ZARD DATA Deg.F TCC 	odor  
Appearance and Odor: White, opac Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper dispose	ZARD DATA Deg.F TCC e. If this material is nguishing agent appropria spray may be used to coo posed to a fire. Fire be collected for	odor  te 1
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper dispose Special Fire Fighting Procedures	ZARD DATA Deg.F TCC 	dor 
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper dispose Special Fire Fighting Procedures Fire fighters should wear self-	Deg.F TCC .e. If this material is .nguishing agent appropria spray may be used to coo bosed to a fire. Fire be collected for 1. 	te 1
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper disposa Special Fire Fighting Procedures Fire fighters should wear self- with a full facepiece operated positive-pressure mode.	Deg.F TCC 	<pre>define soluble     odor te 1 atus</pre>
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper disposa Special Fire Fighting Procedures Fire fighters should wear self- with a full facepiece operated positive-pressure mode. Unusual Fire and Explosion Hazar	ZARD DATA Deg.F TCC e. If this material is nguishing agent appropria spray may be used to coo posed to a fire. Fire be collected for al.	te 1
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HA Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper disposa Special Fire Fighting Procedures Fire fighters should wear self- with a full facepiece operated positive-pressure mode. Unusual Fire and Explosion Hazar None	ZARD DATA Deg.F TCC 	te 1
Appearance and Odor: White, opaq Section: 04 FIRE AND EXPLOSION HF Flash Point (Test Method): 600 Extinguishing Media This material is non-combustibl involved in a fire, use an exti to surrounding materials. Water containers of this material exp extinguishing materials should determination of proper disposa Special Fire Fighting Procedures Fire fighters should wear self- with a full facepiece operated positive-pressure mode. Unusual Fire and Explosion Hazar None	ZARD DATA Deg.F TCC 	atus

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Product Name: UNICHEM 9850
Section: 05 HEALTH HAZARD DATA <u>CCNTINUED</u>
conditions. Inhalation: not expected to present a hazard under normal conditions. Ingestion: may cause gastrointestinal upset and nausea.
Emergency and First Aid Procedures
SKIN Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or inmitation develops.
Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.
INHALATION Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention. INGESTION
Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.
Section: 06 REACTIVITY DATA
Stable (Y=Yes/N=No): Y
Stability Conditions to Avoid None known.
Incompatibility (Materials to Avoid) Strong alkalies and acids.
Hazardous Decomposition Products Thermal decomposition or burning may produce carbon dioxide and/or carbon monoxide and oxides of silicon.
Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Wipe up with a cloth or paper (small quantity); or absorb

#### MATERIAL SAFETY DATA SHEET PAGE 3

unrecoverable product with inert materail such as clay, sand or vermiculite, and put into containers for disposal. Waste Disposal Method Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271). ection: 08 SPECIAL PROTECTIVE INFORMATION Respiratory Protection Use a dust/mist mask if spray or mist is present. Ventilation Good general mechanical ventilation recommended. Protective Gloves Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC) Bys Protection Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under Certain conditions. The use of contact lenses is not recommended. Other Protective Equipment Eye wash and safety shower ection: 09 SPECIAL PRECAUTIONS Precautions to be Taken in Handling and Storing Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Other Protections Containers of this material may be hazardous when emptied. Since emptied containers retain residues (vapor, liquid, or solid), al hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container. Keep container closel. Use with adequet ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes. FOR INDUSTRIAL USE ONLY	CONTINUED	
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MATERIAL SAFET	Y DATA SHEET	PAGE 4
oduct Name: UNICHEM 9850		
ction: 10 REGULATORY INFORMATION	CONTINUED	
Section 302/304-Extremely Hazardous SARA requires emergency planning bas	Substances (40 CFR 355) sed on Threshold Planning	
Quantities (TPQs) and release report Quantities (RQs) in 40 CFR 355 (used and 312). These values are subject to regulations should be consulted to v requirements. Components present in this produce could require reporting under the st	ting based on Reportable d for SARA 302, 304, 311 to change and the verify current statutory act at a level which tatute are:	
Component Name **NONE**	RQ	<u>TPQ % Range</u>
Section 311/312 Chemical Inventory Re The Superfund Amendments and Reauthor	eporting Requirements (40 prization Act (SARA) may	CFR 370)
require submission of reports (chemi Tier II) to the State Emergency Resp Emergency Response Committee and the The SARA physical and health hazards are:	ical list, MSDS, Tier I & ponse Commission, Local e local fire department. s related to this product	
X Acute Health Hazard Chronic Health Hazard	_ Sudden Release of Pressu _ Reactive	are _ Fire
Section 313-List of Toxic Chemicals This product contains the following to the reporting requirements of Sec Emergency Planning and Community Rig (40 CFR 372). This information shoul MSDSs that are copied and distribute	(40 CFR 372) toxic chemicals subject tion 313 of the ght-to-Know Act of 1986 d be included in all ed for this material.	
Component Name **NONE**	CAS #	% Range
CERCLA, 40 CFR 261 AND 302 The Comprehensive Environmental Resp Liability Act of 1980 (CERCLA) requi National Response Center 1-800-424-8 Hazardous Substances equal to or gre quantities (RQs) listed in 40CFR 302 pounds for the component and not the (These values are subject to change should be consulted to verify current	ponse, Compensation, and ires notification of the 3802 of any release of a eater than the reportable 2.4. Values are given in e mixture, if applicable. and the regulations at statutory levels.)	
Component Name **NONE**	<u>CAS</u> #	CERCLA RQ
SHA Exposure Limits Component Name **NONE**		
ational Fire Protection Agency	) Fire	
0 Reactive	Other	

#### MATERIAL SAFETY DATA SHEET PAGE 5

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roduct Name: I	JNICHEM 9850		
ection: 10 REGULA	ATORY INFORMATION	CONTINUED	
Department of Tra	ansportation Shipping	Information	
Proper Shipping Hazardous Substa Labels: None	Name: Nonregulated ma ance RQ: *NONE* Eme	aterial ergency Response Guide Number: 31	
<u>Foxic Substances</u> This product (or compliance with	Control Act (TSCA), 4 r components if produc TSCA.	O CFR 261 t is a mixture) is in	
Section 10 info safety data shee	rmation is to remain a et for this product.	attached to the material	
While UNICHEM IN correct, UNICHEM for any loss or	NTERNATIONAL believes M INTERNATIONAL expres injury arising out of	that the above data is ssly disclaims liability the use of this	
information or 1 	the use of any materia	als designated.	
END OF MSDS			

· MATERI	AL SAFETY	DATA	SHEE	r	PAGE	
Product Name: UNICHEM	5025					
Section: 01 Propuer Them						
		w w Z.h	<b># #</b>			•
UNICHEM INTERNATIONAL I	NC. Energen	cy Telephon	e 5	05-393-7751		
P.O. BOX 1499	Previou	s Version D	ate	10/13/93		
HORRS NM 89241-1400	Date Pr Voveloo	epared		10/21/93		
MGDDD; NM GG241-1437	Afte Tou	: 0000003				
Product Name: UNICHEM 5	025					
Chemical Description:						
Proprietary Scale Inhib:	itor					
		بر میں میں سے این کا	، گا او جو چهچو هد ه	• • •	7 <b></b>	
Section: UZ HAZARDOUS ING	yredients 	، هذه هذه مدين مدر بين جي من علي غلي علي ا		بن برن ب		
Component Name			CAS#	S Range		
proprietary organophosp!	honic acid			< 15%		
hydrochloric acid		01	7647-01-0	0 < 5%		
Freezing Point: 22 Day Boiling Point: 760 mm Ho Specific Gravity(H2O=1) Appearance and Odor: Cla	A eg.F. g: 212 Deg.F : 1.068 ear, water white 1	Solubility	in water	; Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Ho Specific Gravity(H2O=1) Appearance and Odor: Cla	A g.F. g: 212 Deg.F : 1.068 sar, water white 1:	Solubility iquid; pung	in water ant odor	; Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Ha Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXP	A g: 212 Deg.F : 1.068 aar, water white 1 LOSION HAZARD DATA	Solubility iquid; punga	in wate: ent odor	; Soluble		
Freezing Point: 22 Day Boiling Point: 22 Day Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXP Flash Point (Test Method	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1 LOSION HAZARD DATA <u>1):</u> > 212 Deg.F 2	Solubility iquid; punge	in water	: Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Ha Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXP Flash Point (Test Method Extinguishing Media	A eg.F. g: 212 Deg.F : 1.068 ear, water white 1: LOSION HAZARD DATA <u>1):</u> > 212 Deg.F :	Solubility iquid; punga	in water ent odor	; Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Hg Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXPI Flash Point (Test Method Extinguishing Media This material is non-co	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1 LOSION HAZARD DATA <u>d):</u> > 212 Deg.F : Dmbustible. If this	Solubility iquid; punge TCC 9 material :	in water ent odor	: Soluble	·····	
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Ha Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXP Flash Point (Test Method Extinguishing Media This material is non-co involved in a fire, use	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1: LOSION HAMARD DATA <u>i):</u> > 212 Deg.F : combustible. If this a metinguishing	Solubility iquid; punge FCC s material : agent appre	in water ent odor	; Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Ha Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXPI Flash Point (Test Method Extinguishing Media This material is non-co involved in a fire, use to surrounding material containers of this material	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1: LOSION HAZARD DATA d): > 212 Deg.F : Combustible. If this a n extinguishing ls. Water spray may arial exposed to a	Solubility iquid; punge ICC s material : agent appre y be used to	in water ent odor	; Soluble		
Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm Hg Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXP Flash Point (Test Method Extinguishing Media This material is non-co involved in a fire, use to surrounding material containers of this mate extinguishing material:	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1: LOSION HAZARD DATA <u>d):</u> > 212 Deg.F ? Dmbustible. If this a n extinguishing ls. Water spray may erial exposed to a s should be collect	Solubility iquid; punga ICC s material : agent appra y be used to fire. Fire ted for	in water ent odor	; Soluble		
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Section: 03 PHYSICAL DATA Freezing Point: 22 Da Boiling Point, 760 mm H Specific Gravity(H2O=1) Appearance and Odor: Cla Section: 04 FIRE AND EXPI Flash Point (Test Method Extinguishing Media This material is non-ca involved in a fire, use to surrounding material containers of this mate extinguishing materials determination of propes Special Fire Fighting P Fire fighters should we with a full facepiece of positive-pressure mode Unusual Fire and Explose May release toxic or co destroyed in a fire.	A ag.F. g: 212 Deg.F : 1.068 aar, water white 1: LOSION HAZARD DATA <u>d):</u> > 212 Deg.F : ombustible. If this a n extinguishing ls. Water spray may erial exposed to a s should be collect r disposal. <u>rocedures</u> ear self-contained operated in the pro- <u>ion Hazards</u> prosive material	Solubility iquid; punge ICC s material : agent approved y be used to fire. Fire ted for breathing a essure-deman if containes	in water ent odor	; Soluble		

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Action: 05 HEALTH HAZARD DATA CONTINUE	<u>:D</u>	
Eye Contact: causes irritation, redness and burnin cause permanent damage if not promptly removed.	ng. May	. هم بين بين
Skin Contact: causes mild to severe irritation, de on the extent of contact. Prolonged exposures of dermatities.	pending an Cause	
Inhalation: vapors can irritate the eyes, nose and and cause coughing.	throat	
Ingestion: causes chemical burns to the esophagus, and throat. Aspiration of fluid into lungs can pulmonary edema and death.	mouth cause	
mergency and First Aid Procedures		
SKIN		
attention if redness or irritation develops.	othing and medical	
EYES		
least 15 minutes. Lift lower and upper lids occa. Get medical attention.	er for at sionally.	
TNHAT.ATTON	•	
Remove victim to fresh air. Give artificial res	piration if	
not breathing. If breathing is difficult, admining Keep person warm, quiet and get medical attention	ster oxygen.	
INGESTION		
Call a physician immediately. Give victim a glass Do NOT induce vomiting unless instructed by a phy poison control center. Never give anything by mo- unconscious person.	s of water. ysician or uth to an	
ction: O6 REACTIVITY DATA	w W W @ @ @ @ #= == == == == == == == == == == == ==	
table (Y=Yes/N=No); Y	یں ہوتا ہے ہوتا ہوتا ہے جاتا ہے جاتا ہے کہ اور اور اور اور اور اور اور اور اور اور	یک خان کا برای میں دین من کا ر
tability Conditions to Avoid None known,	······································	
ncompatibility (Materials to Avoid)		
Avoid contact with oxidizers or alkaline materials	•	
Azardous Decomposition Products Smoke, carbon dioxide, carbon monoxide, oxides of a	nitrogen.	<u></u>
azardous Polymerization May Occur(Y=Yes/N=No): N	-	

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MATERIAL SAFES	FY DATA SHEET	PAGE
Product Name: UNICHEM 5025		
Section: 06 REACTIVITY DATA		
Section: 07 SPILL OR LEAK PROCEDURES	و و به ه میشون و بو و محمد مشاه و و و و و و و و و و و و و	
Steps to be Taken if Material is Relea	used or Spilled	
Persons not wearing suitable personal should be excluded from area of spill	protective equipment	
been completed. Shut off source of sp	bill if possible to do	
so without hazard. Prevent material f	rom entering sewers or ation Contain spilled	
material with sand or earth. Recovered	d undamaged or	
minimally contaminated material for r	euse or reclamation.	
Place all collected material and spli DOT approved containers.	l absorbents into	
Advise authorities. If this product i	s an EFA hazardous	
substance (see Section 10), notify th	e U.S.EPA or the	
to SARA Section 302/304 (40 CFR 355)	notification pursuant	
Waste Disposal Method		
	a dimension the function	
Treatment, storage, transportation an accordance with EPA or State regulati	d disposal must be in	<b></b>
Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover	d disposal must be in ons under authority of Y Act (40 CFR 260-271).	
Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover	d disposal must be in ons under authority of y Act (40 CFR 260-271).	
Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover	d disposal must be in ons under authority of y Act (40 CFR 260-271). YON	
Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover Section: 08 SPECIAL PROTECTIVE INFORMAT Respiratory Protection	d disposal must be in ons under authority of by Act (40 CFR 260-271). PION	
Treatment, storage, transportation an accordance with EPA or State regulati the Resource Conservation and Recover Section: 08 SPECIAL PROTECTIVE INFORMAT <u>Respiratory Protection</u> If workplace exposure limit(s) of pro	d disposal must be in ons under authority of by Act (40 CFR 260-271). TON duct or any component	
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	MATERIAL	SAFETY	DATA	SHEET		PAGE	
Product Name	UNICHEM 5025						
Section: 08	SPECIAL PROTECTIVE	INFORMATION	CONTINUE	)			
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Other Prote	ctive Equipment						
Eye wash a	and safety shower			· · · · · · · · · · · · · · · · · · ·		•	
Section: 09	SPECIAL PRECAUTION	S	يو مې هم بين بې بې يې يې يې يې يې کې	****		F 174 174	
Precaution	to be Taken in Ha	ndling and St	oring			ی که دی بیسینی خت خت که تن ا	
Avoid cont	act with eyes, ski	n or clothing	y. Avoid br	eathing			
vapors or	mist.						
Other Preca	utions	·····			1		
Container:	of this material :	may be hazard	lous when e	emptied.			
solid), al	ll hazard precautio	ain residues ns given in t	(Vapor, 11 his data s	heet must			
be observe	d. Do not transfer	to improper1	y marked c	ontainer.			
Keep conta	iner closed. Use w	ith adequate	ventilatic	on. Wash			
thoroughly	y after handling. C	ontainers sho	uld not be	washed			
FOR TNDUG	ed for other purpos	69.					
FOR INDUG.	CAIND OBB ONDI						
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Section: 10	REGULATORY INFORMA	TION			· · · · · · · · · · · · · · · · · · ·		
Section: 10 Superfund 1	REGULATORY INFORMA	TION thorization A	Act Of 1986	(SARA) Titl	.e III	•••••••••••••••••••••••••••••••••••••••	
Section: 10 Superfund 2 Section 3	REGULATORY INFORMA Amendments and Reau 302/304-Extremely H	TION thorization A azardous Subs	act Of 1986 stances (40	(SARA) Till CFR 355)	e III		
Section: 10 Superfund A Section 3 SARA rec	REGULATORY INFORMA Mmendments and Reau 302/304-Extremely H Juires emergency pl	TION thorization A azardous Subs anning based	act Of 1986 stances (40 on Thresho	(SARA) Titl CFR 355) Old Planning	.e <u>I</u> II	· · · · · · · · · · · · · · · · · · ·	
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Section: 10 <u>Superfund I</u> <u>Section 3</u> SARA rec Quantiti Quantiti and 312) requirer Componen **T <u>Section 3</u> The Super require	REGULATORY INFORMA Amendments and Reau 302/304-Extremely H Ruires emergency pl Les (TPQs) and rele Les (RQs) in 40 CFR ). These values are ions should be cons ments. ponents present in squire reporting un at Name NONE** 311/312 Chemical In arfund Amendments a submission of repo	TION thorization A azardous Subs anning based ase reporting .355 [used fo subject to c ulted to veri this product der the statu <u>ventory Repor</u> nd Reauthoriz rts (chemical	act Of 1986 stances (40 on Thresho y based on or SARA 302 shange and fy current at a level at a level at a a level at a a level sting Requi	CFR 355) CFR 355) Old Planning Reportable 304, 311 the statutory which <u>RQ</u> <u>réments (40</u> (SARA) may DS, Tier I 4	<u>TPQ</u> &	Range	
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Section: 10 <u>Superfund A</u> <u>Section 3</u> SARA rec Quantiti Quantiti and 312) regulati regulati regulati requirer <u>Componen</u> **T <u>Section 3</u> The Super require Tier II Emergence	REGULATORY INFORMA Amendments and Reau 302/304-Extremely H puires emergency pl les (TPQs) and rele les (RQs) in 40 CFR ). These values are lons should be cons ments. ponents present in equire reporting un at Name NONE** 311/312 Chemical In arfund Amendments a submission of repo ) to the State Emer CY Response Committ	TION thorization A azardous Subs anning based ase reporting .355 (used fo subject to c ulted to veri this product der the statu ventory Repor nd Reauthoriz rts (chemical gency Respons se and the lo	Act Of 1986 stances (40 on Thresho y based on or SARA 302 shange and fy current at a level at a level at a a level at a level at a level at a level at a level at a commission sation Act list, MSE socal fire d	CFR 355) CFR 355) Id Planning Reportable , 304, 311 the statutory which <u>RQ</u> <u>réments (40</u> (SARA) may DS, Tier I & On, Local lepartment.	<u>TPQ</u> &	Range	
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Section: 10 <u>Superfund A</u> <u>Section 3</u> SARA rec Quantiti Quantiti and 312) regulati requirer Componen **N <u>Section 3</u> The Super require Tier II Emergend The SARA are: X Acute	REGULATORY INFORMA Amendments and Reau 302/304-Extremely H Juires emergency pl Les (TPQs) and rele Les (RQs) in 40 CFR ). These values are ions should be cons ments. ponents present in squire reporting un at Name NONE** 311/312 Chemical In arfund Amendments a submission of repo ) to the State Emer Cy Response Committ A physical and heal Health Hazard	TION thorization A azardous Subs anning based ase reporting 355 [used for subject to co ulted to veri this product der the statu ventory Repor- nd Reauthoriz rts (chemical gency Response se and the lo th hazards re	act Of 1986 stances (40 on Thresho y based on or SARA 302 change and fy current at a level at a lev	CFR 355) Old Planning Reportable , 304, 311 the statutory which <u>RO</u> <u>rements (40</u> (SARA) may DS, Tier I & On, Local lepartment. this product	<u>TPO</u> <u>*</u> ) CFR 370	Range	
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Section: 10 Superfund I Section 3 SARA rec Quantiti Quantiti and 312) regulati requirer Component **I Section 3 The Super require Tier II Emergend The SARA are: X Acute Chronit	REGULATORY INFORMA Amendments and Reau 302/304-Extremely H puires emergency pl les (TPQs) and rele les (RQs) in 40 CFR ). These values are ions should be cons ments. ponents present in squire reporting un at Name NONE** 311/312 Chemical In arfund Amendments a submission of repo ) to the State Emer CY Response Committ A physical and heal Health Hazard ic Health Hazard	TION thorization A azardous Subs anning based ase reporting .355 (used for subject to c ulted to veri this product der the statu ventory Report nd Reauthoriz rts (chemical gency Response se and the lo th hazards re 	Act Of 1986 stances (40 on Thresho y based on or SARA 302 shange and fy current at a level at a level at a a level at a l	CFR 355) CFR 355) Id Planning Reportable , 304, 311 the statutory which <u>RQ</u> <u>réments (40</u> (SARA) may DS, Tier I & Con, Local lepartment. this product use of Press	<u>TPQ</u> & 0 CFR 370	Range	

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ction: 10 REGULATORY INFORMATI	ION <u>CONTINUED</u>
to the reporting requirement	s of Section 313 of the
Emergency Planning and Commu	nity Right-to-Know Act of 1986
(40 CFR 372). This information	on should be included in all
MSDSs that are copied and di	stributed for this material.
Component Name	<u>CAS #</u> <u>* Range</u>
hydrochloric acid	07647-01-0 < 5%
CERCLA, 40 CFR 261 AND 302	
The Comprehensive Environmen	stal Response, Compensation, and
Liability Act of 1980 (CERCL	A) requires notification of the
National Response Center 1-8	800-424-8802 of any release of a
Hazardous Substances equal to	o or greater than the reportable
quantities (RQs) listed in 4	WCFR 302.4. Values are given in
These values are subject to	not the mixture, if applicable.
should be consulted to verif	y current statutory levels.)
· · · ·	
Component Name	$\frac{CAS \mp}{0.7547-01-0} = \frac{CERCLA RO}{5000}$
Nydruchiofic acid	07547-01-0 3000
SHA Exposure Limits	
Component Name	
ational Fire Protection Agency	
2 Health	0 Fire
O Reactive	ACID Other
epartment of Transportation Sh	ipping Information
Proper Shipping Name: Corrosiv	ve liquids, n.o.s.
Hazard Class: B	Identification: UN1760
Packaging Group: PG II	,
Contains: phosphonic Acid, Aya	Arochioric acid Na Francoscu Researce Suide Numbers 60
Labels: Corrosive	. FURIGAUCA KARBONSA ANTGA MUUDAL: 20
This product for components if	(DUA), 90 UFR 201 F nenduat is s mintural is in
compliance with TSCA.	Product is a mixedial is in
	and a sharped by the astrony.
section 10 information 18 to r safety data sheet for this pro	remain attached to the material Dduct.
While UNICHEM INTERNATIONAL be	alieves that the above data is
correct. UNICHEM INTERNATIONAL	A expressly disclaims liability
for any loss or injury arising	y out of the use of this
information or the use of any	materials designated.

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a francis .	MATERIAL SARES ADAMS S	LI DALA SHEEL SPECIAL	
		1	HMIS HEALTH
		0	HMIS FLAMMABILITY
$\hat{\mathbf{A}}$		0	HMIS REACTIVITI HMIS PERSONAL PROTECTION
**********************			
MANUFACTURER'S NAME PHONE NUMBER EMERGENCY PHONE NUMBE EFFECTIVE DATE TRADE NAME CHEMICAL FAMILY CAS NUMBER	ADAMS CHEMICAI 915 337 8942 R 915 697 2803 SEPTEMBER, 199 ADAMS SPECIAL SURFACTANTS BLEND	L AND EQUIPMENT	COMPANY, INC.
CHEMICAL FORMULA	BLEND		
	SECTION II - HAZA	ARDOUS INGREDIE	NTS
HAZARDOUS COMPONENTS	%	TLV (Units)	PROD; CAS #
PROPYLENE GLYCOL T BU ETHER	TYL <5 NONE I	LISTED	57018-52-7
SODIUM META SILICATE	< 5		6834-92-0
SODIUM TRIPOLY PHOSPH	ATE <5		NONE LISTED
NONYLPHENOL	< <b>5</b>		26027-38-3
	SECTION III -	PHYSICAL DATA	
BOILING Point(F) FREEZING POINT (F) VAPOR PRESSURE (mm Hg VAPOR DENSITY (Air=1) SOLUBILITY IN H20 APPEARANCE/ODOR SPECIFIC GRAVITY (H20 PH	APPROXIMATELY NOT DETERMINEI ) NOT APPLICABLH APPROXIMATELY YES ORANGE LIQUID =1). APPROXIMATELY 12.8	212 DEGREES F 1 1.18 <b>q</b> .84	
***************	=======================================	=======================================	
SECT	ION IV - FIRE ANI	D EXPLOSION HAZ	ARD DATA
FLASH POINT LOWER FLAME LIMIT HIGHER FLAME LIMIT EXTINGUISH MEDIA UNUSUAL FIRE HAZARD	NON FLAMMABLE NON FLAMMABLE NOT APPLICABLI NOT APPLICABLI NOT APPLICABLI		
	=======================================		**********************
	SECTION V SECTION HI	EALTH HAZARD DA	ГА
THRESHOLD LIMIT VALUE	NOT LISTED		
POUTES OF ENTRY I	NHALATION? ONE	SKIN? IRRITANT	INGESTION? IRRITANT

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a la companya di seconda di secon	ADAMS SPECIAL
HEALTH HAZARDS	Acute, Irritating to skin and eyes. Chronic, May cause allergic skin reactions.
RCINOGENICITY NTE NO	?? IARC MONOGRAPHS? OSHA REGULATED NO NO
OVER EXPOSURE EFFECTS	Skin irritation develops slowly after contact. Eye
FIRST AID PROCEDURES	Irritation develops immediately upon contact. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water.
***************************************	
	GECTION VI - REACTIVITY DATA
CHEMICAL STABILITY CONDITIONS TO AVOID INCOMPATIBLE MATERIALS DECOMPOSITION PRODUCTS HAZARDOUS POLYMERIZATION. POLYMERIZATION AVOID	STABLE NONE NONE WILL NOT OCCUR NONE KNOWN
***************************************	
SECTI	ON VII – SPILL OR LEAK PROCEDURE
FOR SPILL	In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.
TE DISPOSAL METHOD	Hazardous Waste. Follow Federal and State Regulations.
SI	ECTION VIII - SPECIAL PROTECTION
RESPIRATORY PROTECTION VENTILATION MECHANICAL EXHAUST LOCAL EXHAUST PROTECTIVE GLOVES EYE PROTECTION OTHER PROTECTIVE EQUIPMENT	NOT NORMALLY REQUIRED NOT NORMALLY REQUIRED NOT NORMALLY REQUIRED NOT NORMALLY REQUIRED Wear impervious gloves Use goggles or face shield if spashing is likely None
	SECTION IX - SPECIAL HANDLING
I AND INC AND COORAD	
HANDLING AND STORAGE	wear impervious gloves use goggies or face shield if spashing is likely
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 firstaid action shown in Section V. D002 CORROSIVE
REFORTABLE QUANTITY (RQ). UN NUMBER.	CORROSIVE LIQUID CONTAINS POTASSIUM HYDROXIDE

. ----

ومستعدية المرمس فرقي ADAMS SPECIAL NA #.... NOT APPLICABLE PACKAGING SIZE..... VARIED SECTION X - REGULATORY EPA ACUTE..... YES EPA CHRONIC..... NO EPA IGNITABILITY..... NO EPA REACTIVITY..... NO EPA SUDDEN RELEASE OF NO PRESSURE..... SARA TPQ..... NONE SARA RO..... NONE SECTION 313..... NO EPA HAZARD WASTE #..... YES CLEANAIR, ..... YES CLEAN WATER..... YES

FOOT NOTES

PARED BY:..... HAZARDOUS MATERIAL CHEMISTS, MIDLAND TEXAS 915 697 2803 REVISED DATE..... SEPTEMBER, 1990

THIS PRODUCT'S 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 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 OBLIGATION TO DETERMINE THE CONDITIONS OF SAFE USE OF THIS PRODUCT. SUCH CONDITIONS SHOULD COMPLY WITH ALL FEDERAL REGULATIONS CONCERNING THE PRODUCT.

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TCLP ANALYSIS REPORT

	TCLP ANALISIS	REPORT	Vo Union MI
Company: Address: City, State:	Texaco E & P PO Box 1929 Eunice New Mexico 88231 Texaco Blant	Date: Lab <b>#</b> :	02/15/96 // H2405
Project Name: Location: Sampled by: Sample Type:	Eunice, NM RB Water	Date: Sample Condition:	02/12/96 intact
Sample ID #1: #2: #3: #4:	#4 Waste Water Pit Able Fresh Water Well N. Plant Fresh Water Well N. Plant Waste Water		

#### HAZARDOUS WASTE CHARACTERIZATION

PARAMETER	<u>RESULT 1</u>	<u>RESULT 2</u>	<u>RESULT 3</u>	<u>RESULT 4</u>	UNITS
Ignitability (Pensky-Martens Closed Cup)	85	>140	>140	95	F
Corrositivity (pH)	10.03	9.95	8.06	8.96	
Reactivity-S Reactivity-CN	0.8 < 0.02	<pre>0.5 &lt; 0.02</pre>	0.8 < 0.02	0.5 < 0.02	mg/L mg/L

METHODS: HWC - EPA SW 845-7.3, 7.2, 1010

Mitch Irvin

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TCLP ANALYSIS REPORT

Company: Address: City, State:	Texaco E & P PO Box 1929 <u>E</u> unice, New Mexico 88231	Date: Lab <b>#</b> :	02/15/96 H2405 1-2
Project Name: Location: Sampled by:	Texaco S. Plant Eunice NM RB	Date:	02/12/96
Sample Type: Sample ID# 1: Sample ID# 2:	water #4 Waste water Pit Able Fresh Water Well	Sample Condition: Units:	ppm

TCLP SEMI VOLATILE ORGANICS

<u>PARAMETER</u>	<u>SAMPLE 1</u>	<u>SAMPLE 2</u>	<u>&amp;IA</u>	<u>QC</u>	<u>True Value</u>
Pyridine 1,4-Dichlorobenzene o-Cresol m,p-Cresol Hexachloroethane Nitrobenzene Hexachloro-1,3-butadiene 2,4,6-Trichlorophenol 2,4-Dinitrotoluene Hexachlorobenzene Pentachlorophenol	<0.010 <0.010 0.034 0.059 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010	<0.010 <0.010 <0.020 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010 <0.010	89 83 89 88 86 88 81 82 85 85 85 85 87 82	0.089 0.083 0.089 0.175 0.086 0.088 0.081 0.082 0.085 0.085 0.085 0.087 0.082	0.100 0.100 0.200 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100
	<u>% Recovery</u>		<u>Relativ</u>	ve % Differ	rence
Fluorophenol Phenol-d5 Nitrobenzene-d5 2-Fluorobiphenyl 2,4,6-Tribromophenol Terphenyl-d14	27 29 71 77 74 85	27 29 71 77 74 85		4 1 1 2 12	



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#### TCLP VOLATILES

#### Page 2

<u>Parameter</u>	<u>Sample 1</u>	<u>Sample 2</u>	<u>sia</u>	<u>QC</u>	<u>True Value</u>
Vinyl chloride 1,1-Dichloroethylene Methyl ethyl ketone Chloroform 1,2-Dichloroethane Benzene Carbon tetrachloride Trichloroethylene Tetrachloroethylene Chlorobenzene 1,4-Dichlorobenzene	<0.001 <0.001 <0.001 <0.001 <0.001 4.450 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	107 89 116 115 118 119 118 113 117 112 105	0.107 0.089 0.115 0.115 0.118 0.119 0.118 0.113 0.117 0.112 0.105	0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100
	% Recove	ery <u>Rel</u>	ative % Di	fference	
Dibromofluromethane Toluene - d8 Bromofluorobenzene	104 94 93	111 103 99	9 1 1		

EPA SW -846-8260, 1311 METHODS:

3 + Mitch Irvin

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CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

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NEW MEXICO

QUADRANGLE LOCATION

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EUNICE G.P. PLT. = 0010 \$ 0020

State Route

RATTLESNAKE CANYON, N. MEX.

N3215-W10307.5/7.5

1969 PHOTOREVISED 1979

DMA 5348 1 SW- SERIES V881

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10" 178 MILS Polyconic projection. 1927 North American datum 0"58' 10,000-foot grid based on New Mexico coordinate system, east zone 1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET Fine red dashed lines indicate selected fence lines Revisions shown in purple compiled from aerial photographs To place on the predicted North American Datum 1983 taken 1977 and other source data. This information not move the projection lines 9 meters south and field checked. Map edited 1979 44 meters east as shown by dashed corner ticks



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# THE REPRODUCTION OF

### THE

# FOLLOWING

# **DOCUMENT (S)**

# **CANNOT BE IMPROVED**

# **DUE TO**

### THE CONDITION OF

## **THE ORIGINAL**

THALEPH OR UNMERANDS

# APPENDIX A

#### **Chemical Resistance Information**

Poly-Flex and DuraiFlex polyethylenes are primarily inert and stable, and contain no plasticizers. Since chemical resistance data for Dura-Flex is ilmited, the following chart (compiled by Nalgene), which documents such data for Low Density Polyethylene (LDPE) and High Dansity Polyethylene (HDPE), is included. The chemical resistance qualities for LDPE can be used only as a guideline for Dura-Flex material. It is important to note that chemical mixtures do not necessarily affect plastics in the same way that the component chemicals of the same mixture will individually. Chemical attack is influenced by temperature, length of contact with material, chemical concentration, and chemical composition. It is therefore recommended that immersion tests be conducted during the design stage of a project, to confirm the stability of the selected membrane type.

E -- 30 days of constant exposure cause no damage. Plastic may even tolerate for years.

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- G Little or no damage after 30 days of constant exposure to the reagent.
- F Some effect after 7 days of constant exposure to the reagent. Depending on the plastic, the effect may be crazing, cracking, joss of strength, or discoloration. Solvents may cause softening, swelling and permeation losses with LDPE and HDPE. The solvent effects on these resins are normally reversible; the part will usually return to its normal condition after evaporation.
- N Not recommended for continuous use. Immediate damage may occur. Depending on the plastic, the effect will be a more severe crazing, cracking, loss of strength; discoloration, deformation, dissolution or permeation loss.

The first letter of each pair applies to conditions at 20° C (68° F); the second to those at 50° C (122° F),

CHEMICAL	LDPE	HDPE	CHEMICAL	LDPE	HDPE
Acetaklehyde	GN	ÇF	Berzaldehyde	EG	EE.
Acetamide, Sat.	EE	EE	Benzene	FN	GG
Acetic Acid, 5%	EE i	EE	Benzolc Acid, Sat.	EE	EE
Acetic Acid, 50%	EE	EE	Benzyl Acetai	εG	EE
Acetic Anhydride	NN	<b>F</b> F	Berizyl Alcohol	NN	FN
Acetone	EE	EE	8tomine .	NN	<b>FN</b>
Acetonitrile	EE	ĔΕ	Bromobenzene	NN	FN
Acrylonitrile	EE	£E	Bromoform	NN	NN
Adipic Acid	£G	ËE	Butadiene	NN	FN
Alanine	EE	<b>8</b> E	Butyl Chloride	NN	NN
Aliyi Alcohol	EE	EE	n-Butyl Acetate	GF	EG
Aluminum Hydroxide	EC	EE	n-Butyl Alcohol	EE	EE
Aluminum Salts	EE	EE	scc-Butyl Alcohol	EG	EE
Amino Acids	EE	£E	tert-Butyl Alcohol	EG	EE
Ammonia	EE	EE	Butyric Acid	NN	ĒN
Ammonium Acetate, Sat.	EE	£E	Calcium Hydroxide, Conc.	EE	EE.
Ammonium Glycolate	EG	EE	Calcium Hypochlorite, Sat.	EE	EE
Ammonium Hydroxide, 5% 👘	EE	EE	Carbazole	EE	EE
Ammonium Hydroxide, 30% -	EG	EE -	Carbon Disulfide	NN	NN
Ammonium Oxalate	EC	ΕE	Carbon Tetrachloride	FN	G۶
Ammonium Salts	EE	EE	Cedarwood Oil	NN	FN
n-Amyl Acetate	GF	£G	Cellosolve Acetate	EG	ĒE
Amyl Chlaride	NN	FN	Chlorobenzene	NN	FN
Anlline	EG	EÇ	Chlorine, 10% in Air	GN	EF
Aqua Regia	NN	NN	Chlorine, 10% (Moist)	CN	GF
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### Chemical Resistance Information (Cont'd.)

CHEMICAL	LDPE	HDPE	CHEMICAL	LDPE	HOPE
Chloroacetic Acid	EE	EE	Ethyl Luctate	EE	ΕĒ
p-Chloroacetophenone	EE	EE	Ethylene Chloride	GN	GF
Chloroform	FN	GF	Ethylene Clycol	33	6E
Chromic Adid, 10%	EE	EE	Ethylane Clycol Methyl Ether	££	55
Chromic Adid, 50%	EE	EE	Ethylene Oxide	FF	GF -
Cinnamon pil	NN	FN	Fatty Acids	EÇ	EE -
Citric Acid, 10%	EE	ËË	Fluorides	EE	EE
Cresol	' NN	FN	fluorine	FN	GN
Cyclohexane	FN	FN	Formaldehyde, 10%	EE	EE -
Cyclohexanene	NN	FN .	Formaldehyde, 40%	ξG	EE
Cyclopentarie	NN	FN	Formic Acid, 3%	EG	EE
DeCalin	ĢF	EG	Formic Acid, 50%	EG	EE
n-Decane	FN	FN	Formic Acid, 98-100%	EG	EE .
Diacetone Alkohol	FN	EE	Freon TF	EG	EĠ
o-Dichlorobanzene	FN	FF	Fuel Oll	FN	GF
p-Dichlorobenzene	FN	GF	Gasoline	FN	00
1,2-Dichloroethane	NN	NN	Glacial Acetlc Acid	EG	EE
2,4-Dichlorophenol	INN	NN	, Glutaraldehyde (Disirifectant)	EG	EE
Diethyl Benzene	NN	<del>F</del> N	Clycerine	EE	EE
Diethyl Ether	'NN	FN	n-Heptane	FN	GF
Diethyl Ketone	GF	CC	Hexane	·NN	GF .
Diethyl Maloriate	<b>EE</b>	ÉE	Hydrazine	NN	NN
Dlethylamine	NN	FN	Hydrochloric Acid, 1-5%	EE.	EE
Diethylene Gigcol	EE	<b>EE</b>	Hydrochloric Acld, 20%	EE	EE
Diethylene Glycol Ethyl Ether	EE	ÉE	Hydrochioric Acid, 3396	EE	EE
Dimethyl Acetamide	FN	£ξ	Hydrofluoric Acid, 4%	ξG	EE
Dimethyl Formamide	ΕE	33	Hydrofluoric Acid, 48%	EE	55
Dimethylsulfoxide	<b>E</b> E	EE	Hydrogen Peroxide, 3%	EE	E£
1,4-Dioxane	ĠF	0D	Hydrogen Peraxide, 3096	ξĊ	EE ·
Dipropylene Glycol	EE	EE	Hydrogen Peroxide, 90%	EG	EE
Ether	NN	FN	lodine Crystals	NN	NN
Ethyl Acetate	EE	EE	Isoburyl Alcohol	EE	EE
Ethyl Alcohol (Absolute)	EÇ	EE	Isopropyl Acetate	GF	εG
Ethyl Alcohol, 40%	БĊ	EE	Isopropyl Alcohol	ÉE	8E
Ethyl Benzene	FN	GF	Isopropyl Benzene	FN	GF
Ethyl Benzoate	F <b>F</b>	CC	Isopropyl Ether	NN	NN
Ethyl Butyrate	CN	GF	jet Fuel	FN	FN
Ethyl Chloride, Liquid	FN	ff	Kerosene	FN	<b>3</b> 2
Ethyl Cyanoacethte	EE	EE	Lacquer Thinner	NN	FN

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#### APPENDIX

### Chemical Resistance Information (Cont'd.)

CHEMICAL	LOPE	HDPE	CHEMICAL	LDPE	HDPE
Lactic Acid, 3%	EG	EE	Salicylic Acid, Powder	ĘĔ	EE
Lactic Acid, 85%	EE	EE	Salicylic Acld, Sat.	£Ε	EE
Mercury	EE	EE	Salt Solutions, Metallic	EE	EE
2-Methoxyethanol	EG	EE	Silicone Öil	EG	ÉĒ
Methoxyethyl Oleate	EC	EE	Silver Acetate	£E	EE
Methyl Acetate	FN	FF	Silver Nitrate	EG	EE
Methyl Alcohol	ĔE	EE	Skydroi LD4	ĢF	EG
Methyl Ethyl Ketone	EG	EE	Sodium Acetate, Sat.	EE	EE
Methyl Isobutyl Ketorle	GF	£G	Sodium Hydroxide, 1%	EE	EE
Methyl Prapyl Ketone	GF	EG	Sodium Hydroxide, 50% to Sat.	GÇ	EE
Methyl-t-butyl Ether	NN	FN	Sodium Hypachlorite, 15%	EE	EE
Methylene Chloride	FN	GF	Stearic Acid, Crystals	EE	EE
Mineral Oll	GN	EE	Sulfuric Acid, 1-696	EE	EE
Mineral Spirits	FIN	FN	Sulfuris Acid, 20%	EE	EE
Nitric Acid, 1-10%	EE	EE	Sulfuric Acid, 60%	EG	EE
Nitric Acid, 50%	ĠĠ	GN	Sulfuric Acid, 98%	00	ĞĞ
Nitric Acid, 7096	FN	GN	Sulfur Dioxide, Lla., 46 psig	NN	FN
Nitrobenzene	NN	FN	Sulfur Dioxide, Wet of Dry	ËĒ	EE
Nitromethane	NN	FN	Sulfur Salts	FN	GF
n-Octane	EE	EE	Tartaric Acid	EE	EE
Orange Oll	FN	GF	Tetrahydrofuran	FN	GF
Özone	٤G	EE	Thionyl Chloride	INN	NN
Perchloric Acid	GN	GN	Toluene	FN	00
Perchloroethylene	NN	NN	Tributyl Cltrate	GF	EC
Phenol, Crystals	GN .	GF	Trichloroacetic Acid	FN	5°F
Phenol, Liquid	NN	NN	1,2,4-Trichlorobenzene	ŇN	NN
Phosphoric Acid, 1-5%	EE	E£	Trichloroethane	NN	FN
Phosphoric Acid, 85%	EE	EE	Trichloroethylene	NN	FN
Picric Acid	NN .	NN	Triethylene Glycol	EE	EE
Pine Oll	GN	EG	2,2,4-Trimethylpentane	FN	FN
Potassium Hydroxide, 1%	EE	5 <u>5</u>	Tripropylene Glycol	EE	EF
Potassium Hydroxide, Conc.	EE	EE	Tris Buffer, Solution	EC	EG
Propane Gas	NN	FN	Turpentine	FN	<u>66</u>
Propionic Acid	FN	EF	Undecyl Alcohol	EF	EG
Propylene Glycol	EE :	EE	Urea	EE	EE
Propylene Oxide	٤G	EE	Vinylidene Chloride	NN	FN
Resorcinol, Sat.	5 <b>5</b> -	EE	Xylene	GN	GF
Resorcinol, S%	EE (	EE	Zinc Stearate	EE	EE
Salicylaldehyde	EC	EE			

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2.6 1.0.

3-1" 0.D.

2"

SRADE EL. 100-0"-

(2) 30" X 7'-6" LG. REINFORCED CONCRETE T& G PIPE JOINTS

EQU)

4" RE. PIPE -

SEE MATCH DETAIL (THIS DWG)

15'+0" REF.

- 3000 PSI CONCRETE

#4 pit

TOP OF SUMP

1'-0"

6'-6"

4-10 1/3

2'-7 7/8"

88.7 7/8

6

EL.

SUMP DETAIL

SCALE: 1"= 4"

6" TYP

4 K. K. M.

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