REDACTED VERSION

Enterprise Products 1690
Prod # 1690

9532057

EPAHO112001557

CES Environmental Services, Inc.

4904 Griggs Road
Houston TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1460

Waste Pre-Acceptance/Approval Letter

Date **7/25/2006**

Dear **Marty Goodpasture**

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 1690

Generator: Enterprise Products Company
Address: 11750 Almeda Road
Houston, TX 77045

Waste Information

Name of Waste: Storm water
TCEQ Waste Code #: Recycle
Container Type:
Detailed Description of Process Generating Waste:
Collection of storm water from the plant process area
Color: brown **Odor:** oil like **pH:** neutral
Physical State:
Incompatibilities: none
Safety Related Data/Special Handling:
Level D

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President
CES Environmental Services, Inc.

1690

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com

TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Generator Information

Company:	Enterprise Products Operating LP Station 812		
Address:	11750 Almeda Road		
City, State, Zip:	Houston, TX 77045		
Contact:	Marty Goodpasture or Dennis Cloud	**Title:**	Operation Supervisor
Phone No:	713-803-2222 713-875-3082	**Fax No:**	713-803-2250
24/hr Phone:	CES-713-676-1460		
U.S. EPA I.D. No:	CESQG TXD055132716		
State I.D.	CESQG 32061	**SIC Code:**	NA

SECTION 2: Billing Information – ☒ Same as Above

Company:			
Address:	Po Box 450678		
City, State, Zip:	Houston Tx 77245		
Contact:	Nan McConnell	**Title:**	
Phone No:	713-803-2246	**Fax No:**	713-803-2250

SECTION 3: General Description of the Waste

Name of Waste: Storm Water
Detailed Description of Process Generating Waste: Collection of Storm Water from the plant process area

Physical State: ☒ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: Brown **Odor:** oil like

Specific Gravity (water=1): .90-1.0 **Density:** 8 lbs/gal

Layers: ☐ Single-phase ☒ Multi-phase

Container Type:	☐ Drum	☐ Tote	☒ Truck	☐ Other (explain)
Container Size:	____	____	5000	____

Frequency: ☐ Weekly ☐ Monthly ☒ Quarterly ☐ Yearly
Number of Units (containers): 4 **Other:** ____
Texas State Waste Code No: NA-Recyclable Hydrocarbon
Proper U.S. DOT Shipping Name: Non-RCRA; Non-DOT Regulated Material
Class: NA **UN/NA:** NA **PG:** NA **RQ:** NA

Flash Point >200	**pH** neutral	**Reactive Sulfides** 0mg/l	**Reactive Cyanides** 0mg/l	**Solids** 0-5%
Oil&Grease >1500mg/l	**TOC** >1500mg/l	**Zinc** 0mg/l	**Copper** 0mg/l	**Nickel** 0mg/l

SECTION 4: Physical and Chemical Data

The waste consists of the following materials	Ranges are acceptable	or %
Water	85-98	%
Oil Emulsion	0-15	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.
Level D

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.
Analysis

SECTION 7: Incompatibilities

Please list all incompatibilities (if any):
none

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals: ____
TCLP Volatiles: ____
TCLP Semi-Volatiles: ____
Reactivity: X
Corrosivity: X
Ignitability: X

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☒ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: [signature] **Date:** 7-24-06

Printed Name/Title: Operations Supervisor

CES USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer: Prabhat Bhargava

Date: 7-24-06 (Approved) Rejected

Approval Number: 1690

Additional Information: REC

EPAHO112001560

SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☐ YES ☒ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

EPAHO112001561

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☐ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

EPAHO112001562

LABORATORY ANALYSIS REPORT

A & B Environmental Services, Inc.
10100 East Freeway, Suite 100
Houston, TX 77029

Report Date: 7/14/2006
Total No. Pages: 7

Client Project ID

Stormwater Tanks

Enterprise Products-Almeda
Attn: Dennis Cloud
11750 Almeda
Houston, TX 77045

Client PO #:
Date Received: 7/11/2006 11:00
Collected by: R.L. Voorhies

A & B Labs has analyzed the following samples . . .

Your Sample ID	Job ID
Tanks 8824/7948	82074-01

Thank you for choosing A & B Labs.

Approved By: Jennifer Bishop Date: 7/14/2006

Title: Project Manager

This report cannot be reproduced, except in full, without prior written permission of A & B Labs. Results shown relate only to the items tested.

LABORATORY TEST RESULTS

A&B Job ID 82074 — Date: 7/14/2006

CUSTOMER: Enterprise Products-Almeda — PROJECT: Stormwater Tanks — ATTN: Dennis Cloud

Customer Sample ID: Tanks 8824/7948
Date Collected: 7/11/2006
Time Collected: 8:45
Sample Loc./Other Info:

Job Sample ID: 82074-01
Sample Matrix: Water

Test Method	Parameter/Test Description	Result	Units	D.F.	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 415.1									
	TOC	234.8	mg/L	100	100			07/11 12:00	RG
SW-846 6010B	**TCLP Metals**								
	Arsenic	BRL	mg/L	1	0.1	1.8		07/11 16:11	SEC
	Barium	0.30	mg/L	1	0.1	100		07/11 16:11	SEC
	Cadmium	BRL	mg/L	1	0.1	0.5		07/11 16:11	SEC
	Chromium	BRL	mg/L	1	0.1	5		07/11 16:11	SEC
	Lead	BRL	mg/L	1	0.1	1.5		07/11 16:11	SEC
	Selenium	BRL	mg/L	1	0.5	1		07/11 16:11	SEC
	Silver	BRL	mg/L	1	0.1	5		07/11 16:11	SEC
SW-846 7470A	**TCLP Mercury**								
	Mercury	BRL	mg/L	1	0.002	0.2		07/11 15:01	SEC
TX 1005	**Total Petroleum Hydrocarbons**								
	C6-C12	2.6	mg/L	1	1.78			07/12 13:54	WH
	>C12-C28	4.3	mg/L	1	1.93			07/12 13:54	WH
	>C28-C35	14.5	mg/L	1	3.42			07/12 13:54	WH
	Total C6-C35	21.4	mg/L	1				07/12 13:54	WH
SW-846 8021B	**TCLP Benzene**								
	Benzene	0.217	mg/L	5	0.125	0.1		07/11 14:55	PNS

** BRL - Below Reporting Limit

EPAHO112001564

A & B Environmental Services, Inc.
10100 East Freeway, Suite 100
Houston, Texas 77029

SAMPLE SURROGATE RECOVERY REPORT

Report Date: 7/14/2006

Job ID: 82074

Parameter	Method	CAS #	Spike Added	Spike Result	D.F.	%Rec	% Rec CLIMIT	Analysis DateTime	Analyst	Lab ID	Q
Tetrafluorotoluene (Surrogate)	SW-846 8021B	5230-78-4	100	96	5	96	75-125	7/11/06 14:55	Psaraiya	82074-01	
Chlorooctadecane	TX 1005	3386-33-2	100	89.5	1	89.5	50-149	7/12/06 13:54	Whuimei	82074-01	

EPAHO112001565

A & B Environmental Services, Inc.
10100 East Freeway
Houston, Texas 77029

QUALITY CONTROL CERTIFICATE

Report Date: 7/14/2006

Job ID: 82074

QCType: Duplicate Paramter	Method	QCSapl Result	Dup Result	RPD	RPD CLimits		QCBatchID	QC SampleID	Qual.
TOC	EPA 415.1	6.0	5.9	1.7	<20		Q071106TOCA	82048-01	

QCType: LCS and LCSD Parameter	Method		Spike Added	LCS Result	LCSD Result	LCS Rec %	LCSD Rec %	RPD	%RPD CLimits	%Rec CLimits	QCBatchID		Qual
TOC	EPA 415.1		5	5.3	5.4	106	108	1.9	<20	80-120	Q071106TOCA		
Arsenic	SW-846 6010B		1	1.06	1.05	106	105	0.9	<25	80-120	Q071106mt		
Barium	SW-846 6010B		1	1.01	0.98	101	98	3.0	<25	80-120	Q071106mt		
Cadmium	SW-846 6010B		1	1.01	0.98	101	98	3.0	<25	80-120	Q071106mt		
Chromium	SW-846 6010B		1	1.00	0.97	100	97	3.0	<25	80-120	Q071106mt		
Lead	SW-846 6010B		1	0.98	0.97	98	97	1.0	<25	80-120	Q071106mt		
Selenium	SW-846 6010B		1	1.06	1.04	106	104	1.9	<25	80-120	Q071106mt		
Silver	SW-846 6010B		1	0.98	0.96	98	96	2.1	<25	80-120	Q071106mt		
Mercury	SW-846 7470A		0.005	0.005		100			<35	71-143	Q071106hgt		
C6-C12	TX 1005		500	552.4	593.0	110	119	7.1	<25	70-130	q071106tph1005b		
>C12-C28	TX 1005		500	523.4	576.1	105	115	9.6	<25	70-130	q071106tph1005b		
>C28-C35	TX 1005		500	520.8	607.5	104	122	15.4	<25	70-130	q071106tph1005b		
Benzene	SW-846 8021B		0.02	0.021	0.021	105	105	0.0	<25	75-125	q071106btext		

QCType: MS and MSD Parameter	Method	QCSapl Result	Spike Added	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD	RPD CLimits	%Rec CLimits	QCBatchID	QC SampleID	Qual
TOC	EPA 415.1	6.0	5	10.8	10.8	96	96	0.0	<20	80-120	Q071106TOCA	82048-01	
Arsenic	SW-846 6010B	BRL	2	2.13	2.19	107	110	2.8	<30	45-138	Q071106mt	82008-01	
Barium	SW-846 6010B	0.17	2	2.08	2.11	96	97	1.6	<25	39-135	Q071106mt	82008-01	
Cadmium	SW-846 6010B	BRL	2	1.90	1.93	95	97	1.6	<25	56-125	Q071106mt	82008-01	

** BRL-Below Reporting Limit

EPAHO112001566

A & B Environmental Services, Inc.
10100 East Freeway
Houston, Texas 77029

QUALITY CONTROL CERTIFICATE

Report Date: 7/14/2006

Job ID: 82074

QCType: MS and MSD

Parameter	Method	QCSapl Result	Spike Added	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD	RPD CLimits	%Rec CLimits	QCBatchID	QC SampleID	Qual
Chromium	SW-846 6010B	0.15	2	2.06	2.09	96	97	1.6	<25	52-125	Q071106mt	82008-01	
Lead	SW-846 6010B	2.14	2	3.91	4.01	89	94	5.5	<25	55-125	Q071106mt	82008-01	
Selenium	SW-846 6010B	BRL	2	2.46	2.51	123	126	2.0	<25	18-137	Q071106mt	82008-01	
Silver	SW-846 6010B	BRL	2	1.82	1.85	91	93	1.6	<25	26-148	Q071106mt	82008-01	
Mercury	SW-846 7470A	BRL	0.005	0.0049	0.0051	98	102	4.0	<35	61-175	Q071106hgt	82008-01	

QCType: Method Blank

Parameter	Method	CAS #	Result	Units	D.F.	Rpt Limit	QCBatch ID		Qual
TOC	EPA 415.1		BRL	mg/L	1	1	Q071106TOCA		
Arsenic	SW-846 6010B	7440-38-2	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Barium	SW-846 6010B	444-39-3	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Cadmium	SW-846 6010B	7440-43-9	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Chromium	SW-846 6010B	7440-47-3	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Lead	SW-846 6010B	7439-92-1	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Selenium	SW-846 6010B	7782-49-2	BRL	mg/L	1	0.5	Q071106mt	TCLP Metals	
Silver	SW-846 6010B	7440-22-4	BRL	mg/L	1	0.1	Q071106mt	TCLP Metals	
Mercury	SW-846 7470A	7439-97-6	BRL	mg/L	1	0.002	Q071106hgt	TCLP Mercury	
C6-C12	TX 1005		BRL	mg/L	1	1.78	q071106tph1005b	Total Petroleum Hydrocarbons	
>C12-C28	TX 1005		BRL	mg/L	1	1.93	q071106tph1005b	Total Petroleum Hydrocarbons	
>C28-C35	TX 1005		BRL	mg/L	1	3.42	q071106tph1005b	Total Petroleum Hydrocarbons	
Benzene	SW-846 8021B	71-43-2	BRL	mg/L	1	0.025	q071106btext	TCLP Benzene	

** BRL-Below Reporting Limit

EPAHO112001567

A & B Labs — Chain of Custody

Page 1 of 1

10100 East Fwy. (I-10), Ste. 100
Houston, TX 77029
713-453-6060
713-453-6091 Fax
ablabs.com

1. REPORT TO:
Company: Enterprise Products Almeda
Address: 11650 Almeda Rd
Houston TX 77045
Contact: Dennis Cloud
Phone: 717-803-2249
Fax: ☐
E-mail: ☒ DCloud@eprod.com
☒ JMollhagen@eprod.com

2. INVOICE TO: LPG
Company:
Address:
Contact:
Phone:
Fax: ☐
E-mail: ☐

3. PO#

4. Turnaround Time (Business Days)
☐ Same Day* ☐ Need by
☐ 1 Day*
☐ 2 Days*
☒ 3 Days*
☐ 7 Days * Surcharge applies

A&B JOB ID: 82094
5. Project #

6. Project Name / Location: Stormwater Tanks

7. Special Instructions (PLEASE PRINT)
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached

8. Sampler's Name & Company (PLEASE PRINT): R.L. Voorhies / A & B Labs
Sampler's Signature & Date

LAB USE ONLY Item	9. Sample ID and Description	10. Sampling Date	Time	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Air	Other	No. of Containers	Analyses/Methods: TPH Texas 1005	TOC	TCLP Metals	17. REMARKS
												13. 14. Containers*	V	P	P	
												15. Preservatives**	C	C,S	C,N	
												16.				
DAY 1	Tank 8824 / 7948	7/11/06	8:45	X		X						5	3	1	1	
	2															
	3															
	4															
	5															
	6															
	7															
	8															
	9															
	10															

18. RELINQUISHED BY	DATE	TIME	19. RECEIVED BY	DATE	TIME
1 R L Voorhies	7/11/06	11:00	S Bass	7-11-06	11:00
2					
3					

20. KNOWN HAZARDS / COMMENTS
Tank 8824 open top
3-4" of oil on top
Tank 7948 - closed top
oil film / gas odor

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other
**Preservatives: C - Cool; H - HCl; N - HNO3; S - H2SO4; OH - NaOH; T - Na2S2O3; X - Other

METHOD OF SHIPMENT
BILL OF LADING / TRACKING #
LAB USE ONLY SAMPLING 2 RENTAL P/U

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091
Samples will be disposed of after 30 days
A & B reserves the right to return samples

EPAHO112001568

Sample Condition Checklist

Date : 7/11/2006

Lab ID#: 82074	Date Received : 07/11/2006	Time Received : 11:00 AM
Company Name: Enterprise Products		
Temperature: 16°C	Sample pH: <2 (TOC)	

	Check Points	Yes	No
1.	Cooler Seal present and signed.		x
2.	Sample(s) in a cooler.	x	
3.	If yes, ice in cooler	x	
4.	Sample(s) received with chain-of-custody	x	
5.	C-O-C signed and dated.	x	
6.	Sample(s) received with signed sample custody seal.		x
7.	Sample containers arrived intact (If No comment)	x	
8.	Matrix Water ☑ Soil ☐ Liquid ☐ Sludge ☐ Solid ☐ Cassette ☐ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐		
9.	Samples were received in appropriate container(s)	x	
10.	All samples were tagged or labeled.	x	
11.	Sample ID labels match C-O-C ID's.	x	
12.	Bottle count on C-O-C matches bottles found.	x	
13.	Sample volume is sufficient for analyses requested.	x	
14.	Samples were received within the hold time.	x	
15.	VOA vials compelety filled.	x	
16.	Sample accepted.	x	

Comments: Include actions taken to resolve discrepancies/problem:

Sample cooling was initiated in the field with blue ice.

Received by : Storres

Check in by/date : Storres / 7/11/2006

CES Environmental Services, Inc.

4904 Griggs Road
Houston, TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1676

Waste Profile Re-Certification Form

CES Waste Approval #: **1690**

Customer: **Enterprise Products Company**

Waste Generator: **Enterprise Products Company**

Waste Stream Name: **Storm water**

Expiration Date: **7/24/2008**

As per our waste analysis plan, CES Environmental Services, Inc. requires recertification of all approved waste profiles on an annual basis. The purpose of this form is to confirm that no changes have been made in the generation process of the aforementioned waste stream and that the waste stream remains classified as non-hazardous as per 40 CFR 261.3.

Generator hereby certifies that the components in the aforementioned waste stream and the process generating this waste stream remain the same as when issued the aforementioned CES Waste Approval Number: (Check Appropriate Box)

☒ No changes, please recertify.

☐ Please send new profile as waste stream has changed.

☒ Analysis is NOT required for recertification.

☐ The following analysis is required for recertification. Please sumbit results of the following tests.

- ☐ TCLP Metals
- ☐ TCLP Volatiles
- ☐ TCLP Semi-volatiles
- ☐ Reactivity
- ☐ Corrosivity
- ☐ Ignitability

Enterprise Products
Customer Name

Signature

Supervisor, Operations
Company / Title

6-11-08
Date

✓

Toromont Process systems 1673
Profile # 1673

EPAHO1120015 71

L. Am

CES Environmental Services, Inc.

4904 Griggs Road
Houston TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1460

Waste Pre-Acceptance/Approval Letter

Date **7/17/2006**

Dear **Nelson James**

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 1673

Generator: Toromont Process Systems
Address: 10815 Telge Rd
Houston, TX 77095

Waste Information

Name of Waste: Recyclable RCRA empty containers
TCEQ Waste Code #: Recycle
Container Type:
Detailed Description of Process Generating Waste:
RCRA empty drums last containing cutting oils and coolants.
Color: varies **Odor:** none **pH:** na
Physical State:
Incompatibilities: none
Safety Related Data/Special Handling:
Level D PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President
CES Environmental Services, Inc.

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit No: 39048
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Generator Information

Company:	Toromont Processing		
Address:	10815 Telge		
City, State, Zip:	Houston, TX 77095		
Contact:	Nelson James	**Title:**	Man. Manager
Phone No:	(281) 345-5058	**Fax No:**	281-345-7434
24/hr Phone:	(281) 345-5058		
U.S. EPA I.D. No:	NA		
State I.D.	NA	**SIC Code:**	NA

SECTION 2: Billing Information – ☒ Same as Above

Company:			
Address:			
City, State, Zip:			
Contact:		**Title:**	
Phone No:		**Fax No:**	

SECTION 3: General Description of the Waste

Name of Waste: Recyclable RCRA Empty Containers
Detailed Description of Process Generating Waste: RCRA empty drums last containing cutting oils and coolants.

Physical State: ☐ Liquid ☐ Sludge ☐ Powder ☒ Solid ☐ Filter Cake ☐ Combination

Color: Varies **Odor:** None

Specific Gravity (water=1): NA **Density:** NA lbs/gal

Layers: ☒ Single-phase ☐ Multi-phase

Container Type: ☒ Drum ☒ Tote ☐ Truck ☐ Other (explain)
Container Size: 55 G 275 G ____ ____

Frequency: ☐ Weekly ☒ Monthly ☐ Quarterly ☒ Yearly
Number of Units (containers): 1-80 **Other:** ____
Texas State Waste Code No: Recyclable
Proper U.S. DOT Shipping Name: Recyclable RCRA Empty Containers
Class: Na **UN/NA:** NA **PG:** NA **RQ:** NA

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
>200	Na	0mg/l	0mg/l	100%

Oil&Grease	TOC	Zinc	Copper	Nickel
Namg/l	Namg/l	Namg/l	Namg/l	Namg/l

Formatted

EPAHO112001574

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The waste consists of the following materials	Concentration Ranges are acceptable	Units or %
RCRA Empty Drums (Plastic)	0-100	%
RCRA Empty Drums (Steel)	0-100	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.
Level-D PPE

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package. Formatted
None

SECTION 7: Incompatibilities

Please list all incompatibilities (if any): Formatted
None

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals: X
TCLP Volatiles: X
TCLP Semi-Volatiles: X
Reactivity: X
Corrosivity: X
Ignitability: X

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: No Signature Required **Date:** 07/14/06 Formatted

Printed Name/Title: Formatted Formatted Formatted

CES USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer: [signature] Additional Information: _____

Date: 7-14-06 Approved Rejected REC

Approval Number: 1673

EPAHO112001575

SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☐ YES ☒ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☒ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

EPAHO112001576

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☐ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

EPAHO112001577

CES Environmental Services, Inc.

4904 Griggs Road
Houston, TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1676

Waste Profile Re-Certification Form

CES Waste Approval #: **1673**

Customer: **Toromont Process Systems**

Waste Generator: **Toromont Process Systems**

Waste Stream Name: **Recyclable RCRA empty containers**

Expiration Date: **7/14/2008**

As per our waste analysis plan, CES Environmental Services, Inc. requires recertification of all approved waste profiles on an annual basis. The purpose of this form is to confirm that no changes have been made in the generation process of the aforementioned waste stream and that the waste stream remains classified as non-hazardous as per 40 CFR 261.3.

Generator hereby certifies that the components in the aforementioned waste stream and the process generating this waste stream remain the same as when issued the aforementioned CES Waste Approval Number: (Check Appropriate Box)

☒ No changes, please recertify.

☐ Please send new profile as waste stream has changed.

☒ Analysis is NOT required for recertification.

☐ The following analysis is required for recertification. Please sumbit results of the following tests.

- ☐ TCLP Metals
- ☐ TCLP Volatiles
- ☐ TCLP Semi-volatiles ✓
- ☐ Reactivity
- ☐ Corrosivity
- ☐ Ignitability

Toromont Energy Systems
Customer Name

Bob Marino
Signature

Material Control Coordinator
Company / Title

6-13-08
Date

Quietflex Manufacturing 1665
Profile # 1665

EPAHO112001579

7E
T-36
8-5-09
LAB

CES Environmental Services, Inc.

4904 Griggs Road
Houston TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1460

Waste Pre-Acceptance/Approval Letter

Date **7/11/2006**

Dear **Waseem Ahmed**

Thank you for choosing CES Environmental Services, Inc. for you waste disposal and/or recycling needs. The following waste stream has been approved at our facility in Houston, TX. If the waste received does not conform to the profile, then rejection or additional charges may apply.

CES Profile # 1665

Generator: Quietflex Manufacturing LP
Address: 4518 Brittmoore Road
Houston, TX 77041

Waste Information

Name of Waste: Used Oil
TCEQ Waste Code #: Recycle
Container Type:
Detailed Description of Process Generating Waste:
Unused oil from equipment drains and leaks
Color: milky - black **Odor:** none **pH:** 4-11
Physical State:
Incompatibilities: Strong Oxidizers
Safety Related Data/Special Handling:
Standard PPE

If you have any questions concerning this approval and/or the conditions, then please feel free to contact our office at (713) 676-1460.

Thank you,

Matt Bowman, President
CES Environmental Services, Inc.

CES Environmental Services, Inc.
4904 Griggs Road Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit No: 39048
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Generator Information

Company:	Quietflex Manufacturing Company LP		
Address:	4518 Britmoore Road		
City, State, Zip:	Houston, TX 77041		
Contact:	Jake Bruner	**Title:**	EH&S
Phone No:	(713) 849-2163	**Fax No:**	(713) 586-8042
24/hr Phone:	(713) 849-2163		
U.S. EPA I.D. No:	N/A		
State I.D.	87631	**SIC Code:**	N/A

SECTION 2: Billing Information – ☒ Same as Above

Company:			
Address:			
City, State, Zip:			
Contact:		**Title:**	
Phone No:		**Fax No:**	

SECTION 3: General Description of the Waste

Name of Waste: Used Oil
Detailed Description of Process Generating Waste: Unused oil from equipment drains and leaks

Physical State: ☒ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: Milky - Black **Odor:** None

Specific Gravity (water=1): 0.95 **Density:** 7.5-8 lbs/gal

Layers: ☐ Single-phase ☒ Multi-phase

Container Type:	☒ Drum	☐ Tote	☐ Truck	☐ Other (explain)
Container Size:	55			

Frequency: ☐ Weekly ☒ Monthly ☐ Quarterly ☒ Yearly
Number of Units (containers): 10 **Other:**
Texas State Waste Code No: N/A - Recyclable
Proper U.S. DOT Shipping Name: Non-DOT Regulated Material
Class: N/A **UN/NA:** N/A **PG:** N/A **RQ:** N/A

EPAHO112001582

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
>200	4-11	<20mg/l	<20mg/l	0-2%

Oil&Grease	TOC	Zinc	Copper	Nickel
> 100mg/l	N/Amg/l	N/Amg/l	N/Amg/l	N/Amg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The waste consists of the following materials	Concentration Ranges are acceptable	Units or %
Used Lubricating Oil	50-90	%
Water	10-60	%
Solids	1-2	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.
Standard PPE

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.
None

SECTION 7: Incompatibilities

Please list all incompatibilities (if any):
Strong Oxidizers

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals:	N/A - Regulated under 40 CFR 279.11
TCLP Volatiles:	N/A - Regulated under 40 CFR 279.11
TCLP Semi-Volatiles:	N/A - Regulated under 40 CFR 279.11
Reactivity:	N/A - Regulated under 40 CFT 279.11
Corrosivity:	N/A - Regulated under 40 CFR 279.11
Ignitability:	N/A - Regulated under 40 CFR 279.11

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: Jake Bruner **Date:** 6/21/2006

Printed Name/Title: Jake Bruner EH&S Manager

CES USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer: Rebecca Thayer

Date: 7-11-06 Approved Rejected

Approval Number: 1665

Additional Information: REC

EPAHO112001583

SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☐ YES ☒ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

07/11/2006 16:05 7138496898 QUIETFLEX HR PAGE 03/04

EPAHO112001584

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☐ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

EPAHO112001585

CES Environmental Services, Inc.

4904 Griggs Road
Houston, TX 77021
Tel. (713) 676-1460
Fax. (713) 676-1676

Waste Profile Re-Certification Form

CES Waste Approval #: **1665**

Customer: **QuietFlex Manufacturing Company**

Waste Generator: **QuietFlex Manufacturing Company**

Waste Stream Name: **Used Oil**

Expiration Date: **7/11/2008**

As per our waste analysis plan, CES Environmental Services, Inc. requires recertification of all approved waste profiles on an annual basis. The purpose of this form is to confirm that no changes have been made in the generation process of the aforementioned waste stream and that the waste stream remains classified as non-hazardous as per 40 CFR 261.3.

Generator hereby certifies that the components in the aforementioned waste stream and the process generating this waste stream remain the same as when issued the aforementioned CES Waste Approval Number: (Check Appropriate Box)

☒ No changes, please recertify.

☐ Please send new profile as waste stream has changed.

Raymond J. Bindiola Jr.
Customer Name

Raymond J. Bindiola
Signature

EH&S Coordinator
Company / Title

6/06/08
Date

☒ Analysis is NOT required for recertification.

☐ The following analysis is required for recertification. Please sumbit results of the following tests.

- ☐ TCLP Metals
- ☐ TCLP Volatiles
- ☐ TCLP Semi-volatiles
- ☐ Reactivity
- ☐ Corrosivity
- ☐ Ignitability

✓

CES Environmental Services, Inc.

4904 Griggs Road
Houston, TX. 77021
Tel. (713) 676-1460
Fax. (713) 676-1676

Waste Profile Re-Certification Form

CES Waste Approval #: **1665**

Customer: **QuietFlex Manufacturing Company**

Waste Generator: **QuietFlex Manufacturing Company**

Waste Stream Name: **Used Oil**

Expiration Date: **7/11/2008**

As per our waste analysis plan, CES Environmental Services, Inc. requires recertification of all approved waste profiles on an annual basis. The purpose of this form is to confirm that no changes have been made in the generation process of the aforementioned waste stream and that the waste stream remains classified as non-hazardous as per 40 CFR 261.3.

Generator hereby certifies that the components in the aforementioned waste stream and the process generating this waste stream remain the same as when issued the aforementioned CES Waste Approval Number: (Check Appropriate Box)

☒ No changes, please recertify.

☐ Please send new profile as waste stream has changed.

Raymond J. Bindiola Jr.
Customer Name

Raymond J. Bindiola
Signature

EH&S Coordinator
Company / Title

6/06/08
Date

☒ Analysis is NOT required for recertification.

☐ The following analysis is required for recertification. Please sumbit results of the following tests.

- ☐ TCLP Metals
- ☐ TCLP Volatiles
- ☐ TCLP Semi-volatiles
- ☐ Reactivity
- ☐ Corrosivity
- ☐ Ignitability

✓

BOX # 113

TYPE OF DOCUMENTS: _____

DOCUMENTS OF INTEREST:

Box was from the lab.
- Folders containing all SOP for CES.
- Folder containing instructions for the STB Hazardous Wastewater Treatment Process.
- Notes from STB process
- Tank wash folder
- Completed Evals
- Eval request forms.
- IPA streams
- 2009 Memos
- 2008 Lab memos

VIOLATIONS SUPPORTED: DOT RCRA SDWA OSHA

BOX SEARECH BY: _____

DATE SEARCHED: 9/15/09

1 of 1

EPAHO113000001

IPA STREAMS

EPAHO11300002

LAB
T-48
8/4/09
CL

RE: IPA Stream

Gary Lenertz

Sent: Monday, May 05, 2008 8:42 PM

To: Matt Bowman; Joe Wilson

Cc: Kelli Lofton; Marlin Moser; Miles Root; Gary Peterson

Some of my thoughts..

The IPA stream (IPA, Methanol, Acetone, Water). This stream can be sold. The price however, is hard to define. Depending on final quality, the price could range from $0.05 to $0.28 per POUND. If the trailer is ~35% recoverable IPA, the total value is between $750 and $4400 per load FOB CES facility. We will also need to get some feedback from Miles on how much chemical cost we will incur to treat the ammonia smell. I would hope the costs will be minimal.

The water should be able to be discharged after treatment. We need to get a good estimate on this. For arguments sake, I would estimate our cost to be $0.12 per gallon. If the water was 30%, then Cost for water disposal is ~$200

For the Amine bottoms, this is where we need to do some homework. This may be of some value and could be sold, but most likely, we will have to dispose of. Keep in mind, that since the volume is not a full truck load, we need to make sure the freight is covered correctly.

For actual processing of the material, the closest I can compare to is what we are doing for PPG's methylene chloride. Independent calcs, and some collaboration with Marlin showed it costs us ~3,500 to $4,500 per load to distill. Distillation for the Pchem material may be more since we will always have to make a special run (unless we dedicate a distillation tower to it). You will need to get some feedback from Marlin on these numbers. It is possible, we can run this material either faster (or slower) than the Me2CL which would affect our economics. Ask Marlin, if there is any special equipment or manpower needed to add the citric acid/ peroxide, it needs to be accounted for.

TO get a estimate for our costs...
We need to confirm the treatment process and estimate manpower and chemicals
Then we need to make a product with this process to send to prospective customers so we can define IPA price.
Then add all these cost/revenue to see where we are at.

First pass looks like the price will need to be in the order of $0.30 to $1.00 per gallon. Once we get the data above, we should be able to narrow to ~$0.10 per gallon.

From: Matt Bowman
Sent: Monday, May 05, 2008 4:37 PM
To: Joe Wilson
Cc: Kelli Lofton; Gary Lenertz; Marlin Moser; Miles Root; Gary Peterson
Subject: RE: IPA Stream

We need to look at the costs for processing the stream (and deal with the residuals) and how much value we may recover from the products. Maybe you could discuss these issues with Gary a little tomorrow before he leaves since he has spent quit a bit of time on this stream.
If I had to guess, I would say that they are probably paying at least $.40/gallon for disposal of this material plus transportation.

EPAHO113000004

Matt

From: Joe Wilson
Sent: Monday, May 05, 2008 6:11 PM
To: Matt Bowman
Subject: RE: IPA Stream

This guy will not give me any pricing info. However I called on another semi. plant last week that is about to shut down, he may be a little more relaxed with info. Freescale is sending this stream to TXI - Midleothian for fuel blending we would have to under or close to that price to get it. Clean Harbors is brokering it to TXI, they are not very cheap. I will get back to you with more info.

Joe Wilson
Account Manager
CES Environmental Services Inc.
(713) 550-6344
jwilson@cesenvironmental.com

From: Matt Bowman
Sent: Monday, May 05, 2008 6:02 PM
To: Joe Wilson; Miles Root; Gary Lenertz
Cc: Kelli Lofton; Marlin Moser
Subject: RE: IPA Stream

Thanks for all the work on this Miles....this looks like it might really be something we could tackle!!! Joe, do you know what the customer is doing with the waste now and about how much he is paying? This is the first step we need to take to find out how to price the work.
Matt

From: Joe Wilson
Sent: Monday, May 05, 2008 4:15 PM
To: Miles Root; Gary Lenertz
Cc: Matt Bowman; Kelli Lofton
Subject: RE: IPA Stream

Gary,
Sounds like we can do something with it. How do I price it. Lets get together on this if you have time before you leave.

Thanks
Joe Wilson
Account Manager
CES Environmental Services Inc.
(713) 550-6344
jwilson@cesenvironmental.com

From: Miles Root
Sent: Monday, May 05, 2008 10:57 AM
To: Gary Lenertz
Cc: Matt Bowman; Kelli Lofton; Joe Wilson
Subject: RE: IPA Stream

Citric acid works for this. Crystals put into the light ends cut and shaken remove the odor. You can also use hydrogen peroxide to form the amine oxides, which do not have the odor. 30% works fine. The citric acid has

EPAHO113000005

RE: IPA Stream

Matt Bowman

Sent: Monday, May 05, 2008 6:40 PM

To: Miles Root; Gary Lenertz

Cc: Kelli Lofton; Joe Wilson

Another possible approach may be to wash with citirc prior to distillation...
Miles, would this make sense? Would it still achieve the same results and make processing easier? If so, how much citric would we use compared to the neat sample? How strong is the concentration of the wastewater that comes off the stream if we use this approach?

From: Miles Root
Sent: Monday, May 05, 2008 10:57 AM
To: Gary Lenertz
Cc: Matt Bowman; Kelli Lofton; Joe Wilson
Subject: RE: IPA Stream

Citric acid works for this. Crystals put into the light ends cut and shaken remove the odor. You can also use hydrogen peroxide to form the amine oxides, which do not have the odor. 30% works fine. The citric acid has the advantage in that it can be used after the distillation and the salts just removed, as they are insoluble, since this is a non aqueous cut. The peroxides would remain in solution and the IPA would need to be distilled away to have a more pure product.

Miles

From: Gary Lenertz
Sent: Friday, May 02, 2008 5:30 PM
To: Miles Root
Cc: Matt Bowman; Kelli Lofton; Joe Wilson
Subject: IPA Stream

Miles,

For Sample 0408-58, you split out the lights (mostly IPA), the water, and the heavies (amines). The IPA phase looked good but had an obvious amine/ammonia smell to it.

We think we have a pretty good potential market for getting this material in and selling, however, the ammonia odor is a killer. Can you look into coming up with a method to help remove/reduce the odor? Perhaps you could mix with a small amount of citric acid/ calcium carbonate etc to help? Any suggestions would be welcome.

Best Regards,

Gary Lenertz
Director of Sales and Marketing

CES Environmental Services, Inc.

Sample Distillation Request Sample 0408-71

Gary Lenertz

Sent: Friday, April 18, 2008 4:14 PM

To: Miles Root

Cc: Gary Peterson; Marlin Moser; Kim Harmon; Joe Wilson

Miles

We have a new stream that we want to evaluate to see if we could recycle. I labeled it 0408-GL in the lab since I did not have a number handy. Since then, I logged it in the shared spreadsheet under 0408-71.

I would like to run a distillation keeping records of the boiling point at 10% increments. Separate the material flashing at temperatures less than 100C.

I would also try to take a separate water cut so we could see if that is something we could discharge. This is probably a long shot.

Then lastly, if we can get a cut for everything above water. We might be able to sell to JT Baxter.

The composition according to the supplier (Teris), is as follows:

2% Acetone (bp ~56C)
45% IPA (bp ~82C)
2% Methanol (bp~64C)
15% Water
6% 1-Methyl 2-Pyrolildinone (bp ~202C)
20% 1 Metholy 2 propanol (bp~120C)

For now, I just want the following analysis:

Light cut – S.G., color, odor, organic chlorides
Water cut – TOC, SG
Heavy cut – SG, color, odor

Call me if you have any questions.

Best Regards,

Gary Lenertz
Director of Sales and Marketing

CES Environmental Services, Inc.
4904 Griggs Rd.
Houston, TX 77021
Cell: (832) 754-5359
Office (713) 676-1460
Fax: (713) 676-1676
glenertz@CESenvironmental.com

EPAHO113000007

4904 Griggs Rd.
Houston, TX 77021
Cell: (832) 754-5359
Office (713) 676-1460
Fax: (713) 676-1676
glenertz@CESenvironmental.com

RE: IPA Stream

Matt Bowman

Sent: Monday, May 05, 2008 6:37 PM

To: Joe Wilson

Cc: Kelli Lofton; Gary Lenertz; Marlin Moser; Miles Root; Gary Peterson

---

We need to look at the costs for processing the stream (and deal with the residuals) and how much value we may recover from the products. Maybe you could discuss these issues with Gary a little tomorrow before he leaves since he has spent quit a bit of time on this stream.
If I had to guess, I would say that they are probably paying at least $.40/gallon for disposal of this material plus transportation.
Matt

From: Joe Wilson
Sent: Monday, May 05, 2008 6:11 PM
To: Matt Bowman
Subject: RE: IPA Stream

This guy will not give me any pricing info. However I called on another semi. plant last week that is about to shut down, he may be a little more relaxed with info. Freescale is sending this stream to TXI - Midleothian for fuel blending we would have to under or close to that price to get it. Clean Harbors is brokering it to TXI, they are not very cheap. I will get back to you with more info.

Joe Wilson
Account Manager
CES Environmental Services Inc.
(713) 550-6344
jwilson@cesenvironmental.com

From: Matt Bowman
Sent: Monday, May 05, 2008 6:02 PM
To: Joe Wilson; Miles Root; Gary Lenertz
Cc: Kelli Lofton; Marlin Moser
Subject: RE: IPA Stream

Thanks for all the work on this Miles....this looks like it might really be something we could tackle!!! Joe, do you know what the customer is doing with the waste now and about how much he is paying? This is the first step we need to take to find out how to price the work.
Matt

From: Joe Wilson
Sent: Monday, May 05, 2008 4:15 PM
To: Miles Root; Gary Lenertz
Cc: Matt Bowman; Kelli Lofton
Subject: RE: IPA Stream

Gary,
Sounds like we can do something with it. How do I price it. Lets get together on this if you have time before you leave.

Thanks

EPAHO113000009

Joe Wilson
Account Manager
CES Environmental Services Inc.
(713) 550-6344
jwilson@cesenvironmental.com

From: Miles Root
Sent: Monday, May 05, 2008 10:57 AM
To: Gary Lenertz
Cc: Matt Bowman; Kelli Lofton; Joe Wilson
Subject: RE: IPA Stream

Citric acid works for this. Crystals put into the light ends cut and shaken remove the odor. You can also use hydrogen peroxide to form the amine oxides, which do not have the odor. 30% works fine. The citric acid has the advantage in that it can be used after the distillation and the salts just removed, as they are insoluble, since this is a non aqueous cut. The peroxides would remain in solution and the IPA would need to be distilled away to have a more pure product.

Miles

From: Gary Lenertz
Sent: Friday, May 02, 2008 5:30 PM
To: Miles Root
Cc: Matt Bowman; Kelli Lofton; Joe Wilson
Subject: IPA Stream

Miles,

For Sample 0408-58, you split out the lights (mostly IPA), the water, and the heavies (amines). The IPA phase looked good but had an obvious amine/ammonia smell to it.

We think we have a pretty good potential market for getting this material in and selling, however, the ammonia odor is a killer. Can you look into coming up with a method to help remove/reduce the odor? Perhaps you could mix with a small amount of citric acid/ calcium carbonate etc to help? Any suggestions would be welcome.

Best Regards,

Gary Lenertz
Director of Sales and Marketing

CES Environmental Services, Inc.
4904 Griggs Rd.
Houston, TX 77021
Cell: (832) 754-5359
Office (713) 676-1460
Fax: (713) 676-1676
glenertz@CESenvironmental.com

EPAHO113000010

EVALUATION REQUEST FORMS - COMPLETED 2008

EPAHO11300011

LAB
T-48
8/4/09
CC

CES Environmental Services, Inc.

BTU = 14,408
LOT - .8370

CES SAMPLE EVALUATION FORM

2000 - .651
5x - 3.361

Sample ID # 1208-55 **Date:** 12/23/2008

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: Standard

PH - 4
TREATS O/L - H2O is ORANGE. BROWN - BUT CLEAR

Customer Name: Delta Chemical
Generator Name and Location: Delta Chemical
Ultimate Objective for Performing Analysis:
Treatability

(1 TOTE)

FP -> 125 - 130 <

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
____

PHENOLS ~ 40 ppm

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

5x. SMELLS LIKE PAINT THINNER

Visc.

14 SEC -
Visc @ 40°c =
14 x .10523 = 1.5 < 5cs

CHLOR-D-TECT - 900 ppm

D - 0.789 @ AMBIENT

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**_____	**Percent Oil**_____
Specific Gravityx on oil	**Chlor-d-tect (oil phase)**x	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**x on oil
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)BTU and viscosity on oil
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni .411
Zn 2.190
Cu 1.949
Cd .145

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

MATERIAL SAFETY DATA SHEET
May be used to comply with

OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*	*(NOTE: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*
SOLOIL 173-3	

Section I

Manufacturer's Name WORKING SOLUTIONS, INC.	Emergency Telephone Number 800-424-9300 (CHEMTREC)
Address *(Number, Street, City, State and ZIP Code)* 2522 ROY CIRCLE HOUSTON, TEXAS 77007	Telephone Number for Information 713-862-3868
	Date Prepared 6/30/05
	Signature of Preparer *(optional)*

Section II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components *(Specific Chemical Identity; Common Name(s))*	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
PETROLEUM DISTILLATE CAS #64742887 and	*500 ppm*	*100 ppm TWA*		
#64742956		*200 ppm STEL*		
It is recommended to use the limits for Stodard Solvent as a guide.				

Section III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	*315° F*	*Specific Gravity (H_2O = 1)*	*0.79*
Vapor Pressure (mm Hg.)	*16**	*Melting Point*	*N/A*
Vapor Density (AIR = 1)	*4.8**	*Evaporation Rate (Butyl Acetate =1)*	*N.D.*

Solubility in Water:
Negligible

Appearance and Odor:
Brown to amber transparent liquid, petroleum odor.

Section IV FIRE and EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable Limits	LEL	UEL
110° F. T.C.C.		1	6

Extinguishing Media
Water fog, dry chemical or carbon dioxide.

Special Fire Fighting Procedures
Do not use a direct stream of water. Do not enter a confined area without proper gear. Cool hot containers with water spray.

Unusual Fire and Explosion Hazards
Containers exposed to intense heat must be cooled down with water spray to prevent vapor pressure buildup, which could result in rupture.

Section V REACTIVITY DATA

Stability	Unstable		Conditions to Avoid High heat, open flames, sparks.
	Stable	X	

Incompatibility *(Materials to Avoid)*
Strong oxidizers.

Hazardous Decomposition or Byproducts
Carbon monoxide and unidentified organic compounds may be formed.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Yes	Skin?	Yes	Ingestion?	Yes

Health Hazards *(Acute and Chronic)* ACUTE: Irritating to skin, eyes, nose, throat and respiratory tract. CHRONIC: Defatting of skin. High vapor concentrations may result in aspiration pneumonitis. (THESE HAZARDS ARE TYPICAL OF ALL PETROLEUM SOLVENTS.)						
Carcinogenicity:	NTP?	No	IARC Monographs?	No	OSHA Regulated?	No
Signs and Symptoms of Exposure: Giddiness, headache, nausea. CNS depression. Redness of skin and eyes. If swallowed: coughing, labored breathing.						
Medical Conditions	Generally Aggravated by Exposure: No available information.					
	Emergency and First Aid Procedures: EYES & SKIN: Flush with water for 15 minutes; if irritation persists, seek medical assistance. INHALATION: Remove to fresh air. Resuscitate if necessary. Get medical aid. INGESTION: Get medical aid.					

Section VII PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled: Spill area should be diked. Shut off all ignition sources. Vacuum up and recover if possible. Absorb residue with suitable absorbent; place in vessel for latter disposal. DO NOT allow material to enter sewers, drains or waterways.		
Waste Disposal Method: Hazardous waste #D001 - Under RCRA if product becomes waste material, it is considered ignitable. Dispose of in accordance with local, state and federal regulations.		
Precautions to Be Taken in Handling and Storing: Keep container closed when not in use. Store in cool, dry place. Do not reuse any empty containers.		
Other Precautions: Ground fixed equipment. Avoid repeated or prolonged breathing of vapors or contact with skin.		

Section VIII CONTROL MEASURES

Respiratory Protection *(Specify Type)*: In confined areas, atmosphere-supplying respirator (29 CFR 1910.134).		
Ventilation	Local Exhaust: Yes	Special: Explosion proof equipment
	Mechanical *(General)*: Preferred	Other:
Protective Gloves: Chemical 7 petroleum solvent resistant		Eye Protection: Chemical safety goggles and/or face shield.
Other Protective Clothing or Equipment: As needed to avoid eye and skin contact. Eyewash fountain. Safety shower.		
Hygienic Practices: Wash hands & face after each use. Launder contaminated clothing prior to reuse.		

EPAHO113000015

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-54 **Date:** 12/23/2008

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: Standard

95 DRUMS 0.8420

Customer Name: Delta Chemical
Generator Name and Location: Delta Chemical
Ultimate Objective for Performing Analysis:
Suitablility for fuels

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Contaminated drums

D - 0.8795
BLENDS W/ LIGHT ENDS
BTU = 11,456

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)BTU
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Attn: Dana Carter

1208-35 Waste Water Trap

pH-7
Phenols - 1 ppm
TOC - 0

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company:	BJ Services Shop				
Address:	11211 FM 2920				
City:	Tomball	**State:**	TX	**Zip:**	77375
Contact:	Ed Harrington		**Title:**		
Phone Number:	281-357-2833		**Fax Number:**	281-357-2585	
24/hr Phone Number:					
US EPA ID No:	TXD000838955				
State ID No:		36611	**SIC Code:**		

SECTION 2: Billing Information - ☐ **Same as Above**

Company:	Rineco				
Address:	PO Box 729				
City:	Benton	**State:**	AR	**Zip:**	72018
Contact:	Douglas Highsmith		**Title:**	Non-Fuels Chemist	
Phone Number:	800-377-4692		**Fax Number:**	501-778-8505	

SECTION 3: General Description of the Waste

Name of Waste: Waste Water Trap

Detailed Description of Process Generating Waste:

MV-10 Maintenance oil/water separator, used Non Haz

Ni .336
Zn .179
Cu .049
Cd .102

Physical State: ☐ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☑ Combination

Color: varies **Odor:** mild

Specific Gravity (water=1): >1 **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ Single-phase ☑ Multi-phase

Container Type: ☑ Drum ☐ Tote ☐ Truck ☐ Other (explain)

Chlor-D-Test. 200 ppm

Frequency: ☐ Weekly ☑ Monthly ☐ Yearly ☐ One-Time

Quantity: 1-4 drums

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☑ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: NHN12051

Proper US DOT Shipping Name: Non-Regulated Material (Waste Water Trap)

Class: _____ UN/NA: _____ PG: _____ RQ: _____

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
>200	4-10	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Rust, Scale	0-20	%
Water	80-99	%
Oil, Petroleum	1-20	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☐ YES ☑ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☑ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory **: *Subpart C***

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☑ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 12/10/2008

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

Rineco

819 Vulcan Road -- Haskell
P.O. Box 729. Benton, AR
Office (501) 778-9089 Fax (501) 776-2864
Prepared by: Shelly Carson

FOR OFFICE USE ONLY

Account Rep: Ralph Gholson
Region: S01
Profile #: Pending Approval
Broker Rep #: 0812-19925
Broker Profile ID:
Status: Pending Approval --

Walk Through: No
Special Instructions: No
Create Date: 12/9/2008
Last Cert Date: 12/9/2008
Expiration Date: 12/9/2009

I. WASTE MATERIAL PROFILE SHEET

In accordance with the Federal and State regulations, it is necessary for the Generator of hazardous waste to properly identify the waste for their records as well as to supply the disposal facility with the information necessary to handle the waste. The information outlined below must be complete, and signed by the generator. PLEASE PRINT LEGIBLY OR TYPE.

Generator Name: ***BJ Services Shop***
USEPA I.D. No. ***TXD000838955***
State I.D. No. ***36611***
Address: ***11211 FM 2920***
Phone: ***281-357-2833***
Fax: ***281-357-2585***
Tomball, TX 77375
Title:
Technical Contact: ***Ed Harrington***
24 hour Phone:
24 Hour Emergency Contact:
Is this material located or generated in a foreign country? No
Foreign Address:

II. GENERAL INFORMATION

Material Name: DIRECT ONLY: Waste Water Trap
Source Code:

No A. Does waste exhibit the characteristic of ignitability as defined in 40 CFR 261.21?
No B. Does waste exhibit the characteristic of corrosivity as defined in 40 CFR 261.22?
No C. Does waste exhibit the characteristic of reactivity as defined in 40 CFR 261.23?
No D. Is waste a spent solvent as defined in 40 CFR 261.31?
No E. Is waste a discarded chemical product, off spec, container or spill residues as defined in 40 CFR 261.33?

Detailed description of process generating waste: MV-10 - Maintenance oil/water separator, used Non Haz

Anticipated Monthly Volume: 1-4
Bulk: No Drum: Yes Other: No

III. MATERIAL COMPOSITION

COMPONENT	Concentration Min	Max	Actual	PPM
Rust, Scale	0.00	20.00		
Oil, Petroleum	1.00	20.00		
Water	80.00	99.00		

IV. PHYSICAL CHARACTERISTICS

Physical State:	Multi Phase
Free Liquid:	Yes
Viscosity:	Low
Layers:	Bi-Layered
Odor:	
Flash Point:	> 200F
BTU:	<5000
pH Level:	NA
Actual pH:	4-10
Density:	1

V. OTHER CHARACTERISTICS

No	**Explosive**	No	**Dioxin**
No	**Radioactive**	No	**Shock Sensitive**
No	**Sulfide**	No	**PCB**
No	**Etiological**	No	**Cyanide**
No	**Pyrophoric**	No	**Water Reactive**

EPAHO113000021

VI. SHIPPING INFORMATION

Profile #: Pending Approv

DOT Hazardous Material: No

ER Guide #:

Proper Shipping Name: Non-Regulated Material (Waste Water Trap)

Hazard Class and Division: N/A

UN or NA:

Packaging Group: N/A

RQ: No If Yes:

Addl. Info:

USEPA HAZARDOUS WASTE: No

Waste I.D. Numbers: NHN12051

VII. INDICATE IF THIS WASTE CONTAINS ANY OF THE FOLLOWING CHARACTERISTICS as defined by 40 CFR 261.24.
Check only if waste exceeds regulatory threshold levels and include analytical date if available.

Constituent	Regulatory level PPM	TCLP PPM	Total PPM	Know ledge	Constituent	Regulatory level PPM	TCLP PPM	Total PPM	Know ledge
D004 Arsenic	5.0				D024 m-Cresol	200.0			
D005 Barium	100.0				D025 p-Cresol	200.0			
D006 Cadmium	1.0				D026 Cresol	200.0			
D007 Chromium	5.0				D027 1,4,Dichlorobenzene	7.5			
D008 Lead	5.0				D028 1,2,Dichloroethane	0.5			
D009 Mercury	0.2				D029 1,1 Dichloroethylene	0.7			
D010 Selenium	1.0				D030 2,4 Dinitrotoluene	0.13			
D011 Silver	5.0				D031 Heptachlor	0.008			
D012 Endrin	0.02				D032 Hexachlorobenzene	0.13			
D013 Lindane	0.4				D033 Hexachlorobutadiene	0.5			
D014 Methoxychlor	10.0				D034 Hexachloroethane	3.0			
D015 Toxaphene	0.5				D035 Methyl Ethyl Ketone	200.0			
D016 2,4 Dichlorophenoxyacetic acid	10.0				D036 Nitrobenzene	2.0			
D017 2,4,5 TP Silvex	1.0				D037 Pentachlorophenol	100.0			
D018 Benzene	0.5				D038 Pyridine	5.0			
D019 Carbon Tetrachloride	0.5				D039 Tetrachloroethylene	0.7			
D020 Chlordane	0.03				D040 Trichloroethylene	0.5			
D021 Chlorobenzene	100.0				D041 2,4,5 Trichlorophenol	400.0			
D022 Chloroform	6.0				D042 2,4,6 Trichlorophenol	2.0			
D023 o-Cresol	200.0				D043 Vinyl Chloride	0.2			

VIII. Benzene Waste Operations NESHAP Generator Certification. Complete only if D018 and/orU019 appear in section 6 (shipping information).

1. Is this waste generated by an industry with any of the following SIC Codes: 2911,2800-2899,3312 or 4953? N/A
2. Does this stream have Benzene concentration of 10ppm or more? N/A
3. Does this stream contain greater than 10% moisture? N/A
4. Is this company's Total Annual Benzene (TAB) of 10Mg or greater per year? N/A
5. Is NESHAP form required? N/A

GENERATOR CERTIFICATION: THIS CERTIFICATION IS REQUIRED FOR EACH PROFILE.

This above information is to be held confidential and is true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Print Name: _____ Title _____

EPAHO113000022

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-48 **Date:** 12/18

CES Sales Representative: Ken N

Requested Turnaround / Completion Date: _____

26,000 bbl

Customer Name: Formosa

Generator Name and Location: Pt Comfort, TX

Ultimate Objective for Performing Analysis:

—— HANDLE IN WWTS

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

SLOP TANKS FROM

pH - 8

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

WATER/____	____/____
PYGAS/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Ni .148

Zn - 0

Cu 0.0

Cd .043

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ OIL	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols ✓ - 10	**Oil and Grease (water phase)**_____	**TOC** - 0
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Ken Noakes

From: Matt Brogger/FTEHSF [MattB@ftpc.fpcusa.com]
Sent: Wednesday, December 17, 2008 9:07 AM
To: Ken Noakes
Subject: RE: f/u to visit

I should be here. Operations is going to collect some samples for you.

Call before you stop by to be sure I am here.

Matt

-----Original Message-----
From: Ken Noakes [mailto:knoakes@cesenvironmental.com]
Sent: Wednesday, December 17, 2008 8:24 AM
To: Matt Brogger/FTEHSF
Subject: RE: f/u to visit

Matt,

Would you be free this afternoon so that I can pick up a sample or 2 as we are very interested in looking at this and doing business with Formosa.

Thanks,
Ken

From: Matt Brogger/FTEHSF <MattB@ftpc.fpcusa.com>
Sent: Tuesday, December 16, 2008 11:14 AM
To: Ken Noakes <knoakes@cesenvironmental.com>
Subject: RE: f/u to visit

.1 PPM

Ken

I have not had a chance to work on this yet, but I do have something that just came up. We have two tanks we may de-inventory since we cannot reprocess the material at this time. One of them contains water and pyrolosis gasoline and the other has water, pyrolosis gasoline and flux oil. R .43 ppm

Are you interested? I just found out about this today and right now I am looking for pricing. That will probably determine if we even move forward with the project.

I am sure you need more details. If so, let me know what you need and I can get the information to you.

Matt

-----Original Message-----
From: Ken Noakes [mailto:knoakes@cesenvironmental.com]
Sent: Monday, December 08, 2008 4:10 PM
To: Matt Brogger/FTEHSF
Subject: f/u to visit

Matt,

Per our discussions you indicated that you might have a couple of streams (oil & solvent) that we can look at. Have you had a chance to compile any information.

Thanks,
Ken
713-240-4112

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CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-49 **Date:** 12/18

CES Sales Representative: Ken N

Requested Turnaround / Completion Date: _____

20,000 BBL

Customer Name: Formosa

Generator Name and Location: Pt Comfort, TX

Ultimate Objective for Performing Analysis: HANDLE IN House

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

SLOP OIL TANK

Provide a detailed Composition to the best of your knowledge:

Ni - .355 pH - 8

Zn - 0

Component / Approximate Percentage or PPM:

FLUX OIL	/	Cu - 0.0	/ 40% Oil
WATER	/		/
PY GAS	/	Cl - .095	/
	/		/

TOC - 0

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____ API = 11
Phenols — 10	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____ D - 0.993
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____ H2O on Oil -

Note: Must have an approved P.O. for any external lab analysis NEAT - 0.17%

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ - 300 ppm	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 12084 **Date:** 12/17/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Afton

Generator Name and Location: Afton

Ultimate Objective for Performing Analysis: profile, price

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

"Greenburn" product. Will email you MSDS
- does not blend w/ black oil or light ends. -

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

	/		/
	/		/
See MSDS	/		/
	/		/

pH - ~1.8
produces lots of solids when neutralized to pH 2.5

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-44 **Date:** 12-17-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: asap

Customer Name: Rineco
Generator Name and Location: NuStar Terminals
Ultimate Objective for Performing Analysis: use as feedstock at PACES

1 load / year

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
washing out pure product from tank 507

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Acrylic Acid/15%	_____/_____
Water/85%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**_____	**Flash**X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)heat sample to 175 degress to ensure polymerization does not occur. also - see Matts email (attached)
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

Dana Carter

From: Matt Bowman
Sent: Wednesday, December 17, 2008 10:56 AM
To: Dana Carter
Subject: RE: acrylic acid water

Have them run a flash and a TOC. Also have them heat up the material to about 175 F to ensure that no polymerization occurs. Also have take a sample of sulfidic caustic and neutralize it down to a 3.5 pH and observe the results. All tests will be done for use as a feedstock in Port Arthur.

From: Dana Carter
Sent: Wednesday, December 17, 2008 10:40 AM
To: Matt Bowman
Subject: acrylic acid water

I have the sample. What do you want run????

Dana Carter
Account Manager
CES Environmental Services Inc
Office: 713-676-1460
Cell: 713-748-9804
Fax: 713-676-1676

5:1 - ACRYLIC ACID & ~ 5% NaOH
TO GET TO PH ~ 4.7

6:1 ~4.0 PH
7:1 3.8 PH
8:1 - 3.8 PH

EPAHO113000029

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-41 **Date:** 12/12/08

CES Sales Representative: Jay Baker
Requested Turnaround / Completion Date: 12/15/08

Customer Name: Tex Tubs
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: Treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
1 of 15 totes from Sump clean-out @ pipe manufacturer

Provide a detailed Composition to the best of your knowledge: POLYMERIZATION OCCURS WHEN ACIDIFIED -
Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability Y	Percent Solids Y 1%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) Y	pH 8
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase) Y	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-37 **Date:** 12-11-08

CES Sales Representative: Dana C

Requested Turnaround / Completion Date: _____

Customer Name: Rineco

Generator Name and Location: BJ Services

Ultimate Objective for Performing Analysis: treat @ CES or reduce

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Sludge accumulating from the pressure washing of oil field equipment

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mud & Sand / 70%	/ Ni - .193
Water / 10%	/ Zn - .104
Oil / 2%	/ Cu - .042
Alkaline det / 2%	/ Cd - .070
	/
	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X oil	**Percent Solids** X 2.0	**Percent Oil**____
Specific Gravity X	**Chlor-d-tect (oil phase)**____	**pH** X 6
Phenols X 0	**Oil and Grease (water phase)**___	**TOC** X - 1700
Distillation Test____	**Metals**____	**Flash** X > 140
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-28 **Date:** 12-8-08

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: _____

Ni .346
Zn 0.00
Cu 0.00
Cd .011
Cr

Customer Name: Rineco
Generator Name and Location: Nustar Terminals
Ultimate Objective for Performing Analysis: disposal/recycling at CES
____ 5000 - 1 TIME DEAL

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
water and fuel oil from line cleaning tank 3001

Provide a detailed Composition to the best of your knowledge: 40% oil
Component / Approximate Percentage or PPM:

water/40-60%	____/____
Fuel Oil/60-40%	____/____
____/____	____/____
____/____	____/____
____/____	____/____

FP - 130

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:
Wastewater TreatabilityX **Percent Solids**_____ 20 **Percent Oil**X
Specific Gravity_____ **Chlor-d-tect (oil phase)**X **pH**X - 9
Phenols_____ - 2 **Oil and Grease (water phase)**_____ **TOC**X - 0
Distillation Test_____ **Metals**_____ **Flash**X
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
AshX **Black Oil Suitability**_____ **Viscosity**_____ **Specific Gravity**_____ **Light End Suitability**X **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tectX **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

☑ CES Environmental Services - Houston Facility	☐ CES Environmental Services - Port Arthur Facility
4904 Griggs Road, Houston, TX 77021	2420 S. Gulfway Dr., Port Arthur, TX 77641
Phone (713) 676-1460 Fax: (713) 676-1676	Phone (713) 676-1460 Fax: (713) 676-1460
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900	U.S. EPA ID Number: TXR000079307 ISWR Number: 88585
TCEQ Industrial Solid Waste Permit Number: 30948	

SECTION 1: Generator Information

Company: NuStar Terminals Partners TX L.P.
Address: Texas City Terminal #1 201 Main Dock Road
City: Texas City **State:** TX **Zip:** 77592
Contact: Bob Hill **Title:** HSE Specialist
Phone Number: 281-750-1486 **Fax Number:** 409-948-4460
24/hr Phone Number: 281-750-1486
US EPA ID No: TXD096036561
State ID No: 31060 **SIC Code:** 5171

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco Chemical
Address: P.O. Box 729
City: Benton **State:** AR **Zip:** 72018
Contact: Doug Highsmith **Title:** Non Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste:
Detailed Description of Process Generating Waste:

Water and fuel oil from Line Cleaning Tank 3001

Physical State: ☑ **Liquid** ☐ **Sludge** ☐ **Powder** ☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: black/clear **Odor:** mild

Specific Gravity (water=1): 0.9 **Density:** 7.5-9 lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ **Single-phase** ☑ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** ☑ **Truck** ☐ **Other (explain)**

Frequency: ☐ **Weekly** ☐ **Monthly** ☐ **Yearly** ☑ **One-Time**
Quantity: 5000 gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☑ Yes ☐ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☑ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Texas State Waste Code Number: _____

Proper US DOT Shipping Name: Waste Fuel oil

Class: 3 **UN/NA:** NA1993 **PG :** III **RQ:** D001 @ 100lb

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
<140	7	n/a mg/l	n/a mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Water	40-60	%
Fuel oil	60-40	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

standard PPE, gloves

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package.

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

oxidizers

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals:	none in process
TCLP Volatiles:	X
TCLP Semi-Volatiles:	X
Reactivity:	X
Corrosivity:	X
Ignitability:	ignitable

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☑ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☑ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** _____

Printed Name/Title: _____

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date: _____	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-26 **Date:** 12/05/2008

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: Today

N: 450.417
Zn 0.00
Cu .028
Cd - .089
Cr

Customer Name: Kinder Morgan – Pasadena
Generator Name and Location: Kinder Morgan - Pasadena
Ultimate Objective for Performing Analysis: To see if there are any recoverables in this material....to see if we can take it in as a recycleable under Profile # 2628

1 box

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Gas Tank Bottoms
Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Gas/5-30%	____/____
Water/ 2-60%	____/____
Rust, Sand, Silt/ 5-30%	____/____
____/____	____/____

SMALL GAS LAYER. ON TOP - DOESN'T EVEN COVER TOP!

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** 6
Phenols___ ~~-~~ 0	**Oil and Grease (water phase)**_____	**TOC** ___-0
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash X	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-14 Date: 12-4-08

CES Sales Representative: Brandman

Requested Turnaround / Completion Date: ASAP 1200 gal

Customer Name: Exfel Precision

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Recycle oil, treat water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Machine coolant - Equipment fluid change outs

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

oil	10-40	Ni	.450
water	30-40	Zn	0.00
coolant	30-40	Cu	.019
		Cd	.078
		Cr	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) > 4000	pH 8
Phenols ~~—~~ 10	Oil and Grease (water phase)____	TOC ✓ - 2150
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) Treatment

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability ✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-23 **Date:** 12/4/08

CES Sales Representative: Greg B.
Requested Turnaround / Completion Date: ____

Customer Name: Complex chemical - Lubrizol
Generator Name and Location: ____
Ultimate Objective for Performing Analysis:

____ This is to be sold as a product. Is this compatible w/ Blackoil? pH, density, Btu, water solubility, chlordect

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

____

16210
BTU - [redacted]

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

H_2O - 0.00 %
D - 0.860

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) 400	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-08 Date: 12-2-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Ethyl Corp

Generator Name and Location: Pasadena

Ultimate Objective for Performing Analysis: Base oil / Blackoil suitability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Off spec product - SEE MSDS

≈ 15,000 gallons.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Mineral oil	100%		
w/ Pibsa			

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) Determine temperature @ which material will

Off-site Lab Analysis (List) Flow, Also see if mixed w/ Light Ends if material will stay in solution ie: ratio

Note: Must have an approved P.O. for any external lab analysis Call Gary for questions B.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

160 °F

Note: Must have an approved P.O. for any external lab analysis

1209-8

Material Safety Data Sheet

HiTEC 1932X Performance Additive

MSDS no. H1932X

HiTEC is a trademark owned by Afton Chemical Corporation or one of its subsidiaries.

1. Product and company identification

Product use Petrochemical industry: Ashless Dispersant

Date of issue/Revisions **10 June 2008**

In case of emergency - Chemical

1-800-403-0044 (US & Canada)
1-804-648-7727 (International)
32-2-507-20-64 (Europe)
81-3-5210-4890 (Japan)

Manufacturer / Supplier

Afton Chemical Corporation
500 Spring St.
Richmond, VA 23219
1-804-788-5800

Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44 1344-304141
msds@aftonchemical.com

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

2. Hazards identification

Notice to reader

Afton operates a world-wide system for hazard communication. Some hazards shown in Section 2 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Sections 3 and 15 for country specific classification information, and Section 11 for additional details.

Europe: The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Australia: **Not classified as hazardous** according to the criteria of NOHSC **nor classified as dangerous goods** according to the ADG Code.

Primary hazards and critical effects : NOTICE!

Environmental hazards : Not classified as dangerous for the environment according to EC criteria.

Hazardous Material Information System (U.S.A.)

Health	**0**
Fire hazard	**1**
Reactivity	**0**

3. Composition/Information on ingredients

Note: see section 8 for occupational exposure limits and section 11 for LC50/LD50 information

Substance/Preparation : Preparation

Ingredient name	CAS no.	Conc. (% w/w)	EU Classification	WHMIS Regulated?
Mineral Oil	Mixture.	30 - 60	Not classified.	No.

4. First aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion : If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin contact : Wash with soap and water. Get medical attention if irritation develops.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

5. Fire-fighting measures

Extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO_2.

Fire-fighting procedures : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Hazardous decomposition products : Decomposition products may include the following materials: carbon oxides (CO, CO_2).

Flash point : Closed cup: 160°C (320°F). (Pensky-Martens. Minimum)

6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5).

Environmental precautions and clean-up methods : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilled material with soil and prevent runoff entering surface waterways.

Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls and personal protection

Engineering controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal protective equipment

Respiratory system : Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).

Skin and body : Disposable outer garments when there is the potential for contact with the material.

Hands : Use chemical-resistant, impervious gloves.

Eyes : Safety glasses with side shields. Goggles with a face shield may be necessary depending on quantity of material and conditions of use.

Occupational exposure limits

Ingredient name	OEL United States	OEL Canada	OEL Europe	OEL Australia
1) Mineral Oil	**ACGIH (United States).** TWA: 5 mg/m³ STEL: 10 mg/m³ **OSHA (United States).** TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	**EH40 (UK) (Europe, 2002).** TWA: 5 mg/m³ 8 hour(s).	**NOHSC (Australia, 2003).** TWA: 5 mg/m³ 8 hour(s).

9. Physical and chemical properties

Physical state and Appearance : Liquid.

Density : 0.925 g/cm³ at 15°C

Viscosity : Not available.
650 cSt @ 100 C

Auto-ignition temperature : Not determined.

Flash point : Closed cup: 160°C (320°F). (Pensky-Martens. Minimum)

10. Stability and reactivity

Stability : The product is stable.

Materials to avoid : Strong oxidizing and reducing agents.

Conditions to avoid : High temperatures, sparks, and open flames.

11. Toxicological information

Routes of entry : Skin, Eyes, Ingestion, and Inhalation.

Target organs : None known.

Acute effects

Inhalation : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Ingestion : Not determined.

Skin contact :

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

Eye contact : Non-irritating to the eyes.

Adverse effects : Not determined.

Carcinogenic effects :

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA	EU

Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Mineral Oil	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

12. Ecological information

Environmental hazards : Not classified as dangerous for the environment according to EC criteria. Based on calculation.

Environmental fate : This product contains components which may be persistent in the environment.

13. Disposal considerations

Waste handling and disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-
ADG Class	Not regulated.	-	-	-		-

This product is classified as non hazardous for transport when shipped in non-bulk quantities but when shipped in bulk by road, rail or sea may be classified as UN3257, Elevated temperature liquid, n.o.s., 9, III.

Notice to reader

The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

15. Regulatory information

EU regulations

Risk phrases : This product is not classified according to EU legislation.

Safety phrases : Not applicable.

US regulations

SARA 313 toxic chemical notification and release reporting (w/w%) : No SARA 313 chemicals are present above the reporting threshold.

SARA 311/312 Hazardous Categorization : SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

RQ (Reportable quantity) : CERCLA: Hazardous substances.: No products were found.

State - California Prop. 65 : No products were found.

Canadian regulations

WHMIS (Classification) : Not controlled under WHMIS (Canada).

International Inventory Status

United States (TSCA)	:	**United States inventory (TSCA 8b):** All components are listed or exempted.
Canada	:	**Canada inventory:** All components are listed or exempted.
Europe	:	**Europe inventory:** All components are listed or exempted.
Japan (ENCS)	:	**Japan inventory (ENCS):** All components are listed or exempted.
Australia (NICNAS)	:	**Australia inventory (AICS):** All components are listed or exempted.
Korea (ECL)	:	**Korea inventory (KECI):** All components are listed or exempted.
China (IECSC)	:	**China inventory (IECSC):** All components are listed or exempted.
Philippines (PICCS)	:	**Philippines inventory (PICCS):** All components are listed or exempted.

16. Other information

PREPARATION INFORMATION

Validated by HS&E Department (Tel: +1 804 788 5800) on 6/10/2008.

Date of printing : **6/10/2008.**

Indicates information that has changed from previously issued version.

Notice to reader

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. Afton makes no representation as to completeness or accuracy. In no event will Afton be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

ADDRESS CONTACT INFORMATION

In the United States and Canada:
Afton Chemical Corporation
500 Spring Street
Richmond, Virginia
USA 23219-2183
Telephone number: 804-788-5800

In Europe:
Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44-1344-304141

In Singapore:
111 Somerset Road
#09-05
Singapore Power Building
Singapore 238164
Telephone number: 65-6732-0822

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

*** * * END OF MSDS * * ***

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-58-760 **Date:**

CES Sales Representative: Jay

Requested Turnaround / Completion Date:

Customer Name: Green Earth Biof

Generator Name and Location: same

Ultimate Objective for Performing Analysis: Pro

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Typical Biodiesel production waste (likely high methanol to system)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

1108-59-P 3-95 D/S.- 34% MeOH RECOVERY

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-63 **Date:** 11/24/08

CES Sales Representative: JBK

Requested Turnaround / Completion Date: SD

Customer Name: Goodrich

Generator Name and Location: Goodrich

Ultimate Objective for Performing Analysis: pricing & profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of turbine parts for reconditioning. (Acid/Caustic bath + metals) 1 load/week.

Provide a detailed Composition to the best of your knowledge: LOTS OF SOLIDS

Component / Approximate Percentage or PPM:

Water	/		/
Nitric	/		/
Caustic	/		/
Metals	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids** X ~~20%~~ 12%	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH** 6
Phenols ~ 0	**Oil and Grease (water phase)**___	**TOC** ~ 0
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

Ni - 1.567
Zn 1.160
Cu .294
Cd .320
Cr

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-62 **Date:** 11-24-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: 11-25-08

Customer Name: BASF
Generator Name and Location: BASF Port Arthur
Ultimate Objective for Performing Analysis:
very weak spent naphthenic caustic, looking at possible disposal options as well as recycling

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
caustic used to scrup napthalene

9 LOADS/DAY
NEAT 7 DAYS/WEEK TREAT

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

caustic/2%
water/98
3.5%
SG - 1.036

Ni 1.306 Ni 1.117
Tin .929 Zn .205
Cu .434 Cu .292
Cd .395 Cd .258
Cr

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**X -14
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X -2650 NEAT SX.
Distillation Test_____	**Metals**X	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**X	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**X

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Benzene?
Non Haz or Recyclable O.W. Water

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-55 **Date:** 11/20/08

CES Sales Representative: Jon

Requested Turnaround / Completion Date: asap

Customer Name: Select

Generator Name and Location: Boyd's

Ultimate Objective for Performing Analysis: profile & pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Oil field equipment cleaning
(trying to get more info from broker)
1-3 loads/week. Generated from cleaning of oil field machinary.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Boyd's ??	/		/
Water	/		/
Oil	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**___	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH** ~ 6
Phenols ~ 0	**Oil and Grease (water phase)** X	**TOC** ~ 0
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Ni .313
Zn .146
Cu .040
Cd .096

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

next 21

Vennie Wolf 1108-54

Existing # TANK #	Size	Vol/contents	Description
20	30k	Full	Trace water Asphalt Like oil
21	30k	2/3 full	Trace " " " "
22	5k	~~Full~~ 3/4	Tank Trailer Asphalt
3[illegible]	6k	2/3 full	Heavy sludge
3A	5k	Empty	
1	5k	1/2	~~[illegible]~~ ? composite
2	5k	500 gal	" " "
22A	3k	Full	Rain water. Water
48	5k	Full	Lube oil 10% oil 90% water
49	4k	A B C D ~~[illegible]~~ full full full	~~[illegible]~~ A-MT 1500 gall B, C, D sludge
Dirt 1	3yd	Full	TPH Dirt
" 2	3yd	"	TPH Dirt Class I
" 3	4y	"	"
D-4	5k	Full	unmarked TPH soil By Garage
8	3k	1/4 sludge	unsampled Class I sludge
9	3k	1/3	old gas sludge check FP
7	3k	1/2	" " "
6	4k	90%	oily water sludge 20
45	4k		A B C oil MT MT

2x 3y

city cat hole

3" 18"

16"

18"

2"

3"

18"

EPAHO113000050

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-53 **Date:** 11-19-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: Rush

Been sitting on product sales

Customer Name: Baker Petrolite

Generator Name and Location: Laporte

Ultimate Objective for Performing Analysis: Cutter stock "Restricted Light Ends" 5000/2 weeks

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Line flush - MSDS created for use as cutter stock.

Provide a detailed Composition to the best of your knowledge:

API - 31 BLENDS w/ BLACK oil

Component / Approximate Percentage or PPM:			
xylene	/		/
ethylbenzene	/		/
other non-halogenated organics	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____ -200	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability ✓	Viscosity____
Specific Gravity ✓	Light End Suitability ✓	Distillation Test____
Flash ✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability ✓	

Other Internal Analysis (List) will this cut Asphalt sludge/

Off-site Lab Analysis (List) (sample of Asphalt is Downstairs vennie)

Note: Must have an approved P.O. for any external lab analysis CUTS ASPHALT

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-52 **Date:** 11/19/08

CES Sales Representative: Dana C

Requested Turnaround / Completion Date: ASAP!

Customer Name: Hydrochem LaPorte

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: recycle hose

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
diesel tank contaminated w/ water
approx 1500gal one-time ship
TREATS OIL

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water	99-100%		/
diesel	0.5-1%		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X onsite	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** 6
Phenols ~2	**Oil and Grease (water phase)**___	**TOC** ~650
Distillation Test____	**Metals**____	**Flash** >140°F
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability** X	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	Ni .022

Other Internal Analysis (List)_____ Zn .089
Off-site Lab Analysis (List)_____ Cu .028
Note: Must have an approved P.O. for any external lab analysis Cd .043

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-25 **Date:** 11/10/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Std

Customer Name: EMA

Generator Name and Location: Plymouth Extruded

Ultimate Objective for Performing Analysis: Pricing

Lab/6 MO/OTHS

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Caustic (sodium hydroxide) used in cleaning for removal of draw lube from metal products

D- 1.25 ~23% NaOH

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Sodium Hydroxide	10-20%		
Water	90-80%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

Zn- ~~0.915~~ .403

Ni- .915

Cu- .159

Cd- .180

Cr- 3.349

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

0.2 g 9.6 ml .1 N HCl

19.2 wt% NaOH

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity** X	**Sulfides**____
Percent Sodium Hydroxide X	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List) feed for NaSH ?? Metals

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

McCoy && McCoy Laboratories, Inc.
P. O. Box

Madisonville, KY

www.mccoylabs.com

Lexington KY 859-299-7775
Paducah KY 270-444-6547
Madisonville KY 270-821-7375
Pikeville KY 606-432-3104

D.Wolfe@mccoylabs.com

Plymouth Extruded Shapes
Attn: Greg Studer
201 Commerce Court
Hopkinsville KY 42240

Batch # : 06022333
Received: 02/28/2006
Reported: 03/13/2006
03/13/2006
Client: PL8500

Analysis

AE36041 Alkaline Collected: 2/28/2006

Test Description	Analyzed	By	Method	Result	Units	Report	MCL	Note
Extraction TCLP Filtration	03/02/2006	KET	EPA 1311	3/2/06				
Arsenic - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.028	mg/l	0.002	5.0	
Barium -Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.432	mg/l	0.002	100.	
Cadmium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.002 U	mg/l	0.002	1.0	
Chromium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	2.36	mg/l	0.002	5.0	
Lead - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.691	mg/l	0.002	5.0	
Mercury- Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.0002 U	mg/l	0.0002	0.2	
Selenium - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.01	mg/l	0.002	1.0	
Silver - Solid Waste/Liquid - TCLP	03/07/2006	FAM	SW 6020	0.002 U	mg/l	0.002	5.0	

Submitted By:

Doug Wolfe, Director of Laboratory Services

The analyses reported above have been determined by protocols that meet or exceed the requirements of NELAC. Methods listed with an "*" are not part of this accreditation. Call Doug Wolfe at 270-821-7375 for any questions concerning this analysis report.

Volume:
3500 bbls

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-37 **Date:** 11/13/08

CRUCIBLE TARE - 57.1607
+5X - 60.8661
+ ASH - 57.1620
.04% ASH
.0013
57.1054

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: 11/19/08

Customer Name: ConocoPhillips
Generator Name and Location: ConocoPhillips - Sweeny
Ultimate Objective for Performing Analysis:
We need to find out if we can process this here and what kind of market we might be able to sell this in.

0.1 H_2O

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Crude Oil Tank

CHLOR-D-TECT - 800 ppm

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

SG - 0.892
FP - 130 - <140°F
API - 27

____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CRUCIBLE TARE - 57.1675
+ 5X - 60.5044

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

57.8190
57.1588

AshX	**Black Oil Suitability**X	**Viscosity**____	**Specific Gravity**X
Light End Suitability____	**Distillation Test**____	**Flash**X	**CES Fuel Suitability**____
Hydro-scout____	**Chlor-d-tect**X	**Color**____	**Chlor-n-oil**____
Water by DistillationX	**Water Extractability**____		

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____

Volume:
8000 bbls

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-33 **Date:** 11/13/08

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: 11/19/08

Customer Name: ConocoPhillips
Generator Name and Location: ConocoPhillips - Sweeny
Ultimate Objective for Performing Analysis:
We need to find out if we can process this here and what kind of market we might be able to sell this in.

WATER - 0.00 %

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Crude Oil Tank

CHLOR-D-TECT - 300 ppm
SG - 0.838
API - 37
FP - 130-135 DEG F

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____ ASHES SHOULD BE IN PRODUCT CODE
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____ CRUCIBLE TARE 57.8234 + 5X - 61.1411
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: 57.8190

AshX	**Black Oil SuitabilityX**	**Viscosity_____ Specific**
GravityX	**Light End Suitability_____**	**Distillation Test_____**
FlashX	**CES Fuel SuitabilityX**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-36 **Date:** 11/13/08

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: 11/19/08

Customer Name: ConocoPhillips
Generator Name and Location: ConocoPhillips - Sweeny
Ultimate Objective for Performing Analysis:
We need to find out if we can process this here and what kind of market we might be able to sell this in.

RETAIN ONLY

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Crude Oil Tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

AshX	**Black Oil SuitabilityX**	**Viscosity_____ Specific**
GravityX	**Light End Suitability_____**	**Distillation Test_____**
FlashX	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tectX	**Color_____**	**Chlor-n-oil_____**
Water by DistillationX	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-35 **Date:** 11/13/08

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: 11/19/08

Customer Name: ConocoPhillips
Generator Name and Location: ConocoPhillips - Sweeny
Ultimate Objective for Performing Analysis:
We need to find out if we can process this here and what kind of market we might be able to sell this in.

RETAIN ONLY

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Crude Oil Tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	~~**Chlor-n-oil (oil phase)**~~_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

AshX	**Black Oil Suitability**X	**Viscosity**_____ **Specific**
GravityX	**Light End Suitability**_____	**Distillation Test**_____
FlashX	**CES Fuel Suitability**X	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water ~~**by Distillation**~~_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-34 **Date:** 11/13/08

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: 11/19/08

Customer Name: ConocoPhillips
Generator Name and Location: ConocoPhillips - Sweeny
Ultimate Objective for Performing Analysis:
We need to find out if we can process this here and what kind of market we might be able to sell this in.

RETAIN ONLY

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Crude Oil Tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

AshX	**Black Oil SuitabilityX**	**Viscosity_____ Specific**
GravityX	**Light End Suitability_____**	**Distillation Test_____**
FlashX	**CES Fuel SuitabilityX**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-49 **Date:** 11/17/08

CES Sales Representative: Matt Bauman

Requested Turnaround / Completion Date: _____

Customer Name: US Oil Recovery

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge: TREAT MAKES LOTS OF FINE SOLIDS.

Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids** 0	**Percent Oil** 0
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** ~9
Phenols ~ 10	**Oil and Grease (water phase)**___	**TOC** 2400
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____ Ni 4.983

Off-site Lab Analysis (List)_____ Zn .260

Cu .170

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Cd .191

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1109-23 **Date:** 11/10/09

CES Sales Representative: JM

Requested Turnaround / Completion Date: STD

Customer Name: ~~Optima Chemical~~ GMA

Generator Name and Location: Optima Chemical

Ultimate Objective for Performing Analysis: pricing, profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Organic WW: chemical manufacturing of pharmaceuticals (F003, F005, D001)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	30-100%	* Hexane	0-10%
Mineral Oil	0-10% *	IPA	0-10%
THF	0-10%	Methanol	0-10%
*Toluene	0-10%	MEK	0-10%

* these should phase out. Is sample 2 phased? top phase can go to light ends??

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) *Because of F005 - would need to be treated in a way that does not generate solids
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

A - top of tank
B - middle
C - Bottom of tank

CES SAMPLE EVALUATION FORM

Sample ID # ~~[illegible]~~-27(A-C) **Date:** 11/10/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Phoenix Pollution Control

Generator Name and Location: Green Hunter Biofuels

Ultimate Objective for Performing Analysis: pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
off-spec biofuels in 500,000 gal tank

Provide a detailed Composition to the best of your knowledge: NaOH ADDED TO TOP PHASE MAKES SOAP.

Per generator?

Component / Approximate Percentage or PPM:

Canola Oil	90%		
Water	5%		
Methanol	5%		
Glycerin	0-5%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash X	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) Oil Blendability? If so: Flash, Ash, Btu, etc.
Off-site Lab Analysis (List) If not: Water Blend? If so: TOC, WWTreat
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-24(a-c) **Date:** 11/10/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: std

Customer Name: Rada Tech

Generator Name and Location: Unknown Biodiesel Plant under Construction in Port Arthur

Ultimate Objective for Performing Analysis: pricing & profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
test run Br. Biodiesel plant being constructed

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

See table	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-22(a-e) **Date:** 11/16/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: std

Customer Name: Rada Tech

Generator Name and Location: Unknown Biodiesel facility being constructed in Pt. Arthur

Ultimate Objective for Performing Analysis: pricing & profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste products from test run of biodiesel plant being constructed in Pt. Arthur

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

See attached table

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability~~(X)~~	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC (X)
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) ~~Diesel Solvent 10 ml. and Solvent~~

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Evaluate for methanol recovery capability onsite w/ distillation

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Rada Fracs in Port Arthur

Frac Tank	Generator frac #	CES Sample ID	Generator composition	Sample appearance	Estimated volume
259808	6	1108-22a	methanol (approx 42%), water, glycerin, soap, biodiesel/feed oil (<1%)	golden low vis liquid, with oil layer on top (~3%)	
259845	7	1108-22b	methanol (approx 42%), water, glycerin, soap, biodiesel/feed oil (<1%)	golden low vis liquid, with "turds" floating on top, some solids	
239751	8	1108-22c	methanol (approx 42%), water, glycerin, soap, biodiesel/feed oil (<1%)	golden low vis liq with some solids on bottom (~1%)	103,100 gal
256127	9	1108-22d	methanol (approx 42%), water, glycerin, soap, biodiesel/feed oil (<1%)	golden low vis liq with trace oils on top	
239307	10	1108-22e	methanol (approx 42%), water, glycerin, soap, biodiesel/feed oil (<1%)	golden low vis liq with trace oils on top	
239644	2	1108-24c	water, methanol (<10%), glycerin, biodiesel/vegetable oil, soap. Fp <100 deg F	white, milky soaps	
239604	3	1108-24b	water, methanol (<10%), glycerin, biodiesel/vegetable oil, soap. Fp <100 deg F	golden low vis liq with trace oils on top	25,300 gal
259742	1	1108-24a	water, methanol (<10%), glycerin, biodiesel/vegetable oil, soap. Fp <100 deg F	nice orange, appears to be biodiesel	

EPAHO113000065

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-18 **Date:** 11/7/08

CES Sales Representative: GARY BEAUCHEMIN

Requested Turnaround / Completion Date: ASAP

Customer Name: LEXMARK

Generator Name and Location: CLINTON DR.

Ultimate Objective for Performing Analysis: RECEIVE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge: CHLOR-D-TECT 1900 PPM AQUEOUS IS ~ 11% ETHYLENE GLYCOL

Component / Approximate Percentage or PPM:

OIL	/		/
WATER	/		/
ANTIFREEZE	/ 1 DRUM		/
	/		/

~45% OIL

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH - 7
Phenols - 0	Oil and Grease (water phase)___	TOC - 34,000
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) OIL TREATABILITY

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

Ni .557
Zn 2.818
Cu .104
Cd .091
Cr .166

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1108-14 **Date:** 11/5/03

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Rada Tech

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Off-spec Biodiesel (2300gal)

Provide a detailed Composition to the best of your knowledge:
BTU- BENZOIC - 0.6045
TOTAL - 1.1650
Component / Approximate Percentage or PPM:

Biodiesel	/		/
fatty acid	/		/
glycerin	/		/
Solids	/		/

BENZOIC - 11373 BTU

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**__X__	**Viscosity**____
Specific Gravity__X__	**Light End Suitability**____	**Distillation Test**____
Flash__X__	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) Btu, water %
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

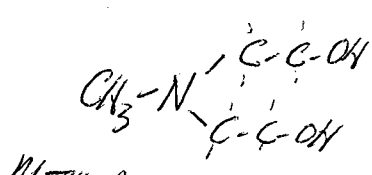
Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

$CH_3-N(C-C-OH)_2$



METHYLDIETHANOLAMINE

CES SAMPLE EVALUATION FORM

Sample ID # 1108-01 **Date:** 11-3-08

CES Sales Representative: GB

Requested Turnaround / Completion Date: ASAP

Customer Name: Hilcorp Energy

Generator Name and Location: Old Ocean

Ultimate Objective for Performing Analysis: Oil Recovery & processing water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
mixture of MDEA & water used to scrub Nat Gas of traces of H_2S, & mostly CO_2

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Amine (MDEA)	30-40
Water	60-70
oil condensate	2-5

Note: same process But different phases in Different tanks

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil ✓
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test___	Metals ✓	Flash ✓
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test ✓

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

FP - FRAC 106 <95°F
CHLOR-D-TECT - 100ppm

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: %Oil - 8%

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

FP - FRAC 112 >140
FP - FRAC ? >140

CAN'T TREAT THE AQUEOUS STREAMS W/ MDEA DUE TO EXCESSIVE H_2SO_4 USE AND SEVERE FOAMING WITH $FeCl_2$ ADDITION.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

NEWPARK THE HIGH FP LOADS
RECYCLE THE ~ 100 gpm OF OIL
FP WATER TO FUELS MARKET.
(RINECO?)

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-66 **Date:** 10-30-07

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: _____

Customer Name: Crown Cork & Seal 4000 gpd

Generator Name and Location: Sugarland

Ultimate Objective for Performing Analysis: oil Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Process Sumps Beneath equipment collects Water, Hydraulic oil & Aluminum Fine
PH-9

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Aluminum	300-500 ppm	CHLOR-D-TECT	200 ppm
Oil	1-3%		
Water	Balance		
Dirt	2-3%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids <1%	Percent Oil ✓ - 9%
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ 9
Phenols - 0	Oil and Grease (water phase)___	TOC ✓ 2750
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni - .266
Zn - .144
Cu - 0

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity Cl - 8048
Specific Gravity____	Light End Suitability____	Distillation Test Cr - 095
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-63 **Date:** 10/31/2008

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: standard

Customer Name: Kinder Morgan
Generator Name and Location: Kinder Morgan Pasadena
Ultimate Objective for Performing Analysis: customer would like to know if this has any fuel value or if it can be recycled at CES for any of our products.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Material from various sump pump cleanouts

DONE BY GARY PETERSON?

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/_____	Solids/_____
Water/_____	_____/_____
Diesel/_____	_____/_____
Gas/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC** X
Distillation Test_____	**Metals**_____	**Flash** X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash X	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-61 **Date:** 10-28-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: asap

Customer Name: SMI Manufacturing
Generator Name and Location: SMI Manufacturing Hardy Rd
Ultimate Objective for Performing Analysis: treat and disposal at ces, possible recycle

2000 gal/qtr or year

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
coolant, water and oil from draining/flushing machines that make stainless steel flanges

Provide a detailed Composition to the best of your knowledge: Sample does not have much water but load will
Component / Approximate Percentage or PPM:

Water /50-60% ____/____
Star Cool/30-40% see msds ____/____
Oil/1-10% ____/____
Envirogreen degreaser/1-2% see msds ____/____
____/____ ____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: 5% TREATS OK - QUICK!
Wastewater TreatabilityX **Percent Solids**____ 2000 **Percent Oil**X
Specific Gravity____ **Chlor-d-tect (oil phase)**X **pH** -9
Phenols -0 **Oil and Grease (water phase)**____ **TOC**X - 6300
Distillation Test____ **Metals**____ **Flash**X - >140
GC/MS____ **Chlor-n-oil (oil phase)**____ **Centrifuge Test**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash____ **Black Oil Suitability**X **Viscosity**____
Specific Gravity____ **Light End Suitability**____ **Distillation Test**____
Flash____ **CES Fuel Suitability**____ **Hydro-scout**____
Chlor-d-tect____ **Color**____ **Chlor-n-oil**____
Water by Distillation____ **Water Extractability**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Ni .396
Zn .187
Cu .383
Cd .056
Cr 0.000

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide____ **Specific Gravity**____ **Sulfides**____
Percent Sodium Hydroxide____ **Chlorides**____ **Sodium**____
Percent Solids by Centrifuge____ **Oil by Centrifuge**____ **TOC**____
Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

A Houston; Joff Sarver
281-449-8608

MATERIAL SAFETY DATA SHEET

STARCOOL 111

METALWORKING FLUID CONCENTRATE

Section 1. Chemical Product and Company Identification	
Product Name: StarCool 111	**Generic Name:** Metalworking Fluid
Manufacturer: STARCHEM 4455 Bethany Road Mason, OH 45040	**Emergency Telephone Number:** 1-800-424-9300 **Information Telephone Number:** 1-513-229-7827 **Date Prepared:** 10/07/2002 **MSDS No.:** 110
Material Uses: Coolant and lubricant for metalworking processes	

Section 2. Hazardous Ingredient/Identity Information		
HAZARDOUS INGREDIENTS	**CAS #**	**RANGE, %**
Triethanolamine	102-71-6	10 – 20
Ethanolamine	141-43-5	5 – 10
Dicarboxylic acid mixture	72162-23-3	1 – 5
Nonanoic acid	112-05-0	1 – 5

Section 3. Hazard Identity		
Product is a primary eye irritant. Product is alkaline, and corrosive to aluminum. Highway spills could result in slippery conditions. No other significant health effects are associated with this product.		
	Concentrated Product	**Diluted Product in Use**
Inhalation	Not applicable	Upper respiratory irritation may occur on extended exposure to mists
Eye Contact	Product is a primary eye irritant	Will cause a stinging sensation in the eye
Skin Contact	Product is not a primary skin irritant	Not irritating to the skin when used as recommended
Ingestion	Not orally toxic	Swallowing small amounts is not expected to cause injury
Exposure to in-use mist can be minimized by proper ventilation, and mist collectors.		
Mild skin irritation may be experienced when the mix concentration is too strong. Contact STARCHEM at 1-513-229-7827 for specific recommendations.		
Carcinogen Listings | NTP: No | IARC: No | OSHA: No		
Signs and symptoms of exposure: Eye injury may occur from contact with concentrated product. Skin irritation can occur from improper handling or use of concentrate or mix.		
Medical conditions generally aggravated by exposure: Existing skin irritation may worsen.		

EPAHO113000073

Section 4. Emergency and First Aid Measures
Eyes: In case of eye contact with the concentrated product or mix, flush immediately with running water for 15 minutes. Get prompt medical attention.
Skin contact: In case of skin contact with concentrated product, wash with water as soon as possible. Mix is not irritating to the skin when used as recommended.
Ingestion: Do not induce vomiting if concentrate or mix is swallowed. Dilute by drinking water or milk, and immediately contact a physician. Swallowing small amounts of mix is not expected to cause injury.
Inhalation: Not expected to be a primary route of exposure for the concentrate. Inhalation of mist can occur. OSHA has set a 15 mg/M^3 PEL as a nuisance level for airborne particulates. NIOSH has set a 0.5 mg/M^3 REL for metalworking fluid mist.

Section 5. Fire and Explosion Data			
Flash Point (COC), °F: NA			
Flammable Limits:			
Lower Explosive Limit: NA		Upper Explosive Limit: NA	
Extinguishing Media: NA			
Special Fire Fighting Procedure: None			
Unusual Fire and Explosion Hazards: None			
Hazardous Combustion Products: Smoke, fumes, and oxides of carbon and nitrogen			
NFPA Ratings	**Health** 1	**Flammability** 0	**Reactivity** 0

Section 6. Accidental Release Measures
Contain the spill, and collect on absorbent material. Discard according to Federal, state and local regulations.

Section 7. Handling and Storage
Use only as recommended by STARCHEM. Avoid all contact of concentrate with eyes or skin. Do not swallow. If frozen, product separates. Thaw completely at room temperature and stir thoroughly prior to use.
Other Precautions - Contains amines. Do not add sodium nitrite or other nitrosating agents to the concentrate or mix due to the potential for nitrosamine formation.

Section 8. Exposure Control/Personal Protection
Respiratory Protection: Concentrated product is not volatile.
Personal Protection: Safety glasses, work apparel, and impervious gloves. Wear goggles when handling product concentrate.
Engineering Controls: Normal shop ventilation is adequate for most applications. However, when high mist levels are generated or ventilation is inadequate, operators may experience respiratory irritation. For such applications, use of mist collectors is recommended.

Section 9. Physical/Chemical Characteristics			
Boiling Point	212 °F	**Evaporation Rate**	Like water when diluted
Specific Gravity	1.05	**Solubility in Water**	100% miscible
Vapor Pressure (mm Hg)	ND	**Appearance/Odor**	Clear/Chemical
Melting Point	ND	**pH (concentrate)**	9.8

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Vapor Density	ND	pH (5.0% mix)	8.9

Section 10. Stability/Reactivity
Stability: Stable
Conditions to Avoid: NA
Materials to Avoid: Avoid contact with strong acids or oxidizers.
Hazardous Polymerization: Will not occur.
Combustion Products: Smoke, fumes, and oxides of carbon and nitrogen

Section 11. Disposal Considerations
For Used Mix: Disposal procedures must comply with Federal, state, county, and local regulations.
For Unused Concentrate: Concentrate is not a hazardous waste as defined by 40 CFR 261.

Section 12. Transport Information		
	Hazardous Materials (49 CFR 172.101)	**Hazard Class (49 CFR 172.101)**
By Land	Not a hazardous material	NA
BY Air or Vessel (49 CFR 175-176)	Corrosive Liquid, n.o.s. (contains ethanolamines) UN1760	Corrosive

Section 13. Regulatory Information					
EXPOSURE GUIDELINES					
REGULATED MATERIAL	**NIOSH REL**	**OSHA PEL**	**OSHA STEL**	**ACGIH TLV**	**ACGIH STEL**
Metalworking Fluid Mist	0.5 mg/M^3				
Triethanolamine				5 mg/M^3	
Ethanolamine	3 ppm	3 ppm		3 ppm	6 ppm

EPCRA (SARA) TITLE III Extremely Hazardous Substances (302): NA

Hazardous Substances (311, 312): Product concentrate is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.

HAZARD CATEGORIES

Acute Health: Yes	**Fire:** No
Chronic Health: No	**Reactive:** No

RCRA: Product concentrate is not a hazardous waste as defined by 40 CFR 261.

TSCA: All of the ingredients in this product are on the TSCA inventory.

State Right-to-Know: Many states have enacted Right-To-Know laws that require information beyond that mandated by federal laws. The information in this sheet may not meet every state's requirements.

Toxic Substances (313): Components present in the product at levels that could require reporting.

CHEMICAL NAME	CAS #	MAX. %	COMMENTS

NOTE: The opinions expressed herein are those of STARCHEM and of their suppliers. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the conditions of use of this product are beyond the control

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of STARCHEM, no guarantee or representation, expressed or implied, is made. It is the user's obligation to determine the conditions of safe use of this product.

ASHBURN
Cut - Clean - Protect

MATERIAL SAFETY DATA SHEET

ENVIRO-GREEN

I. PRODUCT AND MANUFACTURER INFORMATION	
Product name	ENVIRO-GREEN, CLEANER & DEGREASER
Chemical name	NA
Synonyms	NA
CAS number	NE
Manufacturer	Ashburn Chemical Technologies 2911 Rusk Houston, TX 77003
Emergency phone number	713-425-3000
Date of last revision	7/25/07

II. HAZARDOUS INGREDIENTS					
HAZARDOUS COMPONENT	CAS NUMBER	% Optional	OSHA PEL	ACGIH TLV	CHEMICAL AND/OR COMMON NAME(S)
Proprietary Ethoxylated Alcohol	Proprietary		NE	NE	
Proprietary Diluent	Proprietary		NE	NE	
Ethylenediaminetraacetic Acid Tetra-Sodium Salt	10378-23-1		NE	NE	
Pyrophosphate Tetrapotassium	7320-34-5		NE	NE	

III. PHYSICAL AND CHEMICAL CHARACTERISTICS	
Boiling point @ 760 mm Hg	>212 °F
Vapor pressure at 20 °C	20
Vapor density (air = 1)	>1
Solubility in water	Complete
Appearance and color	Green liquid, mild odor
Specific gravity (H_2O = 1.0)	1.01
Melting point	NA
Evaporation rate (butyl acetate = 1)	<1

IV. FIRE AND EXPLOSION HAZARD DATA			
Combustible/Not Combustible	Not Combustible		
Flammable/Not Flammable	Not Flammable		
Pyrophoric/Not Pyrophoric	Not Pyrophoric		
Explosive/Not Explosive	Not Explosive		
Flash point (test method)	None		
Flammable limits (in Air % by volume)	NA	LEL: NA	UEL: NA
Extinguishing media	NA		
Special fire-fighting procedures or equipment	None		
Unusual fire and explosion hazards	None		

V. REACTIVITY DATA	
Material is stable/unstable	Stable.
Conditions to avoid	None Known
Incompatibility (materials to avoid)	Avoid contact with strong acids and alkalis, and Magnesium
Hazardous decomposition or by-products	None known
Hazardous polymerization will/will not occur	Will not occur.

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ASHBURN
Cut - Clean - Protect

VI. HEALTH HAZARD DATA Note: data applies to the concentrate. Health hazard potential is reduced at use concentrations, if applicable.	
Threshold limit value	TLV for this product not established. Refer to the hazardous materials list for TLV of individual ingredients.
Primary route(s) of entry	Inhalation
Known Hazards Under 29 CFR 1910.1200	
Mutagenic (genetic defects)	NONE
Reproductive	NONE
Systemic	NONE
Teratogenic (birth defects)	NONE
Carcinogen listed in:	
NTP (National Toxicology Program)	NO
IARC Monographs	NO
OSHA	NO
Signs and symptoms of exposure	
Inhalation	May cause headache or dizziness
Skin contact	May cause skin irritation, dryness
Eye contact	Contact with eyes will cause temporary eye irritation
Ingestion	May cause nausea, diarrhea
Emergency first aid procedures	
Inhalation	Remove to fresh air. Consult a physician if symptoms persist.
Skin contact	Wash off thoroughly with soap and water. Remove contaminated clothing and launder before re-use. Consult a physician if irritation persists
Eye contact	Flush with water for 15 minutes, seek medical attention.
Ingestion	If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Consult physician as soon as possible.
Medical conditions generally aggravated by exposure	None Known
Notes to physician	Treatment of overexposure should be directed toward the control of symptoms and the clinical condition.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE		
Steps to take if released or spilled	Contain spill. Use absorbent material. Sweep or mop up.	
Waste disposal method	Use approved treatment, transporters and disposal sites in accordance with local, state and federal laws. Do not flush to storm or sanitary sewer.	
Precautions for handling and storing	Avoid prolonged or repeated skin contact. Do not get in eyes. Avoid breathing oil mist. Store at room temperature out of direct sunlight, away from heat. Protect from freezing. Keep container closed when not in use.	
Hazard ratings	NFPA	HMIS
Health	1	1
Flammability	0	0
Reactivity	0	0
Personal protection		

VIII. CONTROL MEASURES	
Protective gloves (type and material)	Not normally required under normal working conditions. Use chemical-resistant gloves in situations of overexposure.
Eye protection	Wear safety glasses or goggles if potential for eye contact exists.
Other protective clothing or equipment	Not normally required.
Respiratory protection (specify type)	Not needed under recommended conditions.
Ventilation and conditions	
Local	Yes
Mechanical	Recommended
Other	None

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Work/hygienic practices	Do not wear contaminated clothing. Wash hands prior to eating, drinking, smoking or use of restroom and when leaving work.

IX. ADDITIONAL REGULATORY INFORMATION	
SARA hazard category (Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III)	None
Toxic chemical(s) subject to the supplier notification requirements of section 313 of the Superfund Amendment and Reauthorization Act of 1986 (SARA) and the requirements of 40 CFR part 372	None
Ingredient(s) regulated under the Clean Air Act Section 112 hazardous air pollutants and subject to all reporting requirements of CERCLA (Superfund)	None

NA – not applicable NR – not reported ND – not determined NE – not established UN – unknown

The information presented in this MSDS has been compiled from sources deemed reliable. This MSDS is presented in good faith and believed to be accurate as of the effective date shown above. No warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the responsibility of the buyer to insure compliance with federal, state, provincial and local laws and regulations.

EPAHO113000079

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-58 **Date:** 10-27-08

CES Sales Representative: Dana Carter

Requested Turnaround / Completion Date: _____

Customer Name: Amtex Machine Products

Generator Name and Location: Huston

Ultimate Objective for Performing Analysis: treat at CES, ~~or Recycle @ CES~~

Approx 2500 gal/qtr

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

rain water with small amounts of coolant from machines

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	/ 97-99	_____	/ _____
coolant	/ 1-3	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** - 9
Phenols - 0	**Oil and Grease (water phase)**___	**TOC** X - 1550
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Zn - .0850
Ni - .250
Cu - .436

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____ Cd. .077
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____ Cr .044

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-52 **Date:** 10/24/08

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: ASAP

Customer Name: Texas Sterling Construction

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Run Flash

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Unknown cures at work site - may contain Flam Hydrocarbons

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

unknown cure	/	_____	/
_____	/	_____	/
_____	/	_____	/
_____	/	_____	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash X > 140°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-53 **Date:** 10/24/08

CES Sales Representative: Dan Bowman
Requested Turnaround / Completion Date: ASAP

Customer Name: Vanco Ring Gasket
Generator Name and Location: Stafford TX
Ultimate Objective for Performing Analysis: See if we can take here

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Coolant & oil from machine shop

Provide a detailed Composition to the best of your knowledge: PH - 7
Component / Approximate Percentage or PPM:

Oil	1-1150		
Coolant	89-99%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X > 4000	pH____
Phenols X - 5 ppm	Oil and Grease (water phase)____	TOC X 500
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni .197
Zn .147
Cu .459
Cd .037
Cr .010

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-51 **Date:** 10-1-08

CES Sales Representative: Joe Wilson / Dan Bowman
Requested Turnaround / Completion Date: _____

Customer Name: ESS - Corsicana
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ tote rinsing

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

10 / 20	Soap	____ / ____	
80 / 100	water	____ / ____	
____ / ____		____ / ____	
____ / ____		____ / ____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ OK	**Percent Solids** ✓	**Percent Oil** ✓ 1.9
Specific Gravity _____	**Chlor-d-tect (oil phase)** _____	**pH** ✓ 2
Phenols ✓ - O	**Oil and Grease (water phase)** _____	**TOC** ✓ - 3523
Distillation Test _____	**Metals** ✓	**Flash** ✓
GC/MS _____	**Chlor-n-oil (oil phase)** _____	**Centrifuge Test** _____

Other Internal Analysis (List) _____
Off-site Lab Analysis (List) _____
Note: Must have an approved P.O. for any external lab analysis

Ni .218
Zn .192
Cu .049
Cd .023
Cr .050

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash _____	**Black Oil Suitability** _____	**Viscosity** _____
Specific Gravity _____	**Light End Suitability** _____	**Distillation Test** _____
Flash _____	**CES Fuel Suitability** _____	**Hydro-scout** _____
Chlor-d-tect _____	**Color** _____	**Chlor-n-oil** _____
Water by Distillation _____	**Water Extractability** _____	

Other Internal Analysis (List) _____
Off-site Lab Analysis (List) _____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide _____	**Specific Gravity** _____	**Sulfides** _____
Percent Sodium Hydroxide _____	**Chlorides** _____	**Sodium** _____
Percent Solids by Centrifuge _____	**Oil by Centrifuge** _____	**TOC** _____

Other Internal Lab Analysis (List) _____
Off-site Lab Analysis (List) _____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-47 **Date:** 10/23/08

CES Sales Representative: Gary Branscum
Requested Turnaround / Completion Date: 10/28/08

Customer Name: Heroux Hope
Generator Name and Location: Hope Arkansas
Ultimate Objective for Performing Analysis: to see if CES can process

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

TREXIS OK

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	98%		
Wax	2 %		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ OK	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH 8
Phenols ~ 0	Oil and Grease (water phase)___	TOC ~ 1200
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____ Ni .040 Zn .048
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Cd .100

Ash____	Black Oil Suitability____	Viscosity____ Cd .006
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____ Cr .037
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-48 **Date:** 10/22/08

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: SPEED INDUSTRIAL SLUDGE/SLOP OIL

Generator Name and Location: MT. BELVUE

Ultimate Objective for Performing Analysis: TREAT / DISPOSAL

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

MATERIAL DISSOLVES IN TOLUENE, NOT ACETONE - BECOMES A THICK PUDDING @ 220-230°F. RELEASES H_2S WHEN HEATED.

CRUCIBLE TARE - 57.6929
" + 5X 62.3410
" + ASH 59.3077

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: 1.6148

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____ 4.6481
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) RUN ALL OIL TESTS. 34.67% ASH

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-46 **Date:** 10/22/08

CES Sales Representative: GARY BRAUCKMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: SW SHIPYARDS

Generator Name and Location: CHANNELVIEW

Ultimate Objective for Performing Analysis: BASIS IN WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) CONCENTRATION OF SULFURIC ACID. D-1,011
Off-site Lab Analysis (List)_____ ~ 2% H_2SO_4
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 100845 **Date:** 10-22-08

CES Sales Representative: Danac

Requested Turnaround / Completion Date: 1

Customer Name: Champion Odessa

Generator Name and Location: Odessa TX

Ultimate Objective for Performing Analysis: treat test @ CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
1-2 inches/month, Vessel washouts from chemical blending plant

Provide a detailed Composition to the best of your knowledge: PH - 8 TREATS OK

Component / Approximate Percentage or PPM:

Water	/		/
methanol	/	FP -	/ 115-120
IPA	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC = 40,650 (TREATED)
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni 1.116
Zn 8.11
Cu .562
Cd .174
Cr .199

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-17 **Date:** 10/14/08

CES Sales Representative: JM

Requested Turnaround / Completion Date: std

Customer Name: Arkema

Generator Name and Location: Arkema - Haden RC

Ultimate Objective for Performing Analysis: to add to 197 SOL stream we currently sell to Intergulf or other outlet?? Purchase eval

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
overhead secondary olefins overhead from NOM production (n-dodecyl mercaptan)

Provide a detailed Composition to the best of your knowledge: BTU= 15,566

Component / Approximate Percentage or PPM:

NOM	98%		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity x - 0.834	Light End Suitability____	Distillation Test____
Flash x 130 - 135	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) (BM) Please separate into an additional 1pt. sample for storage/eval.
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-34 **Date:** 10-16-08

CES Sales Representative: GB

Requested Turnaround / Completion Date: [illegible]

Customer Name: SW Shipyard

Generator Name and Location: Channelview

Ultimate Objective for Performing Analysis: Oil Recovery & pricing

TANK 303

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Oil - Skimmings From Waste water & Barge Meets

Provide a detailed Composition to the best of your knowledge:

H_2O - 5.9 %

FLASH Pt > 100°F

Component / Approximate Percentage or PPM:

Oil	99%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

CRUCIBLE TARE - 56.4175

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

CRUCIBLE + Sx 59.8186

+ ASH - 56.4567

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Internal ~~Analysis~~ to be Performed on Hydrocarbons or other Organic Chemicals:

.0392

3.4011

Ash ✓	Black Oil Suitability ✓ ok	Viscosity____
Specific Gravity API - 14	Light End Suitability____	Distillation Test____
Flash ✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ 400	Color____	Chlor-n-oil ✓
Water by ~~Distillation~~ ✓ 5.9%	Water Extractability____	

ASH = 1.15 %

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008.32 **Date:** 10-16-08

CES Sales Representative: Brauchman
Requested Turnaround / Completion Date: ASAP

Customer Name: SW. Shipyard
Generator Name and Location: Channelview Tank A
Ultimate Objective for Performing Analysis: Receive - Reuse Sulfuric Acid For Port Arthur

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Barge Heels

Provide a detailed Composition to the best of your knowledge: D- 1.112 ~ 17%
Component / Approximate Percentage or PPM:

H2SO4	100%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent ~~Caustic~~: Mesoil

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

0/0 solids
0/0 oil

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

call Matt w/ Results

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-33 **Date:** 10-16-08

CES Sales Representative: Branchcomb

Requested Turnaround / Completion Date: ASAP

Customer Name: SW. Shipyard

Generator Name and Location: Channelview Tanks

Ultimate Objective for Performing Analysis: Recycle-Reuse-Sulfuric for port Arthur

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Barge Heels

Provide a detailed Composition to the best of your knowledge: D- 1.249

Component / Approximate Percentage or PPM:

H2SO4	/ 100%		/ ~34%
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on ~~Spent Caustic:~~ H2SO4 % solids % oil

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

call Matt w/ Results

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-23 **Date:** 10/10/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: STJ

Customer Name: Vertex at Cedar Marine

Generator Name and Location: Cedar Marine Terminals

Ultimate Objective for Performing Analysis: profile / pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

oily water from tank cleans (oil) ~~[illegible]~~ Cu - .310

~ 1 LOAD/MONTH Zn - 9.1

Provide a detailed Composition to the best of your ~~knowledge~~: Ni - 1.10

Component / Approximate Percentage or PPM:

Oil	/		/ Cd - .16
Water	/		/
	/		/ Cr - .18
	/		/

TREATS ok - NOT ANY RECOVERABLE OIL TO SPEAK OF

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** -9
Phenols____	**Oil and Grease (water phase)**____	**TOC** - 14,500
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-07 **Date:** 10/2/03

CES Sales Representative: Joy

Requested Turnaround / Completion Date: ASAP

Customer Name: Rado

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: "Soaps" from biodiesel production

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

40,000 gal

EXTRACTED N.O - MIXES W/ BLACK OIL

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Glycerin	/		/
Water	/		/
Methanol	/		/
Fatty acid	/		/

pH ~ 9

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) Flash - 100-105°F

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

BTU - 14420 ON OIL FROM NaOH EXTRACTION.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

1:4 MIX 10% NaOH / SX IS A GOOD ONE

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

BIODIESEL @ 15/40 = 37.5%

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-16 **Date:** 10/7/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Rado

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: pricing ~~RD~~ (buy)

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:

TARE - 58.4964
+5x 61.6565
58.4935

Component / Approximate Percentage or PPM:

Biodiesel / _____
fatty acids / _____
_____ / _____
_____ / _____

_____ / _____
_____ / _____
_____ / _____
_____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	Black Oil Suitability____	Viscosity____
Specific Gravity X - @ 0.872	Light End Suitability____	Distillation Test____
Flash X 115-120	CES Fuel Suitability____	Hydro-scout X 0.10 %
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) Btu .9128 - 12,804 BTU
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-18 **Date:** 10/7/08

CES Sales Representative: Ken N.
Requested Turnaround / Completion Date: asap

Customer Name: Monumental Pipeline
Generator Name and Location: "
Ultimate Objective for Performing Analysis:
To see if we can treat in our system

2000 gals

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Pigged lines last containing diesel

MIXES w/ Black Oil

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

CHLOR-D-TECT - 500

50%/diesel	____/____
50%/solvent	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

HAZARD RATINGS
Health: 2
Flammability: 2
Reactivity: 1
Personal Protection: C

MATERIAL SAFETY DATA SHEET

NOTICE: Judgment may be based on indirect test and technical literature. The OSHA Hazard Communication Standard only requires MSDS's and special labeling for materials defined as "HAZARDOUS": see 29 CFR 1910.1200 (c). This document may be about a product which is NOT hazardous but is provided as information for our customers. See references for information.

SECTION I. PRODUCT IDENTIFICATION

Product Identifier: RC-Pigout-404
Product VOC: 97.3%
Manufacturer/Supplier: Rig-Chem
132 Thompson Road
Houma, LA 70363

Product Identification #(PIF):
Emergency Telephone #: 1-800-424-9300
General Information #: 985-873-7208
Prepared by: Sonya Lockhart
Date Prepared: February 1, 2006

SECTION II. HAZARDOUS INGREDIENTS

	CAS #	OSHA/PEL	TLV	STEL	max. %
1. Terpene hydrocarbon	Proprietary	NE	NE	NE	62
2. Terpene solvent	5989-27-5	NE	NE	NE	34
3. Petroleum distillates	64742-88-7	NE	NE	NE	6

SECTION III. HEALTH HAZARD INFORMATION

.....Primary Routes of Entry: X Skin X Eyes X Inhalation ___Ingestion

- *Effects of overexposure:*
  - -Eye Contact: Eye irritant.
  - -Skin Contact: Irritating to skin. Can cause defatting of the skin, which can lead to dermatitis.
  - -Inhalation: Vapors may cause irritation to nose, throat, and respiratory tract. Breathing high vapor concentrations may cause CNS depression.
  - -Ingestion: Irritating to tissues. May be harmful or fatal if swallowed in sufficient quantity.

SECTION IV. EMERGENCY FIRST AID

- *Eyes:* Flush well with water for at least 15 minutes. Seek medical attention if irritation develops.
- *Skin:* Wash with soap and water. If irritation develops, seek medical attention.
- *Inhalation:* Move to fresh air.
- *Ingestion:* Drink lots of water to dilute, DO NOT INDUCE VOMITING. Get medical help.

SECTION V. FIRE & EXPLOSION DATA

Flammability: FLAMABLE LIQUID
Means of extinction: Foam, dry chemicals, CO_2.
Autoignition Temperature: ND
Flash Point: 118° F Closed Cup
Upper Flammability Limit (% by volume): ND
Lower Flammability Limit (% by volume): ND
Hazardous combustion products: Carbon monoxide, carbon dioxide and smoke.

- *Special Fire Fighting Procedures:* Smother to exclude air. Do not use water. Handle as an oil fire.
- *Unusual Fire Fighting Hazard:* Combustible liquid. Keep away from heat and open flames. Slippery on floors; be cautious of footing if containers leak or burst due to heat. Material will float and can be re-ignited on surface of water.

SECTION VI. REACTIVITY DATA

Chemical stability: Stable
Hazardous polymerization: Will not occur.
Incompatibility with other substances: Strong oxidizing agents, strong acids, strong bases and acidic agents including acidic clays, peroxides, halogens, vinyl chloride, and iodine pentafluoride.
Conditions to Avoid: Excessive temperatures and/or contact with air may cause decomposition or oxidation. Violently reacts with strong acids to release large amounts of heat.
Hazardous decomposition products: Carbon monoxide, carbon dioxide and smoke.

SECTION VII. HANDLING & STORAGE

Storage: Keep container closed, when not in use. Keep away from heat, flame, or sunlight. Protect from physical damage.
Handling: Do not premix with other chemicals. Exercise reasonable care and precaution. Keep out of reach of children.

SECTION VIII. EXPOSURE CONTROL/PERSONAL PROTECTION

Personal protective equipment: Use rubber gloves and eye protection.
Gloves (specify): Chemical resistant gloves
Eye (specify): Chemical resistant eye ware
Clothing (specify): Apron
Respirator (specify): NA
Footwear (specify): Chemical resistant shoes
Other: Always provide adequate ventilation.

SECTION IX. SPECIAL PRECAUTIONS/ OTHER COMMENTS

Carefully read all instructions on label before handling this product. "FOR INDUSTRIAL USE ONLY"

SECTION X. PHYSICAL DATA

Boiling point: >212°F
Specific Gravity, (water + 1.0): 0.860
% Volatile/ volume: 97.3%
Solubility: Dispersible
Description/odor: Green/Blue liquid with pine and citrus odor.
Vapor Density: (Air = 1): heavier than air
pH, Neat: NA
Vapor Pressure: ND
Evaporation Rate: Slower than butyl acetate

SECTION XI. TOXICOLOGICAL INFORMATION

- Effects of acute exposure to product: Liquid and vapor irritating to eyes, skin and respiratory tract.
- Effects of chronic exposure to product: Prolonged skin contact may result in defatting of the skin, which can lead to dermatitis. Breathing high vapor concentrations may cause CNS depression.

SECTION XII. ECOLOGICAL INFORMATION

This substance is immiscible with water.

SECTION XIII. ACCIDENTAL RELEASE MEASURES/ DISPOSAL INFORMATION

Large spills cannot occur because of packaging. Eliminate all ignition sources. Walking surface may be a slip hazard. Material should be soaked onto absorbent and shoveled into metal waste containers. Dispose of contaminated absorbent material in accordance to local, state and federal regulations. Do not release to open, public waters.

SECTION XIV. TRANSPORT INFORMATION

Hazardous according to Table 49 CFR 172.101: **Flammable LIQUID N.O.S. (Terpene Hydrocarbons, Petroleum Distillates)3, , UN 1993, PG-III.**

Flammable Liquid: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less. Exception CFR 173.150(f) (2): Flammable liquids.

Packing Size: Bulk

1001 lbs. or more need placard, less than 1001 lbs. no placard needed

SECTION XV. REGULATORY INFORMATION

SARA TITLE III REPORTING REQUIREMENTS
SECTION 302: Not listed
SECTION 311: Immediate and Delayed Health, Fire Hazard
SECTION 312: Immediate and Delayed Health, Fire Hazard
SECTION 313: Not listed
CERCLA: Not Reportable.
RCRA: A waste containing this product may have the RCRA hazardous waste no. D001 (Ignitable) (40 CFR 261.22).

SECTION XVI. ADDITIONAL INFORMATION

OSHA List (29 FR 1910.1200) as hazardous chemical.
The information contained herein is based on data available to us and is believed to be correct. We make no warranty, however, expressed or implied regarding the accuracy of these data or the results obtained from the use thereof.
Regulatory Standards: DOT TITLE 49, Code of Federal Regulations: 172.101: Parts 100 to 177, Revised 10/1/92.
SUPER FUND AMENDMENTS REAUTHORIZATION ACT OF 1986, TITLE III TOXIC SUBSTANCE CONTROL ACT LIST (TSCA)-INGREDIENTS LISTED. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES NATIONAL TOXICOLOGICAL PROGRAM (NTP) REPORT OF CARCINOGENS INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) MONOGRAPHS, OCCUPATIONAL SAFETY & HEALTH REGULATIONS. CODE OF FED. REGS. FOOD & DRUG, 21 PARTS 170 to 199. Revised 4/1/91, 173.310.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008 - 08-10 **Date:** 10/2/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: std

Customer Name: Bromakima

Generator Name and Location: "

Ultimate Objective for Performing Analysis: profile & pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Wastewate and detergent w/ Acid for degreasing steel ~~pipes~~ rod from workout equipment manufacturing (3 drums)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	/		/
Oil	/		/
detergent	/		/
Acid	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**___	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH**___
Phenols___	**Oil and Grease (water phase)**___	**TOC**___
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1008-06 **Date:** 10-2-08

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: _____

Customer Name: Champion Technologies
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: treatability at ces

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
byproduct produced from production of commercial chemical product; Volume is about once per quarter DOES NOT TREAT WELL EVEN DILUTED DOWN FP > 140°F 5000gal

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Polymers /2-20%	Acetephonone/1-5%	Cd .267
Water/60-90%	_____/_____	Cu .266
Hydrochloric Acid/1-5%	_____/_____	Ni 2.03%
Formaldehyde/1-5%	_____/_____	Zn .259
Thiourea/1-2%	_____/_____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** ~~2~~ 1.3
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____ 21450
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

$R_1NH - \overset{O}{\overset{\|}{C}} - OR_2$

R is alkyl or aclkyl

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-01 Date: 9-30-08

CES Sales Representative: Len Knoare

Requested Turnaround / Completion Date: 10/1

Customer Name: DanaContainers

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: To Determine amount of product.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Rinsewater from cleaning of trailer

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

(1) Carbamate / 10%
Pesticide / _____
_____ / _____
_____ / _____

(2) water / 90%
_____ / _____
_____ / _____
_____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids ✓ - 6	Percent Oil____
Specific Gravity ✓	Chlor-d-tect (oil phase)____	pH ✓ - 8
Phenols____	Oil and Grease (water phase) ✓	TOC ✓
Distillation Test____	Metals____	Flash ✓ - < 75 DEG F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

D - 1,00 - 20 - Liquid
10 - Sludge

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil 2 - 1,27
Water by Distillation____	Water Extractability____	

70 - H2O?

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-57 **Date:** 9-29-08

CES Sales Representative: Dana C

Requested Turnaround / Completion Date: _____

Customer Name: Freeport LNG

Generator Name and Location: Freeport LNG

Ultimate Objective for Performing Analysis: recycle product

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

glycol & water from line leaks, spills etc.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Glycol	/	_____	/
Water	/	_____	/
_____	/	_____	/
_____	/	_____	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

32% ethylene Glycol by Refractive Index

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-58 **Date:** 9-29-08

CES Sales Representative: DanaC

Requested Turnaround / Completion Date: Tuesday

Customer Name: Buckeye Pipeline

Generator Name and Location: Buckeye Pipeline

Ultimate Objective for Performing Analysis: Advise Check

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Blowdown of ammonia into water to clear pipes

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Ammonia	~15%		
Water	~85%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ - 11
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash ✓ 138 °F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-56 **Date:** 9-24-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: RES

Generator Name and Location: Age Refining - San Antonio

Ultimate Objective for Performing Analysis: Treat water, oil for used oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Sep sludge / oil / water (K051)

~~Note only~~

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

10-15 %	oil		
20-30 %	sludge		
60-80	water		

Water phase

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ___	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH ✓ .6
Phenols ___	Oil and Grease (water phase) ___	TOC ✓
Distillation Test ___	Metals ___	Flash ✓
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Fail if <140F

>140°F

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Oil phase

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ✓ <90°F	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ✓ - 500	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Fail if <100f

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Reserve Remaining oil From Flash Point

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-54 **Date:** 9/24/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: 3d

Customer Name: Specialty Chem

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Sump water fr. biodiesel

Provide a detailed Composition to the best of your knowledge: NO HEAT NECESSARY - NOT ENOUGH OIL TO MATTER

Component / Approximate Percentage or PPM:

Water	/		/
Methanol	/		/
Biodiesel	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X - OK	**Percent Solids** 0	**Percent Oil** < 1
Specific Gravity ____	**Chlor-d-tect (oil phase)** ____	**pH** 5
Phenols ~ 0	**Oil and Grease (water phase)** ___	**TOC** ~ 0
Distillation Test ____	**Metals** ____	**Flash** ____
GC/MS ____	**Chlor-n-oil (oil phase)** ____	**Centrifuge Test** ____

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ____	**Black Oil Suitability** ____	**Viscosity** ____
Specific Gravity ____	**Light End Suitability** ____	**Distillation Test** ____
Flash ____	**CES Fuel Suitability** ____	**Hydro-scout** ____
Chlor-d-tect ____	**Color** ____	**Chlor-n-oil** ____
Water by Distillation ____	**Water Extractability** ____	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Ni .176
Zn .153
Cu .081
Cd .057

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	**Specific Gravity** ____	**Sulfides** ____
Percent Sodium Hydroxide ____	**Chlorides** ____	**Sodium** ____
Percent Solids by Centrifuge ____	**Oil by Centrifuge** ____	**TOC** ____

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 090850 **Date:** 9/24/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: 5d

Customer Name: Rineco

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Spill cleanup

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge: HEAT & ACIDIFY.

Component / Approximate Percentage or PPM:

Oil	10-20%	_____	_____
Water	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids** 2	**Percent Oil** 10
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** 7
Phenols 0	**Oil and Grease (water phase)**___	**TOC**___ 1000
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Ni .826
Zn .247
Cu .183
Cd .163

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0909-53 **Date:** 9/24/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: 5d

Customer Name: Rada Tech.

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: alternative to System 1

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Bio Diesel methanol WW

DISTILLATION - (DIDN'T USE FOR F.A EMULSION)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	/	MeOH - 45 % RECOVERY	
Methanol	/ <24%		/
	/		/
	/		/

TOC 332,900

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test X	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) try distillation and TOC of remaining water (& flash)

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-45 **Date:** 9-23-08

CES Sales Representative: Dana Carter

Requested Turnaround / Completion Date: _____

Customer Name: QATX Galena Park

Generator Name and Location: QATX Galena Park

Ultimate Objective for Performing Analysis: test pH, Flash Disposal

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
used cleaner from Rail Car repair operations

Provide a detailed Composition to the best of your knowledge: BLENDS w/ BLACK OIL
1 DRUM
Component / Approximate Percentage or PPM:

Citri clean (see msds)	/	_____	/
dirt	/	_____	/
OILS (trace)	/	_____	/
Water	/	_____	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) 1000	pH X 4.3
Phenols____	Oil and Grease (water phase)___	TOC___
Distillation Test____	Metals see	Flash X - 130 - 135
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

MSDS Material Safety Data Sheet

UNITEX

CITRI-CLEAN

MSDS Number: 4006

Revision Date: OCT-04-2003

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

UNITEX
3101 GARDER AVENUE

KANSAS CITY, MO 64120

Contact:
Telephone Number: 816-231-7700
FAX Number: 816-483-3149
E-Mail: mail@unitex-chemicals.com
Web www.unitex-chemicals.com

Product Name: CITRI-CLEAN
Revision Date: OCT-04-2003
MSDS Number: 4006
Common Name: CITRI-CLEAN
Product Code: CITRI-CLEAN
Product Use: CLEANER, DEGREASER
Emergency Telephone No.: 800-424-9300

MSDS Prepared by: Wm. Michael Simmons Director of Safety Phone: 816-231-7700

HAZARD RATINGS: HEALTH (1) FIRE (2) REACTIVITY (0) EQUIPMENT (C)

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Chemical Name	Perc.
5989275	Citrus Distillates	>95%
NE		> 5%

3 HAZARDS IDENTIFICATION

Route of Entry: Eyes; Skin; Swallowing; Inhalation

Target Organs: Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rats and the kidney effects are not expected to occur in humans.

Inhalation: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

Skin Contact: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Eye Contact: May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Ingestion: Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

MSDS Material Safety Data Sheet
UNITEX

4 FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists, get medical attention.

Skin Contact: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effect). Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Eye Contact: May cause eye irritation. Symptoms include stinging, tearing, and redness. Flush with fresh water for 15 minutes while gently holding open eyelids.

Ingestion: Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

5 FIRE FIGHTING MEASURES

Flash Point: 122F/ 177C
Flash Point Method: Pensky Martens Closed Cup
Burning Rate: ND
Autoignition Temperature: ND
LEL: NE
UEL: NE
Flammability Classificati Moderate

Other:
NFPA Class B extinguisher (co2, dry chemical or foam) for class 1C fires. Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzels if water is used. Use air supplied breathing masks.Unusual Fire and Explosion Hazards: Keep away heat and open flame. Closed container may explode if exposed to extreme heat.

6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL
Absorb liquid with vermiculitem floor absorbent or other absorbent material.

LARGE SPILL
Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area or spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If run-off occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water.

7 HANDLING AND STORAGE

Handling 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.

INDUSTRIAL USE ONLY!

Storage Requirements: Keep away from heat, sparks, and flames. Store in a cool/dry area. DO NOT STORE ABOVE 49C (120F). Store away from oxidizers. Keep out of reach of children.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

MSDS Material Safety Data Sheet
UNITEX

Engineering Controls:

Protective Equipment: Respiratory Protection: NIOSH approved respirator for emergency use. Local exhaust is preferable. Mechanical equipment is acceptable.
Protective gloves; must not dissolve in solvents.
Eye protection use splash proof safety goggles.
Other equipment as required to prevent prolonged contact.

Note to Physicians: Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

This material is not listed by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear water-white to slightly orange		
Physical State:	Liquid	**Boiling Point:**	348-350 F
Odor:	Orange Citrus	**Freezing/Melting Pt.:**	Varies on concentration
pH:	ND	**Solubility:**	Moderate
Vapor Pressure:	20C(Mm of Hg): 1.0	**Spec Grav./Density:**	ND
Vapor Density:	4.73		

Heat Value: ND
Evap. Rate: Slower Than Ether
Percent Volatile: 100%

10 STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Heat, sparks and open flame.

Materials to avoid (incompatability): Isolate from strong oxidizers such as permanganate.

Hazardous Decomposition products: Carbon Monoxide and Carbon Dioxide.

Hazardous Polymerization: Will not occur.

11 TOXICOLOGICAL INFORMATION

No data available

12 ECOLOGICAL INFORMATION

No data available

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal regulations.

Material Safety Data Sheet

MSDS Number: 4006 Revision Date: OCT-04-2003

14 TRANSPORT INFORMATION

Consult DOT 49 CFR 172.101 for transportation information.

15 REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substance Control Act) Status: TSCA (United States) The international ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a) - None listed

SARA 302 Components - 40 CFR 355 Appendx A - None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(x) Delayed( ) Fire(x) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.5 - None

OSHA Process Safety Management 29 CFR 1910 - None listed

EPA Accidental Release Prevention 40 CFR 69 - None listed

State and Local Regulations
California Proposition 65 - None

16 OTHER INFORMATION

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

END OF MSDS DOCUMENT

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-44 **Date:** 9/23/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: TECHNISAND

Generator Name and Location: 2727 FM 521, 77545

Ultimate Objective for Performing Analysis: BRINE IN WATER

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

N/A

VERBAL TO DAN 9/24

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols X - >1500 ppm	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-41 **Date:** 9/18/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Rada Tech

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: acceptance here

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Biodiesel plant decant methanol ww Strean
(30,000 TOC)
pH ~ 4

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	/		/
Methanol	/		/
Biodiesel	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil** X
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC** X - 199,450 DN TREATED SX.
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) emulsion break or heat help at all?)
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni Zn

7000 gal .687 1.284

1000

$.6 + X = 12000$

$.6 + X = 7000$

4666

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-28 **Date:** 9/16/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Zach

Generator Name and Location: Zach -

Ultimate Objective for Performing Analysis: Light ends suitability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Heptane w/ trace THF "Mother liquor" (1st wash from pharm. mfg)
2 TRAILERS

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Heptane	99%		API - 26.2 = 0.897
THF	<1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____ Toluene - ND

Off-site Lab Analysis (List)_____ Steam 3 - ND

Note: Must have an approved P.O. for any external lab analysis Black oil - ND

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: IPA - YES

Ash____	**Black Oil Suitability** X	**Viscosity**____
Specific Gravity____	**Light End Suitability** X	**Distillation Test** Acetone - YES
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

Very Large Vol 40K/day

CES SAMPLE EVALUATION FORM

Sample ID # 090834 **Date:** 9-16-08

CES Sales Representative: Gary Brandeman

Requested Turnaround / Completion Date: ASAP

Customer Name: Hydrocarbon Resources - Huish Detergents

Generator Name and Location: Huish Detergents - LaPorte

Ultimate Objective for Performing Analysis: Waste Water Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rinse water & process water from soap mfg

NICE TREAT - LARGE FLUFFY FLOC READILY SETTLES OUT

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	90-100		
Methanol	0-2		
Soap	0-10		
Dirt	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓ - TR	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH ✓ 12
Phenols - 0	Oil and Grease (water phase) ___	TOC ✓ - 0
Distillation Test ___	Metals ✓	Flash ✓ > 140°F
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Very Large Vol - 8000/day

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-35 **Date:** 9-16-08

CES Sales Representative: Gary Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Hydrocarbon Resources - Huishi Detergents

Generator Name and Location: Huishi Detergents

Ultimate Objective for Performing Analysis: ~~Waste Water~~ Caustic Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
By-product from production of Soap

Provide a detailed Composition to the best of your knowledge:

WT. 0.3560 .8 ml 0.1 N

0.9% wt NaOH

Component / Approximate Percentage or PPM:

NaOH	10-25	TREATS OK -	PH MAKES
Water	75-90		~40% SOLIDS
Soap	0-2		
Dirt	0-2		

TOC - 0

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols ~0	Oil and Grease (water phase)____	TOC ✓
Distillation Test____	Metals	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) ~~% NaOH~~

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

PH - 12.546

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

SX - 1.100

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity ✓	Sulfides____
Percent Sodium Hydroxide ✓	Chlorides ✓	Sodium ✓
Percent Solids by Centrifuge ✓	Oil by Centrifuge____	TOC ✓

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

	24	34	35	37
Ni	.596	.419	1.721	1.228
Zn	.342	.062	.481	.306
Cu	.501	.124	.636	.344
Cd	.056	.084	.441	.066
Cr				
Pb	1.164			

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-24 **Date:** 9/4/08

CES Sales Representative: Joy Baker

Requested Turnaround / Completion Date: ASAP

Customer Name: RESLINK (SCHLUMBERGER)

Generator Name and Location: BUSCHONG STREET

Ultimate Objective for Performing Analysis: TREAT WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

COOLANT WASTE FROM WELDING MACHINES

PH - 9

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X OK	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols - 1 ppm	Oil and Grease (water phase)___	TOC___ - 1500 ppm
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) LEAS BEFORE & AFTER.

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # [NEED ONE] 0908-14 **Date:** 9/4/08

CES Sales Representative: GARY BRAUERMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: REAGENS USA

Generator Name and Location: BAYPORT BLVD.

Ultimate Objective for Performing Analysis: RECEIVE $@$ i'c.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HYDRAULIC & MOTOR OIL FROM BARRELS, ETC.

~ 10% OIL LAYER
15%

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

N/A	/	CRUCIBLE TARE	/ ~~58.2899~~	58.2676
	/	CRUCIBLE + SX	/ ~~62.4750~~	61.4635
	/	+ ASH	/	58.2831
	/		/	

ASH - 0.48 .0155
3.1959

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil** 10
Specific Gravity 0.851	**Chlor-d-tect (oil phase)** 1500	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test API-35	**Metals**____	**Flash** > 140°F
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) ALL TEST FOR OIL PROCESSING
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-37 Date: 9/17/08

CES Sales Representative: DANA CARTER

Requested Turnaround / Completion Date: ASAP

Customer Name: SLAY TRANSPORTATION

Generator Name and Location: SAME (JACINTO PORT BLVD.)

Ultimate Objective for Performing Analysis: TREAT W/W

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

TREATS FINE.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids 2%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ~7
Phenols ~0	Oil and Grease (water phase)___	TOC ~900
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 8/20

CES Sales Representative: Joy

Requested Turnaround / Completion Date: ASAP

Customer Name: _____

Generator Name and Location: Nustar

Ultimate Objective for Performing Analysis: make sure it conforms to existing profile 2866

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water /	Ni .268
/	Zn .108
/	Cu .171
/	Cd .118
/	Cr
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____ VERBAL
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** – 14 TO JOY
Phenols – O	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 09/08/07 **Date:** 9/3/08

CES Sales Representative: Dan

Requested Turnaround / Completion Date: ASAP

Customer Name: Grief Brothers

Generator Name and Location: Houston TX

Ultimate Objective for Performing Analysis: Pricing / Treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Water used to clean threads. water & Sodium Silicate

Sil. SOLIDIFIES WHEN ACIDIFIED.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water	/ 70-85		/
Sodium Silicate	/ 3-5		/
Metal Fines	/ 10-15		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids X	Percent Oil ____
Specific Gravity ____	Chlor-d-tect (oil phase) ____	pH X - 11.3
Phenols X	Oil and Grease (water phase) ____	TOC X
Distillation Test ____	Metals X	Flash ____
GC/MS ____	Chlor-n-oil (oil phase) ____	Centrifuge Test ____

Other Internal Analysis (List) ____
Off-site Lab Analysis (List) ____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ____	Black Oil Suitability ____	Viscosity ____
Specific Gravity ____	Light End Suitability ____	Distillation Test ____
Flash ____	CES Fuel Suitability ____	Hydro-scout ____
Chlor-d-tect ____	Color ____	Chlor-n-oil ____
Water by Distillation ____	Water Extractability ____	

Other Internal Analysis (List) ____
Off-site Lab Analysis (List) ____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	Specific Gravity ____	Sulfides ____
Percent Sodium Hydroxide ____	Chlorides ____	Sodium ____
Percent Solids by Centrifuge ____	Oil by Centrifuge ____	TOC ____

Other Internal Lab Analysis (List) ____
Off-site Lab Analysis (List) ____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 090802 **Date:** 9-2-08

CES Sales Representative: GB

Requested Turnaround / Completion Date: _____

Customer Name: Dresser 1900 TJ

Generator Name and Location: Tanner 130

Ultimate Objective for Performing Analysis: Waste segregation

TECH-U-SOLVE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Tech-u-solve - off-spec

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Pet Dist.	/ 90-100	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ - 3
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____ (<140)	Light End Suitability____	Distillation Test____
Flash ✓ - 135-139	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ 300	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-03 **Date:** 9-2-08

CES Sales Representative: GD

Requested Turnaround / Completion Date: _____

Customer Name: Dresser Rocts

Generator Name and Location: Tanner Rd

Ultimate Objective for Performing Analysis: Waste Segregation

CRYSTAL CLEAN SOLVENT

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

crystal clean solvent - cut-spec

IS FLASH ≥ 140 °F ?

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

petroleum	40-100	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ 5
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash ✓ >140	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ 2800	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 090804 **Date:** 9-2-08

CES Sales Representative: GB

Requested Turnaround / Completion Date: _____

Customer Name: Dresser Roots

Generator Name and Location: Tanner Rd

Ultimate Objective for Performing Analysis: ~~[illegible]~~ oil recycling

OILY WATER

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

off spec oil, contaminated

Provide a detailed Composition to the best of your knowledge: LOTS OF SOLIDS PRODUCED DURING TREAT.

Component / Approximate Percentage or PPM:

oil	2-5		
water	95-98		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: $\frac{15}{360} = 1.2\%$

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) ✓ 500	pH ✓ 5
Phenols - 0	Oil and Grease (water phase)____	TOC ~~[illegible]~~ <300 TOC
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0908-05 **Date:** 9-2-08

CES Sales Representative: GB

Requested Turnaround / Completion Date: _____

Customer Name: Dresser Roots

Generator Name and Location: Tanner Rd

Ultimate Objective for Performing Analysis: ~~[illegible]~~ Waste classification

UNKNOWN DM #17

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

unknown DM #17

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

~~[illegible]~~			
Pet Dist	80-100		
Water	0-20		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____ 110-115	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____ 200	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 09-0906 Date: 9-2-08

CES Sales Representative: Brueckner

Requested Turnaround / Completion Date: _____

Customer Name: Dresser 19005

Generator Name and Location: Tanner Rd

Ultimate Objective for Performing Analysis: Waste segregation

UNKNOWN DM #20

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Jet Fuel	80/100	_____	/_____
water	0-20	_____	/_____
_____	/_____	_____	/_____
_____	/_____	_____	/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) ✓ >4000	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash ✓ >140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-45 **Date:** 8/28/08

CES Sales Representative: GARY B

Requested Turnaround / Completion Date: _____

Customer Name: SMITH INTL.

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: OIL TESTING

4,000 - 5000 GAL.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HYDRAULIC OIL PIT

Provide a detailed Composition to the best of your knowledge: .0088 CRUCIBLE TARE 56.3380
Component / Approximate Percentage or PPM: 3.1555 " + SX 59.4935
" + ASH 56.3468
ASH = 0.28

BTU = 17306

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity - 0.866	Chlor-d-tect (oil phase) - 200	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash >140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) H2O - 0.00% 0-20%
Off-site Lab Analysis (List) ERR 1 ON PPM - 1182 PPM
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-44 **Date:** 8-29-08

CES Sales Representative: Ken
Requested Turnaround / Completion Date: 9-3

(b) (6) [redacted]

Customer Name: Sunburst Trucking
Generator Name and Location: Houston, TX
Ultimate Objective for Performing Analysis:
To see if this can go to CES Oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
18 Wheeler maintenance-gear oil, motor oil & antifreeze mix

800-1000 gal/wk

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

oil/80%	_____/_____
antifreeze/10%	_____/_____
water/10%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

split

CES SAMPLE EVALUATION FORM

8-28-00

Sample ID # 0808-43 **Date:** ~~[illegible]~~

CES Sales Representative: BB

Requested Turnaround / Completion Date: _____

Customer Name: Hitemco - LO Zuno

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: WW analysis

split sample i Running analysis for classification

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Chiller water - gets to Hard
must change out

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

water	/ 100%	_____	/ _____
w/ minerals	/ _____	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-46 **Date:** 8/26/08

CES Sales Representative: GARY B

Requested Turnaround / Completion Date: ASAP

Customer Name: ETHYL CORPORATION

Generator Name and Location:

Ultimate Objective for Performing Analysis: CAN WE BREAK OUT OIL - IF SO, QUALITY? H2O - THERE?

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

5000 gals

2 %

REQUIRES 10% DIL. MAY SAMS RECOVER 8% OIL THATS WET.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

____ / ____		____ / ____	
____ / ____		____ / ____	
____ / ____		____ / ____	
____ / ____		____ / ____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-35 **Date:** 8/25/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: STC

Customer Name: Phoenix Poll.

Generator Name and Location: Green Haven

Ultimate Objective for Performing Analysis: public approval

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Used solidified glycerin from biodiesel production

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Glycerin	98-100%		
Biodiesel	0-2%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash✓ >140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-15 **Date:** 8/14/08

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: ASAP

Customer Name: Phoenix Pollution Control
Generator Name and Location: Galveston Bay Biodiesel
Ultimate Objective for Performing Analysis: Black oil miscibility

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
This is from process generating Bio diesel

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

See	/		/
ATTached	/		/
profile	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability_X_	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: GALVESTON BAY BIODIESEL
Address:
City: GALVESTON State: TX Zip:
Contact: STEVE SAMS Title: AUTH. BROKER FOR GENERATOR
Phone Number: 281-838-3400 Fax Number: 281-424-7748
24/hr Phone Number: 281-838-3400
US EPA ID No:
State ID No: SIC Code:

SECTION 2: Billing Information - ☐ Same as Above

Company: PHOENIX POLLUTION CONTROL & ENVIRONMENTAL SERVICES, INC.
Address: 4808 FAIRMONT PARKWAY # 274
City: PASADENA State: TX Zip: 77505
Contact: STEVE SAMS Title: SALES REP.
Phone Number: 281-838-3400 Fax Number: 281-424-7748

SECTION 3: General Description of the Waste

Name of Waste: CENTRIFUGE MATERIAL (TANK BOTTOMS)
Detailed Description of Process Generating Waste:

Physical State: ☒ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: YELLOW Odor: M.LD

Specific Gravity (water=1): Density: lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☒ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☒ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☒ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☒ Single-phase ☐ Multi-phase

Container Type: ☐ Drum ☐ Tote ☒ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☐ Monthly ☐ Yearly ☒ One-Time
Quantity: 5,000 Gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☒ Yes ☐ No
If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☒ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☒ No
If "Yes", then please list ALL applicable codes: _____

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☒ No
If "Yes", then please list ALL applicable codes: _____

Texas State Waste Code Number: _____

Proper US DOT Shipping Name: _____
Class: _____ **UN/NA:** _____ **PG :** _____ **RQ:** _____

Flash Point		pH		Reactive Sulfides	Reactive Cyanides		Solids	
		12-14		mg/l		mg/l		%
Oil & Grease		**TOC**		**Zinc**	**Copper**		**Nickel**	
	mg/l		mg/l	mg/l		mg/l		mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
SALTS		90 %
MYTHENOL		8 %
BIODIESEL		2 %

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

PPE

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. Sample

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

N/A

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: N/A
TCLP Volatiles: N/A
TCLP Semi-Volatiles: N/A
Reactivity: N/A
Corrosivity: N/A
Ignitability: N/A

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☐ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

***Metals Subcategory*: Subpart A**

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

***Oils Subcategory*: Subpart B**

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory **: *Subpart C***

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☒ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 08-12-08

Printed Name/Title: Steve Sams

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

NO REPORT - SAMPLES TAKEN AWAY TO ANOTHER END USER FOR EVAL.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-29(A & B) **Date:** 8/20/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: STD

Customer Name: EMA

Generator Name and Location: PQ Corp

Ultimate Objective for Performing Analysis: provide pricing/option at CES may need to give maximum amine levels w/ WW that would be acceptable at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
process water from manufacturing of zeolites (pH typically 7-10 might 5% of the time be close to 12)

Provide a detailed Composition to the best of your knowledge: FP A 90 B 90

Component / Approximate Percentage or PPM:

Water	/ [redacted]		/
Amines	/ What would be our max??		/
~~[redacted]~~	/		/
trimethylamine (A)			/
~~[redacted]~~ iso butyl amine (B)			/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) Flash?

Off-site Lab Analysis (List)

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)

Off-site Lab Analysis (List)

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)

Off-site Lab Analysis (List)

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-27 **Date:** 8/20

CES Sales Representative: Jay

Requested Turnaround / Completion Date: _____

Customer Name: Rada

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Oily Sludge and water from tank clean-up
(1" of solids in bottom of 2 vac boxes)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water /		/	
Solids / - 3/13 = 23% Solids		/	Cd .167
oil /		/	Cr
/		/	

N .606
Zn 6206
Cu .370

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids** X - 23%	**Percent Oil** O
Specific Gravity ____	**Chlor-d-tect (oil phase)** ____	**pH** ~6
Phenols ~O	**Oil and Grease (water phase)** ____	**TOC** ____
Distillation Test ____	**Metals** ____	**Flash** ____
GC/MS ____	**Chlor-n-oil (oil phase)** ____	**Centrifuge Test** ____

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) Segregate Solids and Send to A&B Labs for: TCLP 11 metals, KCl, TPH

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: SENT TO A&B LABS

Ash ____	**Black Oil Suitability** ____	**Viscosity** ____
Specific Gravity ____	**Light End Suitability** ____	**Distillation Test** ____
Flash ____	**CES Fuel Suitability** ____	**Hydro-scout** ____
Chlor-d-tect ____	**Color** ____	**Chlor-n-oil** ____
Water by Distillation ____	**Water Extractability** ____	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	**Specific Gravity** ____	**Sulfides** ____
Percent Sodium Hydroxide ____	**Chlorides** ____	**Sodium** ____
Percent Solids by Centrifuge ____	**Oil by Centrifuge** ____	**TOC** ____

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0809-26 **Date:** 9/20

CES Sales Representative: Jay

Requested Turnaround / Completion Date: _____

Customer Name: Rada

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: suitable for purchase

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Lube ~~Oil~~ Oil from cooling tower
(210 gal) ~4-5 drums

BTU-T. 148 1.1138

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM: ASH - 0.33%

_____ / _____	CRUCIBLE TARE - 55.0819 } Sx 3.7166
_____ / _____	CRUCIBLE + Sx 58.7985
_____ / _____	" + ASH 55.0942 } ASH .0123
_____ / _____	_____ / _____

ASH - CRUCIBLE TARE

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	**Black Oil Suitability**____	**Viscosity** X 13 CSt
Specific Gravity X 0.852	**Light End Suitability**____	**Distillation Test**____
Flash X >140°F	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect X 200	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	BTU X ~~3515~~ 9916

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____ Viscosity C40C

Note: Must have an approved P.O. for any external lab analysis

9:48:25
9:50:30

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____ SEC

Other Internal Lab Analysis (List)_____ .10523 X 125 = 13

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

2XQTs

CES SAMPLE EVALUATION FORM

Sample ID # 0708-54 **Date:** 7-31-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: STD

Customer Name: Texas Petrochemicals

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Oil Recovery, Water Treatment, Sludge Disposal

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Lean Oil Tank Bottoms TOC - 66.71x50 = 3336

% WATER (LIQUID) = 400 mL / 2000 = 20%

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Oil	5-10	No metals	
Sludge	40-80	NO TELPHOL or semi	
Fuel Oil	5-10		
Water	40-90		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ -ok	Percent Solids ✓ 80%	Percent Oil ✓ NO RECOVERABLE
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH ✓ -6
Phenols -0	Oil and Grease (water phase) ✓	TOC ✓ -3336
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test ✓

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Cd .079
Cr 0
Cu 0
Ni 2.502
Zn .572

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

80 78 36

$2NaOH + H_2S \rightarrow Na_2S + 2H_2O$

$Na_2S + H_2S \rightarrow 2NaHS$

EPAHO113000143

CES Environmental Services, Inc.

D - 1.112
H_2O SOLUBLE
TOC - 127200

CES SAMPLE EVALUATION FORM

Sample ID # 0808-08 **Date:** 8/8/08

% WATER BY D.S. - 50% 10 ml SX.

CES Sales Representative: Joy
Requested Turnaround / Completion Date: Tues - 7AM

Customer Name: Preston Env
Generator Name and Location: Biodiesel Production
Ultimate Objective for Performing Analysis: Pricing & Acceptance

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Called "off-spec biodiesel w/ methanol" - suspect it is Methanol & fatty acids. 2-4000 bbl / quarter 55

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

	BTU - ~~.9662 1.0064~~	CRUCIBLE TARE	55.1344
		" + SX	60.0511
		" + ASH	55.1996
	BENZOIC - .6350		.0641 / 4.9156 = 1.3%
	SX - 1.2060		
	1.841		

11373 = BENZOIC BTU ∴ 7221.9 CONTRIBUTION

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____ 5734
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) See if all methanol can distill off. Is it
~~Off-site Lab Analysis (List)~~ saleable methanol that is recovered? Is what is left blend w/ black oil?
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Send results to Al Longoria Tues morning.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

	OH	POT
IBP	67	79
10	71	83
20	74	87
30	78	93
36	88	

38% RECOVERY

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-09 **Date:** 8-8-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: ASAP

Customer Name: Magnaflow Austin
Generator Name and Location: Austin TX
Ultimate Objective for Performing Analysis:
wastewater treat at CES

3 TRUCKS

F039

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
leechate condesnate from a landfill with a slight amount of motor oil from machines

Provide a detailed Composition to the best of your knowledge: SOLIDS DO NOT FALL OUT - CAN BE FILTER PRESSED.
Component / Approximate Percentage or PPM:

Water /98-99%	____/____
solids (dirt)/0-1%	____/____
Motor oil/0-2%	____/____
____/____	____/____
____/____	____/____

Cd .057
Cr .123
Cu .042
Ni 2.886
Zn .121

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:
POOR – **Wastewater Treatability**X **Percent Solids**X – TR46 **Percent Oil**____
Specific Gravity____ **Chlor-d-tect (oil phase)**____ **pH**X – 6
Phenols– 5 **Oil and Grease (water phase)**____ **TOC**X - 22,60
Distillation Test____ **Metals**X **Flash**____
GC/MS____ **Chlor-n-oil (oil phase)**____ **Centrifuge Test**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash____ **Black Oil Suitability**____ **Viscosity**____
Specific Gravity____ **Light End Suitability**____ **Distillation Test**____
Flash____ **CES Fuel Suitability**____ **Hydro-scout**____
Chlor-d-tect____ **Color**____ **Chlor-n-oil**____
Water by Distillation____ **Water Extractability**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide____ **Specific Gravity**____ **Sulfides**____
Percent Sodium Hydroxide____ **Chlorides**____ **Sodium**____
Percent Solids by Centrifuge____ **Oil by Centrifuge**____ **TOC**____
Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0808-04 **Date:** 8/6/08

CES Sales Representative: today

Requested Turnaround / Completion Date: Jon

Customer Name: Noltex

Generator Name and Location: Noltex waste Organics

Ultimate Objective for Performing Analysis: ~~Recycle Stream into Vinyl Acetate~~ heavy stream & methanol/heavy stream

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
flow of methanol & VA w/ intermediate products from EVOH manufacturing

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

VA	/	H_2O	/
Methyl Methacrylate	/		/
methanol	/		/
EVOH	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) extract VA layer by method previous (attached) and provide sample of recovered VA stream to Kim to market.
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Needs to be representative of what we could feasible extract here when recycling the stream.

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0806-02 **Date:** 8-4-08

CES Sales Representative: Ken

Requested Turnaround / Completion Date: 8-4-08

Customer Name: Specialized Decommission

Generator Name and Location: Louisiana Crane Houston, TX

Ultimate Objective for Performing Analysis: Bring in as oily water, Separate oil and put with black oil, treat water for discharge

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Decommissioned Burnt of Transformer HEAT TO PHASE OUT OIL BETTER - EASY TREAT..

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

1-5% OIL	____/____
95-99% WATER	____/____
____/____	____/____
____/____	____/____
____/____	____/____

TOC - 26.35 x 50 = 1318

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)** ✓ 300	**pH** ~ 8
Phenols ~ 0	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)** ✓	**Centrifuge Test**____

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Cd .064
Cr .104
Cu .610
Ni 1.824
Zn .216

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0710-04 **Date:** 7/29/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: today

Customer Name: Rada Technologies

Generator Name and Location: Green Hunter

Ultimate Objective for Performing Analysis: disposal profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Sulfuric Acid with toluene compound contamination

Provide a detailed Composition to the best of your knowledge: TOC = 74,950

Component / Approximate Percentage or PPM:

H_2SO_4	/ originally 96%		/
toluene compounds	500 gal		/
	/		/
	/		/

DOESN'T TREAT

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids ___	Percent Oil ___
Specific Gravity X	Chlor-d-tect (oil phase) ___	pH X -0
Phenols ___	Oil and Grease (water phase) ___	TOC ___
Distillation Test ___	Metals ___	Flash ___
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0707-50 **Date:** 7-30-07

CES Sales Representative: Brackman 7/30/08

Requested Turnaround / Completion Date: _____ PPJ 1531

Customer Name: Houston Marine DOC# 69302

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Determine if material can be filtered

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

DAF Sludge

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

[redacted]	/	Ray Layer	/ 2-5%
Oil	/ 1-3%		/
Sludge	/ 15-20%		/
water	/ 60-80%		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-57 **Date:** 7/31/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: today

Customer Name: Preston Env. PRESTON ENVIRONMENTAL

Generator Name and Location:

Ultimate Objective for Performing Analysis: Pricing (Buy)

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Biodiesel fatty acids flushed w/ Methanol

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Biodiesel fatty acids	/	/	/
Methanol	/	/	/
/	/	/	/
/	/	/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability X NO	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash X < 90°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) Please allow to set w/Black Oil for 2 hrs min to check for any phasing out of glycerin.
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-45 **Date:** 7/29/08

CES Sales Representative: JM

Requested Turnaround / Completion Date: Standard

Customer Name: Green Hunter

Generator Name and Location: "

Ultimate Objective for Performing Analysis: pricing (purchase)

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Distillate Bottoms from Biodiesel plant

CRUCIBLE TARE 54.1961
" + 5X 57.9167
" + ASH 54.2099

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

ASH- .0130 = 0.37
3.72%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X = 0.37	Black Oil Suitability X OK	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash X >140 F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

~~H2O~~ 14990
~~TOC~~ 74950

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-43 **Date:** 7/28/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Tues - Am

Customer Name: Rada Tech.

Generator Name and Location: Green Earth Fuels

Ultimate Objective for Performing Analysis: pricing / probe

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
60,000gal of ww fr. Biodiesel plant:
TREATS TO FORM FINE SOLIDS THAT ARE SLOW TO PHASE SEPARATE.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Methanol	/ <24%	Oil - 2%	/
Glycerin	/		/
Water	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** - 6
Phenols____ - 0	**Oil and Grease (water phase)**___	**TOC** 68,350 ppm
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd .013
Cr .408
Cu .282
Ni 1.864
Zn 1.774

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-42 **Date:** 7/26/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Mon-AM

Customer Name: Rada Tech.

Generator Name and Location: Green Earth

Ultimate Objective for Performing Analysis: pricing & profile approval

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

ammonia wtr generated from Biodiesel plant

Ammonia Quick Test ~ 60 ppm

Provide a detailed Composition to the best of your knowledge: TREATS OK

Component / Approximate Percentage or PPM:

Ammonia	2500 ppm		
Water	balance		

Cd .080
Cr .295
Cu .115
Ni .319
Zn .120

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X ok	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ~ 11
Phenols ~ 0	Oil and Grease (water phase)___	TOC ~ 1750
Distillation Test____	Metals____	Flash >145°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-40 **Date:** 7-23-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: _____

Customer Name: Champion Technologies
Generator Name and Location: Odessa
Ultimate Objective for Performing Analysis: ww treat at CES (hazardous wastewater), carries D001 code

avg 2 1/2 trucks per month

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Vessel washouts. This is primarily a blending plant which receives its feedstock from the Fresno Plant so the chemistry is mostly the same. They do some neutralizations with NH3 (anhydrous) and SO2 (anhydrous).

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM: traces of hydrocarbons

Water/90%	heavy aromatic natptha/<1%
Xylene/<1% toluene slight	_____/_____
~~trimethylbenzene~~/<5%	_____/_____
napthalene/<1% methanol	_____/_____
formaldehyde/<1%	_____/_____

See attached analytical

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**X
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**_____	**Flash**X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-36 **Date:** 7/21/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Tues - afternoon

Customer Name: Triple B

Generator Name and Location:

Ultimate Objective for Performing Analysis: Profile & price

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Molasses Spill

FP- 125-130 °F

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Molasses	/		/
Water	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids	Percent Oil
Specific Gravity	Chlor-d-tect (oil phase)	pH
Phenols	Oil and Grease (water phase)	TOC
Distillation Test	Metals	Flash
GC/MS	Chlor-n-oil (oil phase)	Centrifuge Test

Other Internal Analysis (List)
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash	Black Oil Suitability	Viscosity
Specific Gravity	Light End Suitability	Distillation Test
Flash	CES Fuel Suitability	Hydro-scout
Chlor-d-tect	Color	Chlor-n-oil
Water by Distillation	Water Extractability	

Other Internal Analysis (List)
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide	Specific Gravity	Sulfides
Percent Sodium Hydroxide	Chlorides	Sodium
Percent Solids by Centrifuge	Oil by Centrifuge	TOC

Other Internal Lab Analysis (List)
Off-site Lab Analysis (List)
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-32 **Date:** 7/15/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Green Hunter Biofuels

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

CRUCIBLE 56.5237
+SX 60.1723 40
+ASH 56.5334 .0097
ASH = .266 3.6503

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

H_2O 1.4% DEAD STOCK
API-23
VISC = 34.4 cSt.
FP > 140°F

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	Percent Solids_____	Percent Oil_____
Specific Gravity_____	Chlor-d-tect (oil phase)_____	pH_____
Phenols_____	Oil and Grease (water phase)_____	TOC_____
Distillation Test_____	Metals_____	Flash_____
GC/MS_____	Chlor-n-oil (oil phase)_____	Centrifuge Test_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

2:21 @ 10
2:26:37

Ash_____	Black Oil Suitability X - OK	Viscosity X
Specific Gravity X	Light End Suitability_____	Distillation Test_____ 327 SSU.
Flash X	CES Fuel Suitability_____	Hydro-scout_____
Chlor-d-tect_____	Color_____	Chlor-n-oil_____
Water by Distillation_____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	Specific Gravity_____	Sulfides_____
Percent Sodium Hydroxide_____	Chlorides_____	Sodium_____
Percent Solids by Centrifuge_____	Oil by Centrifuge_____	TOC_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-25 Date: 7-10-08

CES Sales Representative: Dana C

Requested Turnaround / Completion Date: ASAP (Need by Fri 7-11)

Customer Name: KSOW

Generator Name and Location: KSOW - Channelview

Ultimate Objective for Performing Analysis: ~~for~~ WW treat / recycle

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Plant water

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

PH-8 FP-80°F

TOC-4,700

1213 ON TREATED H2O 0708-26

7 / _____ _____ / _____

_____ / _____ _____ / _____

_____ / _____ _____ / _____

_____ / _____ _____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil X
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X
Phenols____	Oil and Grease (water phase) X	TOC X
Distillation Test____	Metals X	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

0708-26

Cd .094

Cr .097

Cu .035

Ni .223

Zn .104

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CL

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-26 **Date:** 7-10-08

CES Sales Representative: DMaC

Requested Turnaround / Completion Date: ASAP Need by Fri 7-11

Customer Name: KSOW

Generator Name and Location: KSOW - Channelview

Ultimate Objective for Performing Analysis: Wastreat

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

dock water from barge stripping operations

Provide a detailed Composition to the best of your knowledge:

PH - 7 FP > 140 °F

TOC - 1343 (1213)

Component / Approximate Percentage or PPM:

	/		/
1.	/		/
	/		/
	/		/

PHENOLS - 0

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids X	Percent Oil X
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X
Phenols X	Oil and Grease (water phase)____	TOC X
Distillation Test____	Metals X	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-29 **Date:** 7/14/2008

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Right now

Customer Name: Rada Technologies

Generator Name and Location: Green Hunter Biofuels

Ultimate Objective for Performing Analysis: profile

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Water from Biodiesel production pH - 11 TOC - 1708

Provide a detailed Composition to the best of your knowledge: PHENOLS - 0
Component / Approximate Percentage or PPM:

Water /_____		_____/_____	
Biodiesel /_____		_____/_____	Cd .076
_____/_____		_____/_____	Cr .056
_____/_____		_____/_____	Cu - .095
_____/_____		_____/_____	Ni .173

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge: Zn - .071

Wastewater Treatability X	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 071003 Date: 7/10

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Phoenix Pollution Contr

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Water w/ trace methanol

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water / _____
methanol / ppm
_____ / _____
_____ / _____

_____ / _____
_____ / _____
_____ / _____
_____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH 5
Phenols____	Oil and Grease (water phase)____	TOC 61300ppm
Distillation Test X	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) flash (should be >140)

Off-site Lab Analysis (List) (100-105)

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 071004 Date: 7/10

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Phoenix Poll. Control

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Customer wants Sell. Can buy?

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

96% H_2SO_4

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

H_2SO_4 / 96%		_____ / _____	
_____ / _____		_____ / _____	
Water / 4%		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-57 **Date:** 7/7/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: 7/8/08

Customer Name: Phoenix

Generator Name and Location: Green Hunter

Ultimate Objective for Performing Analysis: Need density of material

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

~16 lb/gal

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____ 1.71 < 63
Note: Must have an approved P.O. for any external lab analysis 370 mls

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity X	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-16 **Date:** 7/7/08

CES Sales Representative: Jon

Requested Turnaround / Completion Date: 7/8/08

Customer Name: EMA

Generator Name and Location: Aerobil

Ultimate Objective for Performing Analysis: profile & pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

see profile attached

HEAT + ACID TREAT -

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids ≥ 16 %	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols ~ 1 ppm	Oil and Grease (water phase)____	TOC ~ 15,305
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd .047
Cr .041
Cu .495

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Ni 3.024

Ash____	Black Oil Suitability____	Viscosity____ Zn 1.277
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

PRICING- TOC .16
SOLIDS .15
HEAT .02
ACID .01
.34

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: Aerofil Technology Inc
Address: 225 Industrial PARK DRIVE
City: Sullivan State: Mo Zip: 63080
Contact: WADE GRICE - ENV. Mgr. Title: 573-468-5557
Phone Number: 573-468-5557 Fax Number: 573-468-5556
24/hr Phone Number: Same
US EPA ID No: MoD981722762
State ID No: 010753 SIC Code: 2899

SECTION 2: Billing Information - ☐ Same as Above

Company: EMA
Address: 10627 MIDWEST IND Blvd.
City: St Louis State: Mo Zip: 63132
Contact: Maria Tumbarello Title: office Mgr.
Phone Number: 314-785-6425 Fax Number: 314-785-6426

SECTION 3: General Description of the Waste

Name of Waste: WASTE WATER
Detailed Description of Process Generating Waste:
Line flush in tolling operation

Physical State: ☒ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: Dirty White Odor: organic

Specific Gravity (water=1): 8.2 to 8.32 Density: _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☒ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☒ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☒ No
Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☒ Single-phase ☐ Multi-phase

Container Type: ☐ Drum ☐ Tote ☒ Truck ☐ Other (explain)

Frequency: ☒ Weekly ☐ Monthly ☐ Yearly ☐ One-Time
Quantity: 5000 gallons per week

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☒ Yes ☐ No
If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☒ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☒ Yes ☐ No
If "Yes", then please list ALL applicable codes: F003

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☒ No
If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number:

Proper US DOT Shipping Name: Flammable Liquid, N.O.S. (Acetone, Hexane)
Class: 3 **UN/NA:** UN1993 **PG:** II **RQ:**

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
73 - 140	7 to 9	0 mg/l	0 mg/l	<2 %
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
0 mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Water	80 - 95	
Acetone	10 - 1	
Isopropyl Alcohol	4 - 1	
Hexane	4 - 1	

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

None

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. attached

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

None

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals:
TCLP Volatiles:
TCLP Semi-Volatiles:
Reactivity:
Corrosivity:
Ignitability:

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☐ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory*: *Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: [signature] **Date:** 5/16/08

Printed Name/Title: Timothy J. Hylla, V.P.

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

WASTE DISPOSAL SERVICE AGREEMENT
ARKLA DISPOSAL SERVICES, INC.

Date: 2-2-06

Profile Number: H06011830MO

Bill To: Environmental Management Alternatives
10627 Midwest Ind. Blvd.
St. Louis, MO 63132

Generator: Aerofil Technology Inc.
225 Industrial Park Dr.
Sullivan, MO 63080

1. **Waste Stream -** Waste water from line flushes in toll mfg. operation. Waste consistent with the following allowable waste parameters shall be deemed acceptable under this Agreement:

Phases / Layers	Single
pH	7 - 9
Specific Gravity	8.2 to 8.32
Color	Dirty white / dark green
Flash Point	73 - 140 degrees
Total Solids by Volume	Less than 2%
Water	80 - 95%
Acetone	1 – 6%
Isopropyl alcohol	1 – 3%
Hexane	1 – 3%

2. **Transportation** – Customer agrees to provide for the transportation of this waste stream to Arkla Disposal Services, Inc., 10845 Hwy. 1 South, Shreveport, La. At its own cost. Arkla shall have the right to reject access of such equipment to its facility if, in Arkla's opinion, the equipment is not safe or suitable for the transportation of customer's waste material. Transporters shall provide Arkla Disposal Services, Inc. with a certificate of insurance prior to arrival on site. Arkla reserves the right to request a driver to leave its facility who demonstrates reckless and unsafe driving practices or unacceptable behavior.

   Customer shall schedule incoming loads with Arkla Disposal at least 24 hours in advance. Each load must be properly manifested.

3. **Waste Codes** – D001, F003

4. **Volumes** – 5,000 gallons per week

EPAHO113000169

Profile Number H06011830MO
Aerofil Technology

5. **Pricing –**

   Processing — $ 0.30 per gallon base price to include up to 2% solids by volume

   Solids Surcharge — A composite sample will be obtained to determine the solids by volume. If the solids by volume level is in excess of 2.0%, a surcharge of $ .07 per gallon for each 1% over the base allowance of 2% will be billed.

   Taxes/Fees — Generator is responsible for any taxes/fees levied by the state of origination.

6. **Minimum Load -** $ 500.00

7. **Rejected Load -** $ 350.00 handling charge.

8. **Washout Fee -** Driver may rinse out trailer at $100.00 / 15 minutes – customer's option. (With no solids heel. Solids/sludges will be priced case-by-case.)

9. **Terms of Payment** – Net 30 days from date of invoice. One and one-half percent (1 ½%) per month service charge will be applied on all past due balances.

   Arkla Disposal Services, Inc. reserves the right to change the above rates with 30 days prior written notice. Further, Arkla Disposal Services, Inc. reserves the right to invoice customer any applicable taxes and/or fees that may be levied during and/or retroactively applied to the term of this agreement.

---

10. **Term of Agreement** – The term of this agreement shall be for a period of one (1) year from the effective date.

11. **Authorization of Services –**

EMA

By _____ **Date** 2/4/06

On behalf of EMA INC.

ARKLA Disposal Services, Inc.

By _____ **Date** _____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-17 **Date:** 7/7/08

CES Sales Representative: JDy

Requested Turnaround / Completion Date: std

Customer Name: EMA

Generator Name and Location: InChem

Ultimate Objective for Performing Analysis: ~~Spent Sulfidic Caustic~~ caustic program acceptance

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Spent sulfidic caustic

Provide a detailed Composition to the best of your knowledge: % NaOH, wt% = 6.0

Component / Approximate Percentage or PPM:

See MSDS	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List) Std Caustic eval

Off-site Lab Analysis (List) std for caustic program (sulfide, chlorides, etc.)

Note: Must have an approved P.O. for any external lab analysis

EPAHO113000171

Section 1 – Chemical Product and Company Identification

MSDS Name: Sodium Hydroxide Process Water

Company: Optima Chemicals Group, LLC
200 Willacoochee Hwy.
Douglas, Georgia 31533
Telephone (912) 384-5101 FAX (912) 384-6330
Emergencies: Telephone (912) 384-5101

Section 2 – Composition, Information on Ingredients

CAS #	Chemical Name	%	OSHA-PEL
1310-73-2	Sodium Hydroxide	10 - 20	2 mg/cu. m
64-17-5	Ethanol	2 – 8	1000 ppm
NA	Yeast Cells (Dead)	15 – 20	N/A
7732-18-5	Water	65 – 85	N/A

Section 3 – Hazards Identification

Hazards: Harmful if swallowed, Highly irritating to eyes, skin, respiratory system

Hazard Symbols: Xi Risk Phrases: 36/37/38

NFPA Rating: Health: 1 Flammability: 2 Reactivity: 0

Section 4 – First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, lifting upper and lower lids. Seek medical attention.

Skin: Flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing.

Ingestion: Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure, to fresh air immediately. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Section 5 – Fire Fighting Measures

Fire Extinguishing Agents Recommended: Water Fog, CO2, dry chemical powder, or appropriate foam.

Fire Extinguishing Agents to Avoid: None

Special Fire fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire and Explosion Hazards: May emit irritating fumes under fire conditions.

Section 6 – Accidental Release Measures

Large Spills: Contain the spill, wet the material with a light water spray, and place into appropriate containers for disposal.

Small Spills: Contain the spill, wet the material with a light water spray, and place into appropriate containers for disposal.

Disposal should be done only through an approved waste disposal facility.

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, or mist. Avoid contact with skin and eyes.

Storage: Store away from acidic materials.

Section 8 – Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Eyes: Wear appropriate protective chemical goggles.

Skin: Wear appropriate protective clothing and gloves to prevent skin exposure.

Respiratory: Wear NIOSH/MSHA approved respirator.

Section 9 – Physical and Chemical Properties

Appearance and Odor: Brownish liquid with sewage-like odor

Section 311/312 Inventory reporting hazard categories: Acute

Section 313 Release reporting: Not required

Reportable Quantity: Sodium Hydroxide has an RQ of 1,000 lbs.

Section 16 – Additional Information

Creation Date: 5/10/04 Revised: 4/9/08

This information is believed to be accurate and represents the best information currently available to Optima Chemicals, Incorporated. However, we make no warranty of merchantability, express or implied, with respect to such information and assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

Melting Point: N/A

Boiling Point: Unkown

Flash Point: 90 – 125 degrees F

Vapor Pressure: N/A

Specific Gravity: ~1.3

pH: >11

Water Solubility: N/A

Section 10 – Stability and Reactivity

Stability: stable under normal handling conditions.

Incompatibility: Avoid strong acids.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: None expected.

Conditions to Avoid: Acids, Strong oxidizing agents.

Section 11 – Toxicological Information

Acute Toxicity: Highly irritating to the eyes and skin.

Chronic Toxicity: Not listed as a Carcinogen by ACGIH, IARC, NIOSH, NTP, or OSHA.

Section 12 – Ecological Information

No information available.

Section 13 – Disposal Considerations

This material must be disposed of in accordance with federal, state, and local regulations.

Section 14 – Transport Information

DOT Shipping Name: Corrosive Liquid, N.O.S. (contains Sodium Hydroxide and Ethanol), 8, UN 2920, PG II

Section 15 – Regulatory Information

TSCA: Not listed on inventory, each component is listed separately on TSCA.

SARA Title III Reporting Requirements:

CES Environmental Services, Inc.

Retain Sample for Possible 3rd Party Analysis

CES SAMPLE EVALUATION FORM

Sample ID # 0708-14 **Date:** 07/07/08

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: ASAP

Customer Name: One Source TK 116

Generator Name and Location: Liberty TX

Ultimate Objective for Performing Analysis: Treatability / Disposal Cost
Disposal Application

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Spill from Drilling Additive Manufacturing Company w/ Rain water.

Provide a detailed Composition to the best of your knowledge:
Slow to phase separate. Fine particulates
H2O is cloudy - NH3 odor

Component / Approximate Percentage or PPM:

Unknown Drilling Add	25-50%		
water (Rain)	50-75%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X ~8
Phenols X ~ 1 ppm	Oil and Grease (water phase)___	TOC X ~9700
Distillation Test____	Metals X	Flash X >140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd .236
Cr .918
Cu .780
Ni 1.945
Zn 7.3

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

Retain Sample for Possible 3rd Party Analysis.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-15 **Date:** 07/07/08

CES Sales Representative: Dan Bourne

Requested Turnaround / Completion Date: ASAP

Customer Name: One Source TK118

Generator Name and Location: Liberty TX

Ultimate Objective for Performing Analysis: Treatability / Disposal Cost Disposal Application

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Spill from Drilling additive Manufacturing Company w/ rain water

VERY SLOW TO DRAIN SEPARATES. FINE PARTICULATES. H2O is cloudy. NH3 odor

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Unknown Drilling Mud	25-50%		
water Rain	50-75%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids ___	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH X - 9
Phenols X 1 - ppm	Oil and Grease (water phase) ___	TOC X - 2963
Distillation Test ___	Metals X	Flash X > 140
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Cd .182
Cr .218
Cu 0.274
Ni 1.746
Zn 5.9

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

WERE NOT TAKING THIS.

Sample ID # 0708-11 **Date:** 7-2-08

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: ASAP

Customer Name: S&B Engineering
Generator Name and Location: BTX Oil/Flex Oil
Ultimate Objective for Performing Analysis: recycle materail

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
aeromatic naptha with waste motor oil from cleaning flash tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

aeromatic naptha/_____	_____/_____
motor oil/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash X - 120°F	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-07 **Date:** 7-1-08

CES Sales Representative: Brandeman

Requested Turnaround / Completion Date: ASAP (Rush)

Customer Name: Midstate ~~[illegible]~~ Environmental

Generator Name and Location: WACO

Ultimate Objective for Performing Analysis: Recycle / Disposal / Oil / Solids

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

~~Off Spec Viscosity improver~~

~~used~~ tank bottoms

used oil tanks

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

~~[illegible]~~			
water	20-80		
oil	5-10		
sludge	20-30		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) > 4000	pH ✓
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase) ✓	Centrifuge Test ✓

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0708-04 **Date:** 7/1/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: MTI

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: purchase price ??

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Off Spec / out of date biodiesel

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability_X_	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

1 load

Sample ID # 0708-03 **Date:** 7/11/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: today

Customer Name: Triple B Industrial

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: profile / prove

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

spilled grain from barge small amt of oil spilled in rainwater

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-54 **Date:** 6/27/08

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: Solvay
Generator Name and Location: Solvay
Ultimate Objective for Performing Analysis: pricing & profile

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
neutralized wastewater from cleaning of tank with nitric, small amountof HF, and caustic

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

PH-7
EASY TREAT - NICE SOLIDS FORMATION AND WATER SEPARATION
PHENOLS- 0
TOC- 1275

Water/_____	_____/_____
HF/ppm range	_____/_____
caustic/_____	_____/_____
nitric acid/_____	_____/_____
_____/_____	_____/_____

Cd .032
Cr .067
Cu .210
Ni 2.113
Zn .041

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatabilityx	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

42g H_2O } CALC. % FROM TANK DATA
69g Oil } ~ 62% OIL

Sample ID # 0608-52 **Date:** 6/26/08

CES Sales Representative: Joy
Requested Turnaround / Completion Date: Monday morning

Customer Name: Phoenix Pollution Control
Generator Name and Location: Green Hunter Biofuels
Ultimate Objective for Performing Analysis: profile/water acceptance & pricing

YOU HAVE TO BOIL THIS SX TO GET THE OIL TO PHASE OUT + H_2SO_4 + EMULSION BREAKER.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Gums from Canola oil feedstock & water in manufacturing of biodiesel

pH ~ 10 - NEAT
PHENOLS - 0 (TREATED WW)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/____ VISC - 10:38:00 ____/____
Oil/____ 10:42:08 ____/____
Gums/____ ____/____
____/____ 248 SECS .10475 ____/____
____/____ 26 cSt @ 40°C ____/____

TOC - 2557 PPM TREATED
CRUCIBLE - 56.4699
+ SX 60.3901 .0005
+ ASH 56.4704 3.9202

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:
Wastewater Treatabilityx **Percent Solids**____ **Percent Oil**x
Specific Gravity____ **Chlor-d-tect (oil phase)**____ **pH**____
Phenols____ **Oil and Grease (water phase)**____ **TOC**____
Distillation Test____ **Metals**____ **Flash**____
GC/MS____ **Chlor-n-oil (oil phase)**____ **Centrifuge Test**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

ASH = 0.01 wt%
API - 24

Cd .068
Cr .072
Cu .134
Ni 3.788
Zn .241

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash____ **Black Oil Suitability**____ **Viscosity**____
Specific Gravity____ **Light End Suitability**____ **Distillation Test**____
Flash____ **CES Fuel Suitability**____ **Hydro-scout**____
Chlor-d-tect____ **Color**____ **Chlor-n-oil**____
Water by Distillation____ **Water Extractability**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CHLOR-D-TECT - 500

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide____ **Specific Gravity**____ **Sulfides**____
Percent Sodium Hydroxide____ **Chlorides**____ **Sodium**____
Percent Solids by Centrifuge____ **Oil by Centrifuge**____ **TOC**____
Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-5D **Date:** 6-24-08

CES Sales Representative: Joe Wilson

Requested Turnaround / Completion Date: _____

Customer Name: Grant-Prideco Navasota - Trepanning Oil

Generator Name and Location: " "

Ultimate Objective for Performing Analysis: treatment / recycle

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
oily sludge from trepanning pit cleanout

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids ✓	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals ✓	Flash____
GC/MS____	Chlor-n-oil (oil phase) ✓	Centrifuge Test ✓

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 060831 Date: 6-24-08

CES Sales Representative: Joe Wilson

Requested Turnaround / Completion Date: _____

Customer Name: Grant-Prideco Nauvsota – Trepanning coolant

Generator Name and Location: " "

Ultimate Objective for Performing Analysis: Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
waste water & coolant from trepanning pit clean out

FP - >140°F
PH - 7

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols____	Oil and Grease (water phase) ✓	TOC ✓
Distillation Test____	Metals ✓	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 2008-49 **Date:** 6/24/08

CES Sales Representative: Kelli / Dan

Requested Turnaround / Completion Date: _____

Customer Name: Heritage Interactive

Generator Name and Location: Ball Corp - Used oil from making cans

Ultimate Objective for Performing Analysis: Determine if can go into black oil or to base oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Used oil from making cans → Slight fuel can break it from the water

56 Test for flash, ash, + water. ~~Should we test for~~

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM: ~~Same as can~~ → Check % + ppm

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* NOTE THAT SAMPLE WAS PULLED BY CUSTOMER

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Be sure it might clear up if we heat it

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____ .1556	

CRUCIBLE 43.6285
+5% 46.7840
+ASH 43.6304

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____ .0019 / 3.1555 = .060
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

CHLOR-D-TECT 500

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

SG - API - 30
FP - >140°F
ASH - .060
H2O - @ 1142 ppm

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-47 **Date:** 6/23/08

CES Sales Representative: Kevin

Requested Turnaround / Completion Date: _____

Customer Name: ZACH

Generator Name and Location: ~~La Porte~~ ZACH Systems La Porte

Ultimate Objective for Performing Analysis: What to do with this stream

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~Head~~ Used to create phasm. - Should be 5101 MTBE to MeOH has traces of DMADC

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

D - EXTRACTED SX - 0.7986
D - NEAT SX - .8045

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-46 **Date:** 6/19/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: Rineco
Generator Name and Location: NuStar
Ultimate Objective for Performing Analysis: pricing/profile

FP > 140°F

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
oily rinse water from tank

pH - 7

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/_____	Cd .030	_____/_____	SOLIDS - 5%
Water/_____	Cr .008	_____/_____	PHENOLS - 0
solids/_____	Cu .099	_____/_____	TREATS EASILY -
_____/_____	Ni .512	_____/_____	SOME TYPE OF OIL ON TOP -
_____/_____	Zn .023	_____/_____	NOT A SHEEN - BUT A PARTIAL SHEEN

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: TOC - 2251 - (TREATED H2O)

Wastewater Treatabilityx	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 06-0843 Date: 6-18-08

CES Sales Representative: Brauchmay

Requested Turnaround / Completion Date: ASAP

Customer Name: Valero - Houston

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Paper Bills

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Note: Samples represent Top, Middle, Bottom
Run Test out as Composite.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Sulfidic	/	/	
caustic	/ 100%	/	
/		/	
/		/	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 06-0842 Date: 6-18-08

CES Sales Representative: Brueckman

Requested Turnaround / Completion Date: ASAP

Customer Name: Martin Transport

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Resale

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Line Flush Oil & Gear Lube.

Provide a detailed Composition to the best of your knowledge:
Component/ Approximate Percentage or PPM:

Unused oil / Gear Lube 100%			

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-40 **Date:** 6/16/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: Rineco
Generator Name and Location: mop water
Ultimate Objective for Performing Analysis: pricing/profile
____

~ 5000 gal
TRENS ok

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
mop water/oily water from rinsing oil tanks

PH - 7
PHENOLS - 0

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/90-100%	____/____
oil/0-10%	____/____
____/____	____/____
____/____	____/____
____/____	____/____

SOLIDS - TRACE-0.1
TOC - 1475

Cd .104
Cr .173
Cu .222
Ni 1.006
Zn .112

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatabilityx	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

FP - >140°F

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-39 **Date:** 6-16-08

CES Sales Representative: Brauckman

Requested Turnaround / Completion Date: ASAP

Customer Name: Citgo Corpus christi - East Plant

Generator Name and Location:

Ultimate Objective for Performing Analysis: paper mills

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

DARK BROWN

Provide a detailed Composition to the best of your knowledge: 56 - 1,050

Component / Approximate Percentage or PPM: NaOH = 3,102

/	RSH - 0 /
/	/
/	S - 0 /
/	/

PH - 12.2

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-38 Date: 6-16-08

CES Sales Representative: Brandman

Requested Turnaround / Completion Date: ASAP

Customer Name: Citgo - Corpus Christi - W. Plant

Generator Name and Location: CC, TX

Ultimate Objective for Performing Analysis: paper mills.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

production of gasoline

DARK GREEN

S= - 0 56 - 1.115

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

RSH - 0.633

NaOH = 7.755

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-37 Date: 6-16-08

CES Sales Representative: Brackman

Requested Turnaround / Completion Date: ASAP

Customer Name: Mid States Env.

Generator Name and Location: Rossford

Ultimate Objective for Performing Analysis: Beneficial use as Bleach Substitute

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Dilute material - no longer useable (25.89 as NaOCl)

Provide a detailed Composition to the best of your knowledge: ACTIVE Cl- 43.5 %

Component / Approximate Percentage or PPM:

Bleach	5.25	BUT NO REAL BLEACHING POWER IT DOES BLEACH BUT IT TAKES A LOT!!!	PHENOLS
water	80-95		

8-10.05

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____ UNTREATED TREAT
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd .553
Cr 0436
Cu .289
Ni 2.995

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____ Zn 0146
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

now
NaOCl - 74.5
$NaClO_2$ - 90.5

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # (06-13-08) 0608-34 & (6-12-08) 0608-35 **Date:** 6-13-08

CES Sales Representative: Dana C

Requested Turnaround / Completion Date: ASAP

Customer Name: Targa

Generator Name and Location: Targa LSNG Caustic with ammonia

Ultimate Objective for Performing Analysis: evaluate sample for caustic recycling - ammonia is almost out of the stream

Done by Gary Peterson

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Sodium Sulfide Hydroxide Solution/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**X	**Sulfides**X
Percent Sodium HydroxideX	**Chlorides**_____	**Sodium**X
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)ammonia

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-26 **Date:** 6/10/08

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: CKG MAGNOLIA CKG MAGNOLIA

Generator Name and Location: MAGNOLIA COUNTY COUNTY

Ultimate Objective for Performing Analysis: TREAT

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X 1700	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)___	Centrifuge Test____

Other Internal Analysis (List) FEASIBILITY OF MARKETS
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash X 7140	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-25 **Date:** 6/10/08

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: ASAP

Customer Name: Flow Tech

Generator Name and Location: Waller TX

Ultimate Objective for Performing Analysis: Treat Waste

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge: Tote #3 < 75%

Component / Approximate Percentage or PPM: Tote 15, < 80%

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
~~Specific Gravity~~____	Light End Suitability____	Distillation Test____
Flash X	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-23 **Date:** 6/16/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: NC Precision
Generator Name and Location: NC Precision
Ultimate Objective for Performing Analysis: pricing/profile
_____ ~ 4 DRUMS

TREATS OIL -

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
spent glycol & oil from machining operations pH · 8

Provide a detailed Composition to the best of your knowledge: CHLOR-D-TECT ON OIL > 4000 mg/L
Component / Approximate Percentage or PPM:

hydraulic oil/10-30%	_____/_____
glycol/70-90%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)glycol suitability
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-18 **Date:** 9/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: EMA
Generator Name and Location: Virbacus
Ultimate Objective for Performing Analysis: pricing/quote

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
see attached profile & analytical

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Flash < 90°F

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatabilityx	**Percent Solids** 0.5	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** 7
Phenols – 0	**Oil and Grease (water phase)**____	**TOC** – 35,260
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Cd .024
Cr .049
Cu .448
Ni .064
Zn .017

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

DIST. ON BTMS

%	OH
IBP	79
10	79
20	79.5
40	80
50	80
60	80
70	80.5
75	81.5

Sample ID # 0608-17 **Date:** 9/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: std

Customer Name: EMA ENVIRONMENTAL MGMT ALTERNATIVES A FINE MIST IN COLUMN
Generator Name and Location: Speer Products
Ultimate Objective for Performing Analysis: pricing/quote

PRODUCT DOESN'T SMELL LIKE IPA - SMELLS LIKE TOP LAYER. 76 - 80.5, SMOKE POINT

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
see attached profile & msdsl

2 PHASED SX. - TOP IS H_2O INSOLUBLE - H_2O SOLUBLE BTM - BUT TURNS H_2O MILKY.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

____/____	____/____
____/____	____/____ D-(BTM) = 0.795 (D-IPA = .786)
____/____	____/____
____/____	____/____ D (TOP) = 0.781
____/____	____/____ TOP MIXES W/ LT ENDS.

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-13 Date: 6/5/08

CES Sales Representative: MATT BROWN

Requested Turnaround / Completion Date: ASAP

Customer Name: ENTERPRISE

Generator Name and Location: BAYTOWN (WADE RD.)

Ultimate Objective for Performing Analysis: TREAT WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
ALL LIQUIDS PRODUCED @ PLANT

Provide a detailed Composition to the best of your knowledge: D-6245

Component / Approximate Percentage or PPM:

LIQUID / 100%	%NaOH - 8.83, WT% = 5.08 Na
/	S= - 7.03 / 8.2
/	BSA - .46 / 0.8
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH - 6
Phenols____	Oil and Grease (water phase)___	TOC - 23480
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

NH_4OH – 2 x 500 mL
50% NaOH

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-11 **Date:** 6-4-08

CES Sales Representative: J. Wilson

Requested Turnaround / Completion Date: _____

Customer Name: Grant Prideco Navasota

Generator Name and Location: Grant Prideco Navasota

Ultimate Objective for Performing Analysis: treatment oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
used oil from various equipment

Provide a detailed Composition to the best of your knowledge: % H_2O - 0.018
Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

SG - 0.876

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids ✓	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH____
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓ >145
GC/MS____	Chlor-n-oil (oil phase) ✓ <100	Centrifuge Test____

API - 30.0

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Good Base Oil

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: 3,500 mmbtu

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

7.24 lb/GAL

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-07 **Date:** 6-4-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Weatherford-Pinemont

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Black oil suitability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Potassium Formate solution used as final cleaning of pipelines

Provide a detailed Composition to the best of your knowledge: NOT SOLUBLE IN BLACK OIL

Component / Approximate Percentage or PPM:

Potassium Formate	60-80%		/
oil	0-2%		/
water.	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation✓	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-12 **Date:** 6/4/08

CES Sales Representative: J. Wilson

Requested Turnaround / Completion Date: _____

Customer Name: Grant Prideco Navasota

Generator Name and Location: Grant Prideco Navasota

Ultimate Objective for Performing Analysis: treatment wastewater

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
water from upset machine. used to cool down pipe

Provide a detailed Composition to the best of your knowledge: WATER TREAT PRODUCES LOTS OF SOLIDS BUT CLEANLY SEPARATES

Component / Approximate Percentage or PPM:

water	70-100 %		
oil	0-30 %		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: 26 ml/1000 = 2.6%

Wastewater Treatability ✓	**Percent Solids** ✓ 0.5	**Percent Oil** ✓
Specific Gravity ____	**Chlor-d-tect (oil phase)** ____	**pH** ✓ - 8
Phenols ✓ - 0	**Oil and Grease (water phase)** ✓	**TOC** ✓ - 11,110
Distillation Test ____	**Metals** ✓	**Flash** ____
GC/MS ____	**Chlor-n-oil (oil phase)** ____	**Centrifuge Test** ____

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Cd .094
Cr .186
Cu .148
Ni .440
Zn .079

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ____	**Black Oil Suitability** ____	**Viscosity** ____
Specific Gravity ____	**Light End Suitability** ____	**Distillation Test** ____
Flash ____	**CES Fuel Suitability** ____	**Hydro-scout** ____
Chlor-d-tect ____	**Color** ____	**Chlor-n-oil** ____
Water by Distillation ____	**Water Extractability** ____	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

1 LOAD/WEEK
5000 gal

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	**Specific Gravity** ____	**Sulfides** ____
Percent Sodium Hydroxide ____	**Chlorides** ____	**Sodium** ____
Percent Solids by Centrifuge ____	**Oil by Centrifuge** ____	**TOC** ____

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0608-1D **Date:** 6-4-08

CES Sales Representative: Dan Bowman (Erik Duke)
Requested Turnaround / Completion Date: 281-960-7889

Customer Name: Atlantic Industrial Services
Generator Name and Location: Atlantic Industrial Services 11953 FM 529
Ultimate Objective for Performing Analysis: seperate oil & water Houston TX 77041

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
recycling of Antifreeze. This is the residual oil that comes in with our Antifreeze stream

Provide a detailed Composition to the best of your knowledge: ~13,000 gal EDEN 1-2 months
Component / Approximate Percentage or PPM:

60% oil / 30% water	10% water /
/	/
/	/
/	/

CHLOR-D-TECT-300

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

TOC = 40,895
PHENOL = 2

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd .092
Cr .242
Cu .237
Ni .503
Zn - .300

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

100 mL SX - HEAT -

ADD H_2SO_4 & MIX

3 mL -

+ 3 mL

SX. BREAKS OUT w/ 6mL TOTAL H_2SO_4 + HEAT. -

41 mL AQUEOUS -

RECOVERY - ~50% OIL

OIL - 5.7% H_2O

EPAHO113000208

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # D608-01 **Date:** 6/2/2008

CES Sales Representative: Kelli

Requested Turnaround / Completion Date: _____

Customer Name: YMCO

Generator Name and Location: Ethoxylated Polyol

Ultimate Objective for Performing Analysis: Si & we can sell as black oil or into similar market, Need to come up with a quote

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____ / _____	_____ / _____
_____ / _____	_____ / _____
_____ / _____	_____ / _____
_____ / _____	_____ / _____

Ash- Crucible Tare 49.7112
Crucible + Sx 52.7450
Crucible + Ash 49.7852

.005 / 3.0328 = 0.16

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

H_2O - 0.0 - BY DS 7/8/2008

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	Black Oil Suitability____	Viscosity____
Specific Gravity X - D - 0.956	Light End Suitability____	Distillation Test____
Flash ~ > 150 °F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) Flash, %H2O

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 06-0803 **Date:** 6-2-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Kinder Morgan - Victoria

Generator Name and Location: ~~[illegible]~~ - Victoria

Ultimate Objective for Performing Analysis: Recover Liq Layer for Fues.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Pipeline Pigging Waste

1st Flush After Cleaning Sludge from Nat Gas P/C

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

~~[illegible]~~		Scale	80-90
Diesel Fuel	10/20%		
Detergent	0-3		
Xylene	0-3		

D- .84

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) ✓ 3000	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash ✓ <90°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-75 **Date:** 5-30-08

CES Sales Representative: Brauckmann

Requested Turnaround / Completion Date: _____

Customer Name: Weatherford - Elmendorf (San Antonio)

Generator Name and Location: Elmendorf

Ultimate Objective for Performing Analysis: WW Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Rinse water from mfg process of corrosion inhibitors

Cd .043 ~~.039~~
Cr .192
Cu ~~.039~~ .321
Ni .878
Zn .202

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

oil	1-3 %		
water	94-98%		
corrosion Inhibitors	1-3		
(6332)			

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids TR	Percent Oil ✓ 0
Specific Gravity ____	Chlor-d-tect (oil phase) ____	pH ✓ -9
Phenols ✓ -0	Oil and Grease (water phase) ____	TOC ✓ - 5885
Distillation Test ____	Metals ✓	Flash ✓ >140f
GC/MS ____	Chlor-n-oil (oil phase) ____	Centrifuge Test ____

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ____	Black Oil Suitability ____	Viscosity ____
Specific Gravity ____	Light End Suitability ____	Distillation Test ____
Flash ____	CES Fuel Suitability ____	Hydro-scout ____
Chlor-d-tect ____	Color ____	Chlor-n-oil ____
Water by Distillation ____	Water Extractability ____	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	Specific Gravity ____	Sulfides ____
Percent Sodium Hydroxide ____	Chlorides ____	Sodium ____
Percent Solids by Centrifuge ____	Oil by Centrifuge ____	TOC ____

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-73 **Date:** 5/30/08

CES Sales Representative: Joy
Requested Turnaround / Completion Date: Monday, 6/2

Customer Name: Rineco
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: quote
_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~Frick oil: Refrigerant oil that contains ammonia~~ Oil Water Separator - Water phase

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/_____	_____/_____
oil/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Cd .156
Cr .558
Cu .~~156~~.666
Ni .516
Zn 1.671

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatabilityx	**Percent Solids** - 0	**Percent Oil** -0
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** 6
Phenols_____ - 0	**Oil and Grease (water phase)**_____	**TOC** x 1491
Distillation Test_____	**Metals** x	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-66 **Date:** 5/28/08

CES Sales Representative: MATT BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: ~~[redacted]~~ ENTERPRISE

Generator Name and Location: NORTH PLANT (MTBE)

Ultimate Objective for Performing Analysis: TREAT / BETTER PRICE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

UNKNOWN

Provide a detailed Composition to the best of your knowledge: D~ 1.01/35 ~ 2.5%

Component / Approximate Percentage or PPM:

SODIUM NITRATE / WATER	____ / ____
____ / ____	____ / ____
____ / ____	____ / ____
____ / ____	____ / ____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity__X__	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) % SODIUM NITRATE (PERCENT SODIUM NITRATE)

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 050B-65 **Date:** 5/29/08

CES Sales Representative: J. Wilson
Requested Turnaround / Completion Date: _____

Customer Name: Tuboscope NOV
Generator Name and Location: Tuboscope Navasota TX.
Ultimate Objective for Performing Analysis: _____
waste water treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ Wash water cleaning coating equipment.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ water	95/100
_____/_____ dirt	0/1
_____/_____ pipe coating	0/1
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids** – TRACE	**Percent Oil** ✓
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** ✓ 7.03
Phenols_____	**Oil and Grease (water phase)** ✓	**TOC** ✓ – 4019 – (TREATED H_2O)
Distillation Test_____	**Metals** ✓	**Flash** ✓ >140 F
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd .033
Cr .040
Cu .064
Ni .148
Zn – .048

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

SAMPLE FORMS AN OILY SLUDGE ON TOP AND BTM OF BEAKEKER UPON HEATING & ACIDIFICATION.

THE SOLIDS FORMED WILL MAKE IT NECESSARY TO CENTRIFUGE.

WATER- TREATS OK BUT WOIL AGAIN FORM SOLIDS ON TOP- CRUD LIKE- THIS WILL NEED TO GO THRU FILTER PRESS.

EPAHO113000215

CES Environmental Services, Inc.

Allied International Broker

CES SAMPLE EVALUATION FORM

Sample ID # 0508-64 **Date:** 5/29/08

CES Sales Representative: J. Wilson

Requested Turnaround / Completion Date: _____

Customer Name: ~~Refrac~~ rinse from tanker washout

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____
wastewater Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ waste water from tanker washout

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_✓_	**Percent Solids** ✓ TRACE	**Percent Oil**_~0_
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_~8_
Phenols_~4 ppm_	**Oil and Grease (water phase)**_✓_	**TOC**_~1943_
Distillation Test_____	**Metals**_✓_	**Flash**_>140 F_
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Cd .033
Cr .031
Cu .032
Ni .148
Zn .039

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-55 **Date:** 5-23-08

CES Sales Representative: Braachman

Requested Turnaround / Completion Date: ASAP

Customer Name: REJ-SAWS RES-SAWS

Generator Name and Location: San Antonio

Ultimate Objective for Performing Analysis: Sale of NaOH

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Product stored for emergency scrubber activities
System no longer in use

Provide a detailed Composition to the best of your knowledge: D-1.227

Component / Approximate Percentage or PPM: NaOH, Lake 15.08

NaOH Solution	20%		
Water	80%		5-0
			RSH-0

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity✓	Sulfides✓
Percent Sodium Hydroxide____	Chlorides____	Sodium✓
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 050852 **Date:** 5-22-08

CES Sales Representative: Brandon Ray

Requested Turnaround / Completion Date: _____

Customer Name: TVU-Green

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Waste water Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rinse water at Fertilizer Trucks

Provide a detailed Composition to the best of your knowledge: NH_4 - 70 mg/L RELEASE OF NH_3 WHEN ACIDIFIED

Component / Approximate Percentage or PPM:

Water	98-99%	NICE TREAT - BIG FLOC THAT SETTLES OUT	
Nitrogen Fertilizer	0-2		
Phosphorous	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ 6L	Percent Solids ~ 0.5	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ ~10
Phenols____	Oil and Grease (water phase)____	TOC ✓ ~1455 mg/L
Distillation Test____	Metals ✓	Flash ✓ >142
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____ PHENOLS - 10 ppm

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd .050
Cr .030
Cu 1,888
Ni .497
Zn .354

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-54 **Date:** 5/23/08

CES Sales Representative: Jay Baker
Requested Turnaround / Completion Date: Rush 5/27/08

TOC - 2 SXS - 1st 2412 - 2nd 2630 -

Customer Name: Working Solutions
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

H_2O - pH - 7
H_2SO_4 + $FeCl_3$ - TURNS BLACK/BLUE LIME ADDITION FORMS SLUGGE WHICH DISSIPATES WHEN MIXED. POLY ADDITION - THICK - FINE FLOC THAT IS SLOW TO SEPARATE. H_2O IS CLEAR W/ TINT. - 2K LOOKS

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X - 300	pH____
Phenols____ - 4 ppm	Oil and Grease (water phase)____	TOC ~~2412~~ 4124
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

~~Cd .068~~
~~Cr .087~~
~~Cu .09~~
~~Ni .349~~
~~Zn .227~~

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Cd .059
Cr .088
Cu .265
Ni .513
Zn .234

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-53 **Date:** 5/23/08

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: Rush / 5/27/08

Customer Name: Working Solutions
Generator Name and Location: _____
Ultimate Objective for Performing Analysis: _____ ~2/3 OL

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
H_2O pH - 7

Provide a detailed Composition to the best of your knowledge: TREATS OIL - FINE FLOC - SETTLES OUT
Component / Approximate Percentage or PPM:

____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)** X - 100	**pH**____ 1170
Phenols — 2 ppm	**Oil and Grease (water phase)**____	**TOC** - ~~58500~~ ON ~~TREATED~~ H_2O
Distillation Test ___	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Cd ~~.097~~ .068
Cr ~~.091~~ .097
Cu .091
Ni .349

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____ Zn .227
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

T-705 - N
T-651 - FREELES-50 Hi Oil/ PHENOL RATIO
N46873
T-484
T-649
LT-1176
T-335

CES SAMPLE EVALUATION FORM

Sample ID # 0508-51 **Date:** 5/22/08

CES Sales Representative: Matt Bowman
Requested Turnaround / Completion Date: ASAP

Customer Name: Lubrizol
Generator Name and Location: Lubrizol Bayport
Ultimate Objective for Performing Analysis: Treat

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Frick oil: Refrigerant oil that contains ammonia

PLEASE INCLUDE TRACER NUMBER WITH THE RESULTS OF EACH SUITABILITY ANALYSIS.

7 SEPARATE SAMPLES

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Solid/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on ~~Hydrocarbons~~ or other Organic Chemicals:

Ash_____	**Black Oil SuitabilityX**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

T-705- MIXES 1:1 READILY- NO FREEZING

T-651- FREEZES - SO HIGH OIL/CA RATIO 2:1 IS OK

N-46873- FREEZES- SO HIGH OIL/CA RATIO - 4:1

T-484 - MIXES FINE 1:1

T-649- SLUDGES - SO MIX HIGH OIL/CA RATIO 5:3

LT-1176 - OK

T-335 - OK - BUT NOT THE BTM H_2O LAYER
WHICH IS ~ 20%

11780

~~12,100~~

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-46 **Date:** 5-20-08

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: Wed 5-21

Customer Name: Angel Brothers
Generator Name and Location: 3300 N Main
Ultimate Objective for Performing Analysis: remove water and mix oils with black oils
_____ HEAT & ACIDIFY H_2O - FP. ON SOME OF THE OIL. NEED VERY CLOSE VALUE.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~Frick oil: Refrigerant oil that contains ammonia~~ Oil, water & solids from oil seperator approx 2000 gal every 3 mos.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/_____ FP - 139-141 ____/____ OIL - ~20 mL / 150 mL = 13%
oil/_____ ____/____
soilds/_____ PH - 7 (WATER) ____/____
Filmfree/_____ ____/____
Bio-solve/_____ TOC - 1514 ppm ON TREATED H_2O ____/____ ~15% SOLIDS/SLUDGE - ~2 mL ACID USED

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**X
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_X_	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_X_
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____ Cd - .098
Other Internal Analysis (List)_____	OIL DENSITY - 0.86	Cr .077
Off-site Lab Analysis (List)_____		Cu .113
Note: Must have an approved P.O. for any external lab analysis		Ni .260
		Zn .071

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_X_	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_X_ ~ 300 mg/L	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	
Other Internal Analysis (List)_____		
Off-site Lab Analysis (List)_____		
Note: Must have an approved P.O. for any external lab analysis		

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____
Other Internal Lab Analysis (List)_____		
Off-site Lab Analysis (List)_____		
Note: Must have an approved P.O. for any external lab analysis		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-35 **Date:** 5/15

CES Sales Representative: MATT B

Requested Turnaround / Completion Date: RUSH (ASAP)

Customer Name: DANA CONTAINERS

Generator Name and Location: PASADENA, TX

Ultimate Objective for Performing Analysis: TREAT WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

UF CONCENTRATE TANK SLUDGE

Provide a detailed Composition to the best of your knowledge: UNTREATED H_2O - FILTERED ONLY

Component / Approximate Percentage or PPM:

	/		/ Cd .015
	/		/ Cr 0.00
	/		/ Cu .055
	/		/ Ni .233
			Zn .200

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

% H_2O - < 10%

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-37 **Date:** 5-15-08

CES Sales Representative: Brandmeyer

Requested Turnaround / Completion Date: Busy

Customer Name: TPC

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Fuels

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Out of Spec Fuel oil - removed from storage

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Fuel Oil / 100	CHLOR-D-TECT 200 mg/L
	D-0803
	API-45 / 35% Solids

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash✓	Black Oil Suitability✓	Viscosity____
Specific Gravity✓	Light End Suitability✓	Distillation Test____
Flash✓	CES Fuel Suitability✓	Hydro-scout____
Chlor-d-tect✓	Color____	Chlor-n-oil____
Water by Distillation✓	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-31 **Date:** 5-13-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: ASAP!!

Customer Name: GATX Hearne
Generator Name and Location: GATX Hearne
Ultimate Objective for Performing Analysis: send product to peak - 6000 gallons in a rail car
_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~Frick oil; Refrigerant oil that contains ammonia~~ Off spec product from removal of heel prior to cleaning rail cars
Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

acrylic acid/100%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

AshX	**Black Oil Suitability**_____	**Viscosity**_____ **Specific Gravity**_____
Light End Suitability_____	**Distillation Test**_____	
Flash_____	**CES Fuel Suitability**X	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)SPECIFIC GRAVITY, BTU
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-29 **Date:** 5-13-08

CES Sales Representative: JW

Requested Turnaround / Completion Date: _____

Customer Name: NOV Rolligon

Generator Name and Location: NOV Rolligon Anderson TX.

Ultimate Objective for Performing Analysis: Treatment / Recycle

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
used oil & gear lube

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

H_2O - 1.76%

.0073
Sx - 2.1973

ASH -
CRUCIBLE - 49.7095
" + Sx. 52.9068
" + Ash 49.7168

D - 0.859

.22% ASH

Wastewater Treatability_____	Percent Solids 1200	Percent Oil ✓
Specific Gravity_____	Chlor-d-tect (oil phase) ✓	pH_____
Phenols_____	Oil and Grease (water phase)_____	TOC ✓
Distillation Test_____	Metals ✓	Flash_____
GC/MS_____	Chlor-n-oil (oil phase) ✓	Centrifuge Test_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Ash ✓	Black Oil Suitability ✓	Viscosity ✓
Specific Gravity_____	Light End Suitability_____	Distillation Test_____
Flash_____	CES Fuel Suitability_____	Hydro-scout_____
Chlor-d-tect_____	Color_____	Chlor-n-oil_____
Water by Distillation_____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Percent Potassium Hydroxide_____	Specific Gravity_____	Sulfides_____
Percent Sodium Hydroxide_____	Chlorides_____	Sodium_____
Percent Solids by Centrifuge_____	Oil by Centrifuge_____	TOC_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-12 **Date:** _____

CES Sales Representative: Jon

Requested Turnaround / Completion Date: std

Customer Name: MTI

Generator Name and Location: Unknown

Ultimate Objective for Performing Analysis: pricing & handling

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
VOS Unknown drums (1) of liquid. Appears to be viscosity modifier

Provide a detailed Composition to the best of your knowledge: BLENDS w/ BLACK OIL
Component / Approximate Percentage or PPM:

Unknown /	/
/	/
/	/
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_X_	Black Oil Suitability_X_	Viscosity____
Specific Gravity____	Light End Suitability_X_	Distillation Test____
Flash_X_	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-14 **Date:** 5/8/08

CES Sales Representative: Jon

Requested Turnaround / Completion Date: std

Customer Name: MTI

Generator Name and Location: Unknown

Ultimate Objective for Performing Analysis: pricing & handling

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~Acid~~ Unknown drum (1) of extremely corrosive liquid

Provide a detailed Composition to the best of your knowledge: of 50% NaOH D - 1.817

Component / Approximate Percentage or PPM: IT TAKES ~25 mL TO ADJUST pH TO 10 FOR 10 mL OF SX.

	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X 0
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List) as suggested

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-13 **Date:** _____

CES Sales Representative: Joy

Requested Turnaround / Completion Date: Std

Customer Name: MTI

Generator Name and Location: Unknown

Ultimate Objective for Performing Analysis: pricing & handling

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

BOL Unknown drums(2) of liquid. Appears to be biodiesel feedstock / veg. oil

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_X_	Black Oil Suitability_X_	Viscosity____
Specific Gravity_X_	Light End Suitability____	Distillation Test____
Flash_X_	CES Fuel Suitability_X_	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-2 **Date:** 5-9-07

CES Sales Representative: Bracciano

Requested Turnaround / Completion Date: _____

Customer Name: Burgess Bart

Generator Name and Location: Oil Water Emulsion

Ultimate Objective for Performing Analysis: BURBANK BARGES + DRUM

Cd .103
Cr .008
Cu .088
Ni 2.323
Zn 8.6
Pb 0.00

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Collection of oil from Drum wash Sump

Provide a detailed Composition to the best of your knowledge: 10K

OIL - 1.5
EMULSION - 4.0
H2O - 4.5

Component / Approximate Percentage or PPM:

Oil Emulsion	40-60		
Water	20-40	WATER	DOES NOT EASILY
Caustic	0-5		TREAT.

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)✓ 2000	pH✓ -water
Phenols____	Oil and Grease (water phase)___	TOC✓ "
Distillation Test____	Metals✓	Flash✓ oil
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test✓

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect✓	Color____	Chlor-n-oil____
Water by Distillation✓	Water Extractability	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Cd .164
Cr .013
Cu .050
Ni .308
Zn .116
Pb .022

Sample ID # 0508-20 **Date:** 5-9-08

CES Sales Representative: Dana
Requested Turnaround / Completion Date: standard

Customer Name: GATX Hearne
Generator Name and Location: GATX Hearne
Ultimate Objective for Performing Analysis: to mix this material with other caustics to go out as product TREATS EASILY

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Spent caustic soda – removal of heel prior to cleaning rail car 5 drums

TOC - 1380
PH - 11.2
D - 1.017
1.0 % aq NaOH
5' - 0
RSH - 0

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Spent caustic soda/_____		_____/_____
/_____	_____/_____	
/_____		_____/_____
_____/_____		_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_X_	**Chlor-d-tect (oil phase)**_____	**pH**_X_
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

PHENOLS - 1
SOLIDS - 9%

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**X	**Sulfides**_X_
Percent Sodium HydroxideX	**Chlorides**_____	**Sodium**_____
Percent Solids by CentrifugeX	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Wait

CES Environmental Services, Inc.

distill for solids?

CES SAMPLE EVALUATION FORM

Sample ID # 0508-08 **Date:** 5/6/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: STA

Customer Name: EMA

Generator Name and Location: CCP

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
MEK & Xylene (1 load / quarter)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

MEK	90%		
Xylene	10%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability X	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation X	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-09 **Date:** 5/6/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Std

Customer Name: EMA

Generator Name and Location: C&P Cook Composites & Polymers

Ultimate Objective for Performing Analysis:

WATER IS PH 3 DOES NOT EASILY TREAT

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Xylene & Water (1 load / quarter)

ORANIC MIXES W/ HT. KNOS-

TOP LAYER - 50 mm
BTM - 65 mm

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Xylene	90%		
Water	<10%		
Polyester Resin	<1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids** ✓	**Percent Oil**____	Cd .067
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____	Cr .136
Phenols____	**Oil and Grease (water phase)**___	**TOC**____	Cu .071
Distillation Test____	**Metals**____	**Flash**____	Ni .264
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____	Zn .057

Other Internal Analysis (List) Recoverable Solvent by ① Decant ② Distillation

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Pb .816

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____	✓
Specific Gravity____	**Light End Suitability** X	**Distillation Test**____	
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____	
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____	
Water by Distillation X	**Water Extractability**____		

Other Internal Analysis (List) Recoverable Solvent by ① Decant ② Distillation , % Solids

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

%	POT	OH
IBP	134	53
5	139	123
10	141	128
20	143	133
40	146	133
50	150	141
60	154	144
70	155	148
80	163	153
85	168	158
89	182	160

A DEFOAMER WAS NECESSARY FOR THIS

DISTILLATE IS A CLOUDY WHITE - LIKE REALLY DILUTED MILK

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-07 **Date:** 5/6/08

CES Sales Representative: JW

Requested Turnaround / Completion Date: Std

Customer Name: EMA

Generator Name and Location: CCP

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Caustic tank rinse (1 load/month)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Caustic/NaOH	5-10%		
Water	90-95		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic: D-1.042

Percent Potassium Hydroxide____	Specific Gravity X	Sulfides____
Percent Sodium Hydroxide X - 5.3%	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-19 **Date: 5-9-08**

CES Sales Representative: Dana
Requested Turnaround / Completion Date: Standard

Customer Name: Enterprise Mont Belvieu East Storage
Generator Name and Location: Enterprise East Storage
Ultimate Objective for Performing Analysis: test for possible recycling of lightends otherwise wastewater treat HARD TO REMOVE/SEPARATE OUT THE OIL.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
clearing of gasoline piping and flare drum

Cd .433
Cr .355
Cu .225
Ni 1.580
Zn .360
Pb 1.263

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/_____	_____/_____
natural gas/_____	_____/_____
solids/0-3%_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X 8%	**Percent Oil** ~10%
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** 11
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X – X 2403 -
Distillation Test_____	**Metals**_____	**Flash**X H2O LAYER
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-18 **Date: 5-9-08**

CES Sales Representative: Dana
Requested Turnaround / Completion Date: Standard

Customer Name: Enterprise Mont Belvieu East Storage
Generator Name and Location: Enterprise East Storage
Ultimate Objective for Performing Analysis: test for possible recycling of lightends otherwise wastewater treat

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
clearing of gasoline piping and flare drum

Cd .179
Cr .273
Cu .189
Ni .726
Zn .117
Pb .962

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/_____	_____/_____
natural gas/_____	_____/_____
solids/0-3%_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX **Percent SolidsX** 0.1% **Percent Oil_____**

Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH - 9.0**
Phenols_____	**Oil and Grease (water phase)_____**	**TOCX - 8 ~~250~~ 1261**
Distillation Test_____	**Metals_____**	**FlashX >140F**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

#2X10T

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-16 **Date:** 5-9-08

CES Sales Representative: Brackman

Requested Turnaround / Completion Date: Rush - customer ready to ship early next week

Customer Name: Baker Hughes PMC

Generator Name and Location: Victoria

Ultimate Objective for Performing Analysis: Fuels

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Diesel used to Flush Natural Gas PIC

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Diesel	90-95		
water	0-10		
Scale	2-5		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability ✓-OK	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash ✓	CES Fuel Suitability ✓	Hydro-scout____
Chlor-d-tect ✓ - 1500 mg/L	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-13 **Date:** 5-7-08

CES Sales Representative: Brauckman #

Requested Turnaround / Completion Date: RUSH #

Customer Name: Strike Construction @ Kindermorgan P/L

Generator Name and Location: Kindermorgan pipeline 248 & BW8 249 BW8

Ultimate Objective for Performing Analysis: Wastewater Treatment & oil Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Water Flush of ~~[illegible]~~ Wat Gas pipeline

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

oil	1-2%	TREAT PRODUCES > AVG. SOLIDS	
water	98-99%	Cd .066	Cr - .194 Zn .043
Rust/scale	0-1%	Cu - 0	Ni - .191

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓ TR	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH ✓ 7
Phenols — 0	Oil and Grease (water phase) ___	TOC ✓ - 1179
Distillation Test ___	Metals ___	Flash ✓ > 140
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Note; customer has another contractor that will manage as Recyclable!

1 Quarts make composite for testing SB

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-12 **Date:** 5-7-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: * RUSH *

Customer Name: Strike construction

Generator Name and Location: Kinder Morgan PIL @ Sheldon Rd

Ultimate Objective for Performing Analysis: Wastewater Treatment & oil Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Water Flush of Nat Gas pipeline

Provide a detailed Composition to the best of your knowledge: Cd .057 Cu .033 Zn .144 Cr .120 Ni .270

Component / Approximate Percentage or PPM:

oil	1-2%		
water	98-99%		
Rust/scale	0-1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓ - TBO.4	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH ✓ 6
Phenols — 0	Oil and Grease (water phase) ___	TOC — 1364
Distillation Test ___	Metals ___	Flash ✓ ~~130~~ >140
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Retest mixed

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Note: customer has another contractor that will manage as Recyclable!

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0508-02 **Date:** 5/9/08

CES Sales Representative: Jon

Requested Turnaround / Completion Date: ASAP

Customer Name: Working Solutions

Generator Name and Location: tank wash out

Ultimate Objective for Performing Analysis: pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
emulsified oil & oily water from tank cleaning operations

Provide a detailed Composition to the best of your knowledge: ACIDIFY AND HEAT H_2O TO BREAK EMULSION. -

Component / Approximate Percentage or PPM:

Sulfuric Acid/Na salts	<15%	WATER TREATS OK, BUT HAS TYPICAL SO2 LBS	
Oils	<50%		
Water	balance		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ~7
Phenols - on H_2O - O	Oil and Grease (water phase)____	TOC 8160
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____ THEAT UNTREATED H_2O

Off-site Lab Analysis (List)_____ .025 Cd .667

Note: Must have an approved P.O. for any external lab analysis .075 Cu .145

.097

.114 Cr .815

Ni .129

Zn 1.768

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect < 100	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-88 **Date:** 4/22/08

CES Sales Representative: CRL

Requested Turnaround / Completion Date: 2 DAY

Customer Name: Shell Yabacoa

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Caustic extraction of light gasoline

Provide a detailed Composition to the best of your knowledge: NaOH = 16.88 %
Component / Approximate Percentage or PPM: S = 1.1 wt%

Caustic	~10%		
WATER	90%		
Solid	0.1 %		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity__✓__	Chlor-d-tect (oil phase)____	pH____
Phenols____ D-1.235	Oil and Grease (water phase)___	TOC__✓__ 15440
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) % NAOH, % Sulfide
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity__✓__	Sulfides__✓__
Percent Sodium Hydroxide__✓__	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC__✓__

Other Internal Lab Analysis (List) Cl-, K, Hg, Pb, benzene,
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-90 **Date: 4-25-08**

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: standard

Customer Name: Targa Midstream Services
Generator Name and Location: Targa – Flare Water
Ultimate Objective for Performing Analysis:

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
~~[illegible]~~ Flare water containg caustic, disulfide oil, gasoline

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

/Water ____/____
/Caustic ____/____
/Gasoline ____/____
/Disulfide Oil ____/____

PHENOLS- 20 ppm
TOC = 13,245
Cd .117
Cu .183
Cr .310
Ni 1.756
Zn .470

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

NaOH = 3.9%

Internal Analysis to be Performed on Spent Caustic:

D- 1.024 S= 0

Percent Potassium Hydroxide ✓	**Specific Gravity** ✓	**Sulfides** ✓ RSH- .12
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC** ✓

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

✓ BTU, ✓ ph 14

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-47 **Date:** 4/14/08

CES Sales Representative: MATT B

Requested Turnaround / Completion Date: ASAP

Customer Name: ENTERPRISE MTBE

Generator Name and Location: MTBE

Ultimate Objective for Performing Analysis: TREATIN

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
FLARE WATER

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

N/A	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

#36 - Rainwater
#37 - Thin Mud
#38 - Thick Mud
#39 - SAPP (Sodium Pyrophosphate) [used to thin mud @ Schlumberger]

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408 - (36-39) **Date:** 4/9/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: Std

Customer Name: Rineco

Generator Name and Location: Schlumberger

Ultimate Objective for Performing Analysis: determine what in our current process or composition of streams has changed that is now generating excess of solids from all streams

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rainwater run-off and drilling mud from a test rig at Schlumberger. In the mud, they add <1% of Bentonite to keep the water in the mud, rather than phase separate.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	/ 95-99%	Baryite (clay)	/ 0-2%
Sand	/ 1-3%	Acetic Acid	/ 0-1%
Crude oil	/ <1%		/
Bentonite	/ <1%		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

* **Wastewater Treatability** ✓	**Percent Solids** ✓	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH** ✓
Phenols___	**Oil and Grease (water phase)**___	**TOC**___
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

See Note Above

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

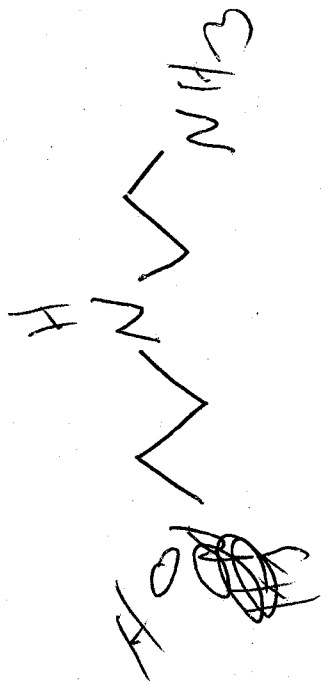
Internal Analysis to be Performed on Spent Caustic:

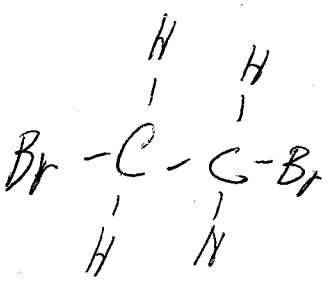
Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Possibly try alternative acid to treat??

* SAPP is rarely used now but I brought a sample to experiment with to see if it helped





CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-GL-71 **Date:** 4/18/08

CES Sales Representative: GLENENTZ

Requested Turnaround / Completion Date: 4/24/08

Customer Name: _____

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: TO TEST FOR RECYCLING LIGHT SOLVENTS FROM WATER AND OTHERS TO MAKE SALABLE PROD.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge: (See email)

Component / Approximate Percentage or PPM:

IPA	/		/
METHANOL	/		/
	/	WATER	/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity_✓_	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test_✓_	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-68 **Date:** 4-18/2008

CES Sales Representative: DANA
Requested Turnaround / Completion Date: RUSH

Customer Name: Enterprise OTI (Jacintoport)
Generator Name and Location: Enterprise OTI Jacintoport
Ultimate Objective for Performing Analysis: evaluated sample for consistency with its profile (#2567) – load scheduled to come in Saturday 4-19.

MIX / W. TEXAS NO Solids

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
he facility dehydrators employ molecular sieve technology to remove water and sulfur compounds from the facility export product stream. Regeneration of the off-line dehydrator bed by a dehydrated and treated product side stream results in these water and sulfur compounds and any methanol that may be intrinsic to the feed stream being removed from the dehydrator and processed in the Product Regeneration Coalescer and the KOH Treater.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Potassium hydroxide/_____	_____/_____
methanol/_____	_____/_____
/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash** X 90°
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____
Other Internal Analysis (List)_____		MIX 50/50 Flash 115°
Off-site Lab Analysis (List)_____		

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	
Other Internal Analysis (List)_____		
Off-site Lab Analysis (List)_____		

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide X 6.628%	**Specific Gravity** X 1.05	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC** X 85'800

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-65 (yellow) Date: 4/17

CES Sales Representative: JV

Requested Turnaround / Completion Date: ASAP

Customer Name: Stolt Barge Services

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: WW treat & pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Barge Clean

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Waste / _____ _____ / _____
_____ / _____ _____ / _____
Oil / _____ _____ / _____
_____ / _____ _____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids X	Percent Oil X 0
Specific Gravity____	Chlor-d-tect (oil phase)____	pH 7
Phenols____	Oil and Grease (water phase)___	TOC X 7175
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-63 & 64 (white) **Date:** 4/17/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: ASAP ~~standard~~

Customer Name: Stolt Barge Services
Generator Name and Location: Wash water from cleaning of barges
Ultimate Objective for Performing Analysis: pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Washwater from barge cleans. Volume approx 90,000 gal. contains some odorizer compounds

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/98-99%	_____/_____
hideway/0.5%	_____/_____
z400/0.5%	_____/_____
oil/1-2%	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatabilityx	**Percent Solids**x	**Percent Oil**x
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_9_ Emulsion Need to be Heated
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-64 (brown) Date: 4/17

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: Shell Barge Service

Generator Name and Location:

Ultimate Objective for Performing Analysis: WW treat/Recycle

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Barge Clean

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	/		/
	/		/
Oil	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids X	Percent Oil X 1-2%
Specific Gravity____	Chlor-d-tect (oil phase)____	pH 6.5
Phenols____	Oil and Grease (water phase)___	TOC X 1901
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-53 **Date:** 4-16-08

CES Sales Representative: Gary D

Requested Turnaround / Completion Date: _____

Customer Name: Citation - Cushing

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Disposal / Recycle

CONTAINMENT H2O

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Containment water - containment of gasoline, Diesel & oil tanks

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Gas	0-1		
Diesel	0-1		
water	90-10		
Sand	10-10		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids**____	**Percent Oil**____ - TR
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____ ✓ - 6
Phenols x - 0	**Oil and Grease (water phase)**____	**TOC** ✓ - 1260
Distillation Test____	**Metals**____	**Flash** ✓ >140F
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd .060
Cu .064
Ni .290
Zn .130

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-54 **Date:** 4-16-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: _____

Customer Name: Citation

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Purchase Oil

CRUCIBLE TARE - 49.5996
+ SX 52.7045
+ ASH 49.6011
.0015
3.1049

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Mineral oil & Lube oil drained from equipment
Is this suitable for Base oil & How much can we pay

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mineral oil	50-100	_____	_____
Motor oil	50-100	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: DENSITY - 0.846

Wastewater Treatability____	**Percent Solids**____	**Percent Oil** BLEND W/ BLACK OIL
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

BASE OIL POSSIBILITY

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓ .05	**Black Oil Suitability** ✓	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash ✓ >140 F	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect ✓ - 200	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) Base oil suitability / water-centrifuge
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-56 **Date:** 4-16-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: _____

Customer Name: Citation-Luther

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Sulfuric Acid used to scrub DMEA
2-3 totes/ month

Provide a detailed Composition to the best of your knowledge:

TREAT FORMS A HUGE MUCK. ADDING CAUSTIC TO RAISE PH

Component / Approximate Percentage or PPM:

DMEA	0-5	JO 4 RELEASES NH4	
H2SO4	1-5		
Water	90-99		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓ - TR
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH ✓ - 2 - ACTUAL
Phenols - 0	Oil and Grease (water phase)____	TOC ✓ - 65,200 1.3
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd 0.00
Cu .133
Ni .834
Zn 0.00

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0498-55 **Date:** 4-16-07

CES Sales Representative: Gary Travolmen

Requested Turnaround / Completion Date: _____

Customer Name: Citation NDT Fluid

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Disposal

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Mold Release agent

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

225ml - { 150 H_2O / 75 Oil

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids** ✓ 0	**Percent Oil** ✓
Specific Gravity D - .890	**Chlor-d-tect (oil phase)** - 100 ppm	**pH** ✓ 9
Phenols — 0 RECOVERED OIL	**Oil and Grease (water phase)** —	**TOC** — 5945
Distillation Test —	**Metals** —	**Flash** —
GC/MS —	**Chlor-n-oil (oil phase)** —	**Centrifuge Test** —

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Cd .065
Cu 2.876
Ni .343
Zn .144

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash —	**Black Oil Suitability** —	**Viscosity** —
Specific Gravity —	**Light End Suitability** —	**Distillation Test** —
Flash —	**CES Fuel Suitability** —	**Hydro-scout** —
Chlor-d-tect —	**Color** —	**Chlor-n-oil** —
Water by Distillation —	**Water Extractability** —	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide —	**Specific Gravity** —	**Sulfides** —
Percent Sodium Hydroxide —	**Chlorides** —	**Sodium** —
Percent Solids by Centrifuge —	**Oil by Centrifuge** —	**TOC** —

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-74 **Date:** 4/21/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: asap

Customer Name: Delta Chemical –Sheldon Rd
Generator Name and Location: same
Ultimate Objective for Performing Analysis: pricing, treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rail Pit sump that collect rainwater & oil

SOLIDS- TR
OIL- 0- BY CENTRIFUGE

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/90-98%	____/____
Oil/0-10%	____/____
Dirt/0-2%	____/____
____/____	____/____

Cd .064
Cu .077
Ni -.421
Zn -.978

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:
Wastewater Treatabilityx **Percent Solids**____ **Percent Oil**x
Specific Gravityx **Chlor-d-tect (oil phase)**x **pH** -9
Phenols – 699m **Oil and Grease (water phase)**____ **TOC** 1828
Distillation Test____ **Metals**____ **Flash**____
GC/MS____ **Chlor-n-oil (oil phase)**____ **Centrifuge Test**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash____ **Black Oil Suitability**____ **Viscosity**____
Specific Gravity____ **Light End Suitability**____ **Distillation Test**____
Flash____ **CES Fuel Suitability**____ **Hydro-scout**____
Chlor-d-tect____ **Color**____ **Chlor-n-oil**____
Water by Distillation____ **Water Extractability**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide____ **Specific Gravity**____ **Sulfides**____
Percent Sodium Hydroxide____ **Chlorides**____ **Sodium**____
Percent Solids by Centrifuge____ **Oil by Centrifuge**____ **TOC**____
Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Power Out
Please assign

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 040869 **Date:** 4-18-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ~~[illegible]~~ 1 wk

Customer Name: National Equipment

Generator Name and Location: Brenham

Ultimate Objective for Performing Analysis: Recycle oil
Dispose H2O

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Equip Fluid changes, machine grinding

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

~20% Oil Phase
PH-(H2O) = 6

Oil	10-20	WATER TREATS	EASILY
Coolant	5-10		
Water	80-90		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Cd .057
Cu .022
Ni .236
Zn .136

Wastewater Treatability____	Percent Solids <1%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) 800	pH____
Phenols 2 ppm	Oil and Grease (water phase)____	TOC 1450
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) ONLY 3 drums/yr.
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

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CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-62. **Date:** 4-17-08

CES Sales Representative: Braochman

Requested Turnaround / Completion Date: _____

Customer Name: National Oil Well-Gammalloy GAMALLOY

Generator Name and Location: FM 529

Ultimate Objective for Performing Analysis: waste water treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Wash down of machined equipment

Provide a detailed Composition to the best of your knowledge: SOLIDS - ~10% - A SLUDGE -

Component / Approximate Percentage or PPM:

Water	~~98-99~~ 95-99		
Oil	1-2%		
Dirt/shavings	1-3		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ ok	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ - 6
Phenols - 0	Oil and Grease (water phase)____	TOC ✓ - 1649
Distillation Test____	Metals____	Flash ✓ > 140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd .083
Cu .026
Ni .344
Zn .157

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408.70 **Date:** 4-18-08

CES Sales Representative: Brackman

Requested Turnaround / Completion Date: Rush.

Customer Name: C-4 EOW - DXI Chem

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: WW Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Alkaline water - 100 From product wash (NaOH) Need % info

% NaOH < 1.8 %

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

NaOH	3%	Cd	.125
Water	97%	Cu	.007
		Ni	.726
		Zn	.647

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ - 14
Phenols____ < 0	Oil and Grease (water phase)___	TOC ✓ < 1282
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-58 **Date:** ~~04~~ 4/16/08

CES Sales Representative: GL

Requested Turnaround / Completion Date: 4/17/08

Customer Name: P Chem

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Verify if it is suitable for chem trade as CES Fuel

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____ ASH 6286

CRUCIBLE TARE - 49.6178
+ Sx - 53.1679
+/ ASH - 49.6327

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

DETA	/ 70	_____	/_____
AEEA	/ 30	_____	/_____
_____	/_____	_____	/_____
_____	/_____	_____	/_____ .0041

3.5393

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

% ASH = .12

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

11373 x .5445 = 6193
17990 - 6193 = 11,597

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓ 0.12	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity ✓	**Light End Suitability**____	**Distillation Test**____
Flash____ D-1.010	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) ~~BTU~~

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

BTU
wet - .9341
.9197

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____ BENZOIC
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____ .5445

Other Internal Lab Analysis (List)_____

Sx - -.6180

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

BENZOIC 1 GRAM - 11373 BTU

17789 BTU

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-52 **Date:** 4-16-07

CES Sales Representative: Joe Wilson

Requested Turnaround / Completion Date: _____ MUST GO TO SYSTEM 1 DUE TO AMINES THAT WILL BREAK DOWN INTO AMMONIA

Customer Name: P-Chem

Generator Name and Location: P-Chem Latexo TX.

Ultimate Objective for Performing Analysis: Wastewater Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Condensate waste from Amine recovery

Provide a detailed Composition to the best of your knowledge: SOME NH_4 ODOR BUT TEST LIT SHOWS < 30 ppm
Component / Approximate Percentage or PPM:

Water	/ 90		/
Amines	/ 10		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids** ✓ – 0	**Percent Oil** ✓ ~ 1% (0.7%)
Specific Gravity____	**Chlor-d-tect (oil phase)** ✓	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC** ✓ – 12,165
Distillation Test____	**Metals** ✓	**Flash** ✓ > 140°F
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cl .105
Cu .369
Ni 1.004
Zn .499

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-49 **Date:** 4/15/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: ASAP

Customer Name: Ineos Polymers

Generator Name and Location: same

Ultimate Objective for Performing Analysis: oil compatibility

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Synthetic oil - Mobil (650 gal)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

BLENDS w/ BLACK OIL
CHLOR-D-TECT- 1500

API = 31.4

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) - 1500	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

ASH-
TARE - 49.6298
+ Sx - 52.9138
+ ASH - 49.6292

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability ✓	Viscosity ✓
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash ✓ - >140°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil ✓
Water by Distillation____	Water Extractability____	Base oil suitability ✓

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408 - 40 **Date:** 4/11/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: std

Customer Name: Delta Chemical

Generator Name and Location: same, Deer Park location

Ultimate Objective for Performing Analysis: Treatability or Caustic

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Unused Caustic in tank for 2 years. Originally a 12% solution. May have gotten some acetic acid added to it.

Provide a detailed Composition to the best of your knowledge: D - 1.066

Component / Approximate Percentage or PPM: %NaOH = 5.1 wt%

Water	88%		
Caustic, NaOH	12%		
Acetic Acid	<1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

	NEAT	TREAT
Cd	.312	.262
Cu	.455	.393
Ni	1.344	1.236
Zn	3.896	.257

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ✓	Specific Gravity ✓	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-42 **Date:** 4/11/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP!!

Customer Name: TX Blending

Generator Name and Location: TX Blending - Houston

Ultimate Objective for Performing Analysis: treatability
pricing field service job

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rainwater Collected in pit.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Rainwater	99%		
leaves/debris	1%		
Oil	<1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ 8hr	**Percent Solids** ✓ 2%	**Percent Oil** ✓ (prob. sheen only)
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** ✓ 7
Phenols____	**Oil and Grease (water phase)**____	**TOC** ✓ - 1221
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd .097
Cu .099
Ni .353
Zn - .136

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-32 **Date:** 4/10/08

CES Sales Representative: MATT BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: KINDER MORGAN

Generator Name and Location: GALENA PARK

Ultimate Objective for Performing Analysis: TREAT IT.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

N/A

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

SLUDGE & WATER /		/	
/		/	
/		/	
/		/	

Cd .110
Cu .191
Ni .038
Zn .217

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability OK	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ~ 7
Phenols ~ 0	Oil and Grease (water phase)___	TOC____ ~ 1562
Distillation Test____	Metals____	Flash____ >130 <140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

X **Other Internal Analysis (List)** RECYCLING TREATABILITY

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

PAINT FILTER TEST (SW-846 METHOD 9095)

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-20 **Date:** 4-2-08

CES Sales Representative: Joe Wilson

Requested Turnaround / Completion Date: _____

Customer Name: ATMI

Generator Name and Location: ATMI Burnet TX. Aqueous Solution

Ultimate Objective for Performing Analysis: _____
In house Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ Tank Rinsing

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ See T.M. profile _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

30 mg/L as NH_4

Wastewater Treatability ✓ **Percent Solids** ✓ **Percent Oil** ✓
Specific Gravity_____ **Chlor-d-tect (oil phase)** ✓ **pH** ✓ ~ 11
Phenols ✓ **Oil and Grease (water phase)**_____ **TOC** ✓
Distillation Test_____ **Metals** ✓ **Flash** ✓ >140°F
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Texas Molecular Limited Partnership

WASTE PROFILE DOCUMENT

TM Deer Park Services LP 2525 Battleground Rd. P.O. Box 1914 Deer Park, TX 77536 281/930-2525 Fax:281/930-2535

CUSTOMER INFORMATION:
Company Name: UNIVAR USA
Mailing Address: 4351 Director Drive
City: San Antonio
State: TX Zip: 78219
Contact: Susan Kirby
Phone: 210-333-2310 Fax: 210-337-1411
EMAIL: susan.kirby@univarusa.com

GENERATOR INFORMATION:
Company Name: ATMI
Physical Address: 706 Houston Clinton Dr
City: Burnet
State: TX Zip: 78611
24 Hour Contact:
24 Hour Phone:

WASTE GENERATION DATA:
Waste Name: Aqueous Solutions
Describe the process that generates this waste: Tank rinsing/flushing

USEPA ID No. T X R 0 0 0 0 4 8 9 5 9
Texas Gen. ID No. 8 7 0 3 9 SIC#
Texas Waste Code 7 0 0 4 2 0 7 1

Annual Volume: 1200 [ ] lbs [ ] tons [X] gals [ ] drums/Container Size: 250 gal totes Shipping Frequency ____ per ____

RCRA DATA:
EPA Hazardous Waste Codes (40 CFR, Part 261, Subpart C & D) **If D Codes apply, UHC Form must be included with profile.**
Is waste hazardous per RCRA? [ ] Yes [X] No NONE
Is this a characteristically Hazardous Waste or a residue from the treatment of characteristically Hazardous Waste? [ ] Yes-Underlying Constituent Form Att. [ ] No

WASTE PROPERTIES:
(a) pH Range: 4 to 10
(b) Sp. Gravity ____ to ____
(c) Percent Settled Solids (by vol.): ____ to ____
(d) Percent Insoluble Organics (by vol.) ____ to ____
(e) Describe Appearance (e.g. yellow, clear, turbid, etc.): ____
(f) Odor: [ ] Strong [X] Mild [ ] None
(g) Describe Odor (acrid, rancid, etc.): ____
(h) Heating Value (BTU/LB or other): ____
(i) Physical State: [ ] Solid [X] Liquid [ ] Semi-Solid [ ] Other
(j) Flash Point: [ ] deg. F [ ] deg. C [ ] Closed Cup [ ] Open Cup
(k) Phases/layers: [X] Single [ ] Bilayered
[ ] Multilayered (Top ____ % Middle ____ % Bottom ____ %)
(l) Viscosity: ____ centipoises
(m) Dry Weight Factor

Does Waste Contain Any Of The Following? * If yes, please indicate concentration under components below.

	Yes	No		Yes	No		Yes	No		Yes	No
Benzene NESHAP Regulated	[ ]	[X]	Pathogens	[ ]	[X]	Pyrophoric	[ ]	[X]	TCLP organics *	[ ]	[X]
Biological Materials	[ ]	[X]	Infectious Agents	[ ]	[X]	Sulfides *	[ ]	[X]	PCB's > 50 ppm	[ ]	[X]
Etiological Agents	[ ]	[X]	Carcinogens	[ ]	[X]	Hydrophoric	[ ]	[X]	Explosives	[ ]	[X]
Radioactive Materials	[ ]	[X]	Dioxins	[ ]	[X]	Pesticides *	[ ]	[X]	Free Cyanides *	[ ]	[X]
OSHA Listed Compounds (29 CFR 1910.1001-.1050):				[ ]	[X]						

COMPONENTS: (Account for 100% of the waste components.)	RANGE (% or PPM)	TRI REPORTING CAS NO.	TRI REPORTING AVERAGE
Diethylene Glycol Monobutyl Ether	0 to 90		
Ethanolamine	0 to 85		
1-methyl-2-Pyrrolidinone	0 to 50		
Butyrolactone	0 to 65		
Cathechol	0 to 80		
Water	30 to 90		
Ethylene Glycol	0 to 50		
Butyl Carbitol	0 to 40		
	to		

METALS (TCLP) (DESIGNATE CONCENTRATION, PPM)

Arsenic ____ ppm	Manganese ____ ppm		
Barium ____ ppm	Mercury ____ ppm		
Chromium ____ ppm	Nickel ____ ppm		
Cadmium ____ ppm	Selenium ____ ppm		
Copper ____ ppm	Silver ____ ppm		
Lead ____ ppm	Thallium ____ ppm		
	Zinc ____ ppm		

Waste analysis data attached: [ ] Yes [ ] No Number of Additional Pages: ____ Waste Properties determined by: Process Knowledge [ ] Waste Analysis [ ]

SHIPPING INFORMATION: (49 CFR 172.101) Proper DOT Shipping Name: Ethanolamine Solutions

DOT Hazard Class: 8 UN/NA Number: 2491 Packing Group: III Reportable Qty.: ____

Method of Shipment (s): [ ] Bulk Liquids [ ] Tank Truck [ ] Vacuum Truck [ ] Other: ____
[ ] Bulk Solids [ ] Vac [ ] Non-Vac [ ] 15 Yard Box [ ] 20 Yard Box [ ] 25 Yard Box [ ] 30 Yard Box [ ] 40 Yard Box
[ ] Van [X] Drums [X] Totes [ ] Flat Bed [ ] Other ____

Method of Collection: [ ] Underground Tanks [ ] Above Ground Tanks [ ] Sumps [ ] Drums [ ] Other ____

Required personnel protective equipment & procedures while in your plant:

Other comments or hazards including effects on human health in the event of a release:

I hereby certify and warrant that the information supplied on this form and on any attachments or supplements represents a complete and accurate identification and description of this waste material, its constituents and its known or suspected hazards. I further certify and warrant that this information is the result of an analysis of a representative sample of the waste obtained and analyzed in accordance with testing procedures of the U.S. Environmental Protection Agency or by the application of knowledge of the process generating the waste materials.

SIGNATURE: ____ TITLE: EHS DATE: 05.18.06

EPAHO113000268

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-21 **Date:** 4-2-08

CES Sales Representative: Joe Wilson
Requested Turnaround / Completion Date: _____

Customer Name: Packless Industries
Generator Name and Location: Packless - WACO TX - Wastewater
Ultimate Objective for Performing Analysis: _____
In house treat

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ WAste water from cleaning copper tubing

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Cd .037
Cr .345
Cu 5.019
Ni .573
Zn .158

Wastewater Treatability ✓ **Percent Solids** ✓, <0.1 **Percent Oil** ✓ 0
Specific Gravity_____ **Chlor-d-tect (oil phase)** ✓ **pH** 8
Phenols_____ **Oil and Grease (water phase)**_____ **TOC** ✓ – 39RQ 9065
Distillation Test_____ **Metals** ✓ **Flash**_____
GC/MS_____ **Chlor-n-oil (oil phase)** ✓ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-18 **Date:** 4-2-08

CES Sales Representative: Joe Wilson
Requested Turnaround / Completion Date: _____

Customer Name: Taylor Press Products
Generator Name and Location: Taylor Press - Jarrell TX. - DI Water stage 4
Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ rinse prior to Autophoretic Painting

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Cd .033
Cr .063
Cu .075
Ni .229
Zn .055

Wastewater Treatability ✓ **Percent Solids** ✓ **Percent Oil** ✓
Specific Gravity_____ **Chlor-d-tect (oil phase)** ✓ **pH** 8
Phenols_____ **Oil and Grease (water phase)**_____ **TOC** ✓ ~ 1331
Distillation Test_____ **Metals** ✓ **Flash**_____
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-19 **Date:** 4-2-08

CES Sales Representative: Joe Wilson
Requested Turnaround / Completion Date: _____

Customer Name: Taylor Press Products
Generator Name and Location: Taylor Press - Jarrell TX.
Ultimate Objective for Performing Analysis: _____

Rinse water stage 6

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ rinse water after Autophoretic Painting

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Cd .034
Cr .191
Cu .106
Ni .353
Zn .113

Wastewater Treatability ✓ **Percent Solids** ✓ **Percent Oil** _____
Specific Gravity_____ **Chlor-d-tect (oil phase)** ✓ **pH** ~ 5
Phenols_____ **Oil and Grease (water phase)**_____ **TOC** ✓ 12/7
Distillation Test_____ **Metals** ✓ **Flash**_____
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Tank 615

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4-4-08

CES Sales Representative: Braudman

Requested Turnaround / Completion Date: _____

Customer Name: S. W. Shipyard

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Tank 633-Top

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-25 **Date:** 4-4-08

CES Sales Representative: Braverman

Requested Turnaround / Completion Date: ASAP

Customer Name: S. Wi Shipyard

Generator Name and Location: Oil Tank # 633-Top / Layer

Ultimate Objective for Performing Analysis: Purchase / Treatment of oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
collection of oil from wastewater treatment of with water from tank cleaning

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil	95-99		
water	1-5		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil___ ✓ ~⅓ Oil
Specific Gravity____	Chlor-d-tect (oil phase)___ ✓ 1000	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash___ ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

pH-9
FLASH > 140°F
TOC-26,255

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity___ 2600
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

TREATED WATER
Cd - .059
Cr —
Cu - .108
Ni - .558
Zn - .212

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

tank
133-Bottom
307-A
620
602

CES Environmental Services, Inc.

Talk to Gary for testing

CES SAMPLE EVALUATION FORM

Sample ID # 0408-24 **Date:** 4-4-08

CES Sales Representative: Brauckman

Requested Turnaround / Completion Date: _____

Customer Name: S. W. Shipyard

Generator Name and Location: SW. Shipyard - wastewater - multiple tanks

Ultimate Objective for Performing Analysis: Treatment - $

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste Water Treatment - Barge Cleaning

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	95-99
Oil	1-5
Caustic	0-2
Organics	0-2

Note: If PH is similar - make composite otherwise run & each separate. Run

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase)____	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

tank 600

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-22 **Date:** 4-4-08

CES Sales Representative: Brandy

Requested Turnaround / Completion Date: ASAP

Customer Name: SW. Shipyard

Generator Name and Location: Waste Water Tank 600

Ultimate Objective for Performing Analysis: W.W. Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste Water Treatment - Pricing

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Wastewater	90-95		
oil	5-10		
some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase) ✓	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Tank
608
15
601
B-2
B-3
614
B1
307-A

call Gary D

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-23 **Date:** 4-4-08

CES Sales Representative: Braudeman

Requested Turnaround / Completion Date: Rush

Customer Name: S. W. Shipyard

Generator Name and Location: SW Shipyard - Waste Water multiple tank

Ultimate Objective for Performing Analysis: Waste Water Treatment - Barge cleaning

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Waste Water - Treatment - Barge cleaning

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	90-99		
Oil	1-10		Rinse
caustic	0-2		Otherwise run each
organics	0-2		Separate

Note: If pH is similar make composite

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids___	Percent Oil___
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test___	Metals___	Flash ✓
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Tank 614

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4-4-08

CES Sales Representative: Brad Lawson

Requested Turnaround / Completion Date: ASAP

Customer Name: S. W. Shipyard

Generator Name and Location: Waste Water Tank 614

Ultimate Objective for Performing Analysis: Treatment - pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste Water Treatment

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Waste Water	90-99		
Oil	1-10		
Some Caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ___	Percent Oil ✓
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase) ___	TOC ✓
Distillation Test ___	Metals ___	Flash ___
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) _____

Off-site Lab Analysis (List) _____

Note: Must have an approved P.O. for any external lab analysis

TANK 601

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4-4-07

CES Sales Representative: Braucheuer

Requested Turnaround / Completion Date: ASAP

Customer Name: SW. Ship Yard

Generator Name and Location: Waste water Tank 601

Ultimate Objective for Performing Analysis: Treatment Facility

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste water Treatment

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Waste Water	90-99		
Oil	1-10		
Some Caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids___	Percent Oil ✓
Specific Gravity___	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols___	Oil and Grease (water phase)___	TOC ✓
Distillation Test___	Metals___	Flash ✓
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Tank 602

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4-4-07

CES Sales Representative: Braucksman

Requested Turnaround / Completion Date: _____

Customer Name: S. W. Shipyard

Generator Name and Location: W water Tank 602

Ultimate Objective for Performing Analysis: Treatment - Pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste water Treatment

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Waste water	95-99		
Oil	1-3		
some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH____
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Tank B-3

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 9/4/08

CES Sales Representative: Brandman

Requested Turnaround / Completion Date: ASAP

Customer Name: J.W. Shipyard

Generator Name and Location: W. Water Tank B-3

Ultimate Objective for Performing Analysis: Treatment - pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Wasted water treatment

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Wastewater	90-95		
oil	5-10		
some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Tank 620

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** ~~4-3-08~~ 4-4-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: S.W. Shipyard

Generator Name and Location: Waste water Tank-620

Ultimate Objective for Performing Analysis: W.W. Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Wastewater From Tank cleaning - pricing

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	99-100		
Oil	0-2		
Some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ___	Percent Oil ___
Specific Gravity ✓	Chlor-d-tect (oil phase) ___	pH ✓
Phenols ✓	Oil and Grease (water phase) ___	TOC ✓
Distillation Test ___	Metals ✓	Flash ✓
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Tank 31

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4-4-08

CES Sales Representative: Brueckmann

Requested Turnaround / Completion Date: ASAP

Customer Name: S.W. Shipyard

Generator Name and Location: Waste water Tank - 31

Ultimate Objective for Performing Analysis: W.W. Treatment - pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

W.W. Treatment - pricing

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Waste Water	90-95		
Oil	5-10		
Some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols____	Oil and Grease (water phase)____	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Tank B-2

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # _____ **Date:** 4.4.08

CES Sales Representative: Braucksieck

Requested Turnaround / Completion Date: ASAP

Customer Name: S.W. Shipyard

Generator Name and Location: Wastewater - Tank B-2

Ultimate Objective for Performing Analysis: W.W. Treatment - pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

W.W. Treatment - pricing

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Waste water	90-95		
oil	5-10		
Some caustic	0-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil ✓
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols ✓	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

TESTING LABORATORY IDENTIFICATION & INFORMATION:
CES

CHAIN of CUSTODY RECORD

CES Environmental Services, Inc.
4904 Griggs Road
Houston, TX 77021
Main Number: (713) 676-1460
Fax Number: (713) 676-1676

Test Results Reporting

CES Environmental Services, Inc.
Main Number: (713) 676-1460
Fax Number: (713) 676-1676

Project Name	Sample Name	Comments/Special Instructions:
Calpine	Chemical Cleaning Water	**Turnaround Time Required:**
Contact:		DATE and/or Number of Days: ASAP
SAMPLER: PRINT: SIGN:		**OTHER INFORMATION:** PH - 9 PHENOLS - 0 TREATS - EASY TOC - 2046 Cd .068 Cr .276 Cu .220 Ni .488 Zn .106
Type and Number of Containers (CIRCLE): Glass (1) 2 3 Grab 4 5 6 Other:		SAMPLE NAME/ID ('s): 0408 - 014 **CES Sample LOG BK Number ('s):**
Requested Analysis: Take or no Take? Send to Newpark or take to CES		☐ ☐

1. Relinquished By:	Date:	Time:	→ 2. Received By:	Date:	Time:
	04/08/07	11:00			
3. Relinquished By:	Date:	Time:	→ 4. Received By:	Date:	Time:
5. Relinquished By:	Date:	Time:	→ 6. Received By:	Date:	Time:

EPAHO113000284

CES Environmental Services, Inc.

TESTING LABORATORY IDENTIFICATION & INFORMATION:

CES

CHAIN of CUSTODY RECORD

CES Environmental Services, Inc.
4904 Griggs Road
Houston, TX 77021
Main Number: (713) 676-1460
Fax Number: (713) 676-1676

Test Results Reporting

CES Environmental Services, Inc.
Main Number: (713) 676-1460
Fax Number: (713) 676-1676

Project Name	Sample Name	Comments/Special Instructions:
Calpine	Chemical Cleaning N/A	**Turnaround Time Required:**
Contact:		DATE and/or Number of Days: ASAP
SAMPLER: PRINT: Dan Bowers SIGN:		**OTHER INFORMATION:** PH-9 PHENOLS-0 TREATS-EASY TOC-2249 Cd .063 Cr .329 Cu .152 Ni .292 ZN .676
Type and Number of Containers (CIRCLE): Glass (1) 2 3 Grab 4 5 6 Other:		SAMPLE NAME/ID ('s): 0408-015 **CES Sample LOG BK Number ('s):**
Requested Analysis: Can we take? Send to Newpark - or Take @ CES		☐ ☐

1. Relinquished By:	Date:	Time:	→	2. Received By:	Date:	Time:
	04/08/07	11:00				
3. Relinquished By:	Date:	Time:	→	4. Received By:	Date:	Time:
5. Relinquished By:	Date:	Time:	→	6. Received By:	Date:	Time:

EPAHO113000285

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0408-011 **Date:** 4/3/2008

CES Sales Representative: Dana
Requested Turnaround / Completion Date: standard

Customer Name: Enterprise Oil Tanking
Generator Name and Location: Enterprise OTI
Ultimate Objective for Performing Analysis: Disposal/recycling at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rainwater collected in containment that is contaminated with machine oils

WHEN THIN OILS, 5X HAS THE SLIGHTEST OF OIL SHEEN.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/ 2-5%	_____/_____
Water/95-98%	_____/_____
/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**_____	**Percent Oil**X
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** ~ 7
Phenols_~0_	**Oil and Grease (water phase)**X	**TOC**X ~ 874
Distillation Test_____	**Metals**_____	**Flash**X >140 F
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Cd .008
Cr 0
Cu .005
Ni .022
Zn 1.458

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-126 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES black oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Hitec 9227, hitec 343, hitec 6560 composite mixture

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

HiTEC 9227_____	_____/_____
HiTEC 343/_____	_____/_____
Hitec 6560/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash x	**Black Oil Suitability** x	**Viscosity_____ Specific Gravity_____**
Light End Suitability_____	**Distillation Test_____**	
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

121 - BLACK OIL

122 - BLACK OIL

123 - LIGHT ENDS

124 - BLACK OIL

125 - LIGHT ENDS

121 0408-001 - 13,111

122 0408-0012 1,7

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-125 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES light-ends

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HiTEC 5710A Product: Viscosity Improver

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mineral Oil/60-100% _____/_____
Methacrylate copolymer/30-60% _____/_____
Alkyl methacrylate/0.5-1% _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_	**Black Oil Suitability**	**Viscosity_____ Specific**
Gravity_____	**Light End Suitability** x	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-124 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES black oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HITEC 6560 Product: fuel additive

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Solvent naptha/30-60%	xylene/1-5
Polyolefin alkyl amine/20-30%	2-ethyl hexanol/1-5
1,2,4-trimethyl benzene/5-10%	cumene/1-5
n-propylbenzene/5-10%	benzene, 1,2,3,-trimethyl/1-5

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability** x	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-123 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES light-ends

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HiTEC 5777 Product: Viscosity Improver

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mineral Oil/60-100%	_____/_____
Alkylated long-chain alkyl alcohol/1-5%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_	**Black Oil Suitability**	**Viscosity_____ Specific**
Gravity_____	**Light End Suitability** x	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-122 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES black oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HITEC 343 Product: gear additive package

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Long-chain alkyl amine/5-10%	sulferized olefins/65-84
Alkyl phosphate/5-10%	_____/_____
Mineral oil/5-10%	_____/_____
Long-chain alkene amine/1-5%	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash x	**Black Oil Suitability** x	**Viscosity_____ Specific Gravity_____**
Light End Suitability_____	**Distillation Test_____**	
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-121 **Date:** 3/31/2008

CES Sales Representative: Joy
Requested Turnaround / Completion Date: by 4/2/08 10AM

Customer Name: Afton Chemical
Generator Name and Location: Afton
Ultimate Objective for Performing Analysis: oil compatability with CES black oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
HiTEC 9227 Product: Motor Oil Detergent Inhibitor Package

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mineral Oil/30-60%	_____/_____
Zinc dialkyl dithiophosphate/10-19.9%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash x	**Black Oil Suitability** x	**Viscosity_____ Specific**
Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-66 167 **Date:** 3-19-08

CES Sales Representative: Joe Wilson

Requested Turnaround / Completion Date: _____

Customer Name: Honeywell Bryan

Generator Name and Location: Honeywell Bryan TF.

Ultimate Objective for Performing Analysis: Treat High Fl Water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
distillation of hydroflouric acid

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

WATER	/ 98-100	_____	/ _____
Flouride	/ 0-2	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids - 8%	Percent Oil ✓ 0
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH - 8
Phenols____	Oil and Grease (water phase)___	TOC ✓ - 1239
Distillation Test____	Metals ✓	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List) TDS conductivity
Note: Must have an approved P.O. for any external lab analysis

Cd .054
Cr .453
Cu .098
Ni .294
Zn .088

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

TDS - 2.33%
CRUCIBLE - 59.8636
CRUCIBLE+SOLIDS - 60.3369
CRUCIBLE+LIQUIDS - 80.1646

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-112 **Date:** 3/27/2008

-20 DRUMS -
55 GAL x 20 = 1100

CES Sales Representative: Joy
Requested Turnaround / Completion Date: standard

A BLEND 4:1
SMELLS OK. -
NO NH3

Customer Name: Select Environmental
Generator Name and Location: Randalls's
Ultimate Objective for Performing Analysis: oil compatability with CES black oil, base oil, fuels, or lightends for accepting at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Frick oil: Refrigerant oil that contains ammonia

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/_____	_____/_____
Ammonia/_____	_____/_____
Water/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil** ✓
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash** ✓
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	**Black Oil Suitability** ✓ OK	**Viscosity** ✓
Specific Gravity ✓ D-0.865 API-32	**Light End Suitability** ✓ OK	**Distillation Test**_____
Flash ✓ > 140	**CES Fuel Suitability** ✓	**Hydro-scout**_____
Chlor-d-tect - 900	**Color**_____	**Chlor-n-oil** ✓
Water by Distillation_____	**Water Extractability**_____	

BUT TOO DARK

H_2O - BY CENTRIFUGE - 10%

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-107 **Date:** 3-26-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: Stewart Stevenson

Generator Name and Location: I-10

Ultimate Objective for Performing Analysis: Recycle - Black oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Collection of oil from oil water separator - Oily water from Wash Bay

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil	10-70		
Water	10-70		
Solids	0-5		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) 1,500	pH ✓ - water - 8
Phenols ✓ - water - 1 ppm	Oil and Grease (water phase)____	TOC ✓ - water - 1070
Distillation Test____	Metals____	Flash ✓ - >140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-89 Date: 3/25/08

CES Sales Representative: GARY BRANCHMAN
Requested Turnaround / Completion Date: ASAP

Customer Name: FUJITEC
Generator Name and Location: SAME PINEHILL LN HOU, TX 77041
Ultimate Objective for Performing Analysis: BURN IN OIL

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
USED OIL, MAYBE HYDRAULIC OIL FROM ESCALATOR & ELEVATOR WORK

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-88 **Date:** 3-24-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: ASAP

Customer Name: Hydrochem Deer Park
Generator Name and Location: Hydrochem at Austin Energy
Ultimate Objective for Performing Analysis: treatment and disposal at ces

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Wastewater from chemical cleaning of exchangers with water scale

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/ 95-98% ____/____
HCL/1-2% ____/____
Caustic-2% ____/____
Inhibitor/ <1% ____/____

Cd - 0
Cr - .062
Cu - .051
Ni .259
Zn .058

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X - 0	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**X - 10
PhenolsX - <1	**Oil and Grease (water phase)**_____	**TOC**X - 1112 mg/L
Distillation Test_____	**Metals**X-after treat	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

City of Austin

Austin's Community-Owned Electric Utility

Laboratory Services

Preliminary report, page 1 of 1

Report Date: 3/17/08
Decker Power Plant
Attn: JEarly, CHew, MSchiller
8003 Decker Lane
Austin, Texas 78724
(V)505-7343 (F)505-7305

Client ID	D2 Cooler Clean		
Lab Sample ID	08030027 - AE11005	**Collection Date**	3/13/2008 2:10:00 PM
Date Submitted	3/13/2008 2:48:00 PM	**Sampler**	M SCHILLER
Submitted by	M Schiller	**Sample Matrix**	Water
Received by	Emily Clark	**QC Sample ID:**	AE11005

Parameter Name	Result(s)	Units	Reference	Analysis Date	MDL	Analyst
Oil and Grease	PENDING	mg/L	E1664	1/1/1981		
Arsenic	<0.010	mg/L	E200.7	3/14/2008	0.010	PCO
Barium	0.014	mg/L	E200.7	3/14/2008	0.010	PCO
Cadmium	<0.010	mg/L	E200.7	3/14/2008	0.010	PCO
Chromium	0.075	mg/L	E200.7	3/14/2008	0.010	PCO
Copper	1.61	mg/L	E200.7	3/14/2008	0.010	PCO
Iron	84.4	mg/L	E200.7	3/14/2008	0.010	PCO
Lead	27.6	mg/L	E200.7	3/14/2008	0.010	PCO
Manganese	0.939	mg/L	E200.7	3/14/2008	0.010	PCO
Nickel	0.668	mg/L	E200.7	3/14/2008	0.010	PCO
Selenium	0.027	mg/L	E200.7	3/14/2008	0.010	PCO
Silver	<0.010	mg/L	E200.7	3/14/2008	0.010	PCO
Zinc	0.513	mg/L	E200.7	3/14/2008	0.010	PCO
Mercury	<0.2	µg/L	E245.1	3/13/2008	0.2	PCO
Total Suspended Solids	PENDING	mg/L	SM2540D	1/1/1981		

2401 Holly Street, Austin, Texas 78702 - P.O. Box 1088 78767 - (512) 505-7840 - Fax: (512) 505-7843

2401 Holly Street, Building B, Austin Tx 78702		Phone:(512) 505-7840	Fax: (512) 505-7843	Batch # 08030027
Sampler Name (print)	Michael Schiller	Project ID		
Client Name	Decker Creek Power Station			
Address	8003 Decker Lane			
City/State/Zip	Austin, Texas 78724			
Email Address	michael.schiller@austinenergy.com			
Telephone Number(s)	512-505-7343	Fax: 512-505-7305		
Report To (if different or additional)	James Earley, Christine Hew			
Invoice To (if different from above)	N/A		Address:	
Sample for environmental compliance	Yes	No	City/State/Zip	

Lab Check List--Samples Were:

1) Shipped Or Hand Delivered ~~DLC~~
2) Received In Good Condition ~~DLC~~
3) Temperature 19°C
4) Samples Will Be Sent Out ____
Customer Notified ____ *

Turnaround: Standard ____ Priority ____ Date ____
Circle : Hard Copy Email Verbal Fax

Please note below

Sample ID /Descriptions:	Lab ID #	# of Containers	Plastic (P) or Glass (G)	Preservative: NONE	Preservative: HCl	Preservative: HNO3	Matrix: WATER	Analyses to be done	Collection: Field pH	Collection: Date	Collection: Time	Lab pH & Initials
D2 Cooler Clean	AE11005	1	P	X			X	* See Attached		3-13-06	14:10	9
D2 Cooler Clean		1	G	X			X	*				9
D2 Cooler Clean		1	G		X		X	*				
D2 Cooler Clean		1	G			X	X	*				

Definitons and Suggestion; Matrix:Soils, Oils, Water, Sludge; Preservatives: HNO3, HCL, H2SO4, ICE, NONE

Special instructions:
* See attached e-mail from Linda Arredondo for analytical parameters.

Comments:

* Sample Sent To:

Relinquished By:	Michael Schiller	Time: 14:48	Received By:	Emily L. Clark
(Print)	Michael Schiller	Date: 3/13/06	(Print)	Emily Clark
Relinquished By:		Time:	Received By:	
(Print)		Date:	(Print)	

EPAHO113000300

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-82 **Date:** 3-20-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: Rush

Customer Name: SW Shipyard

Generator Name and Location: Channelview

Ultimate Objective for Performing Analysis: Recover oil from Sludge

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Waste water processing of Heels from Barges
Material is the resulting Sludge

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Solids	40%		
water	46%		
oil / Hydrocarbons	14%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil ✓
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH ___
Phenols ✓ (water)	Oil and Grease (water phase) ___	TOC ✓ (oil)
Distillation Test ___	Metals ✓	Flash ✓
GC/MS ___	Chlor-n-oil (oil phase) ✓	Centrifuge Test ✓

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) TCLP Benzene - Sludge from centerfuge + Total Benzene
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

Need $ (CES cart)

Note: 70000 Gallons of this

EPAHO113000301

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 030X-71 **Date:** 3-18-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: Rush

Customer Name: USES USES @ Mapleton

Generator Name and Location: @ Mapleton

Ultimate Objective for Performing Analysis: Fuels

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of #6 Fuel w/ Diesel

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Diesel	40-60		
#6 Oil	40-60		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_C_	Black Oil Suitability____	Viscosity____
Specific Gravity✓	Light End Suitability____	Distillation Test____
Flash✓	CES Fuel Suitability✓	Hydro-scout____
Chlor-d-tect✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability✓	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-70 **Date:** 3/18/08

CES Sales Representative: Jon

Requested Turnaround / Completion Date: Standard

Customer Name: Rineco

Generator Name and Location: Schlumberger Rosharon

Ultimate Objective for Performing Analysis: Pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Rainwater / run-off from secondary containment around test Rig

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	/ 95-100 %	____	/ ____
Crude Oil	/ 0-5 %	____	/ ____
____	/ ____	____	/ ____
____	/ ____	____	/ ____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ____	Percent Oil ____
Specific Gravity ____	Chlor-d-tect (oil phase) ____	pH ✓
Phenols ✓	Oil and Grease (water phase) ____	TOC ✓
Distillation Test ____	Metals ✓	Flash ____
GC/MS ____	Chlor-n-oil (oil phase) ____	Centrifuge Test ____

Other Internal Analysis (List) ____

Off-site Lab Analysis (List) ____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ____	Black Oil Suitability ____	Viscosity ____
Specific Gravity ____	Light End Suitability ____	Distillation Test ____
Flash ____	CES Fuel Suitability ____	Hydro-scout ____
Chlor-d-tect ____	Color ____	Chlor-n-oil ____
Water by Distillation ____	Water Extractability ____	

Other Internal Analysis (List) ____

Off-site Lab Analysis (List) ____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ____	Specific Gravity ____	Sulfides ____
Percent Sodium Hydroxide ____	Chlorides ____	Sodium ____
Percent Solids by Centrifuge ____	Oil by Centrifuge ____	TOC ____

Other Internal Lab Analysis (List) ____

Off-site Lab Analysis (List) ____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-59 **Date:** 3-14-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: Monday 3-17

Customer Name: Champion Technologies
Generator Name and Location: Champion Technologies Fresno
Ultimate Objective for Performing Analysis: Disposal of hazardous wastewater (carries D001 and D002 codes)

Tank 0~~308-59~~ 7906

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rinsewater from process vessels and operations

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/95-99%	_____/_____
Solids ____/0-2%	_____/_____
product/1-5%_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**X
PhenolsX	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**	**Flash**X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-58 **Date:** 3-14-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: Monday 3-17

Customer Name: Champion Technologies
Generator Name and Location: Champion Technologies Fresno
Ultimate Objective for Performing Analysis: Disposal of hazardous wastewater (carries D001 and D002 codes)

Tank ~~0308-58~~ 7907

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rinsewater from process vessels and operations

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/95-99%	_____/_____
Solids ___/0-2%	_____/_____
product/1-5%_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**X
PhenolsX	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**	**Flash**X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

FORT

~~$MeCl_2$ MeOH~~
~~7 46~~

Composite -

PH. 5

PHENOLS - 10

FLASH Pt - 125

TOC - 7485

SOLIDS - 0

METALS
Cd - .184
Cr - .247
Cu - .244
Ni - 0.2
Zn 5.7

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-57 **Date:** 3-13-08

CES Sales Representative: DC

Requested Turnaround / Completion Date: ASAP!!!!

Customer Name: Enterprise Products

Generator Name and Location: Enterprise Products Port Allen LA

Ultimate Objective for Performing Analysis: Recycle hydrocarbon + water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Lightend hydrocarbons from fractionating natural gas

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	/	Zn 7.12 PPM	/ Cd 0.003PPM
Amine	/	Ni 0.107 PPM	/
natural gas	/	Cu 0.055PPM	/
gasoline	/	Cr 0.024PPM	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH 10
Phenols 0	Oil and Grease (water phase)___	TOC X 8000
Distillation Test____	Metals____	Flash____ >140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability X	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-56 **Date:** 3-13-08

CES Sales Representative: DC

Requested Turnaround / Completion Date: ASAP !!!!

Customer Name: Enterprise Products

Generator Name and Location: Enterprise Products Port Allen LA

Ultimate Objective for Performing Analysis: ~~Test~~ Recycle KOH caustic

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
KOH from PCU unit (Scrubber)

KOH = NaOH value × 56 (KOH) / 40 (NaOH) = 26.95% KOH ≈ 27 % KOH

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

KOH	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity ~~X~~ 1.238	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide X	Specific Gravity ✓	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge X %	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-37 **Date:** 03/10/08

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: _____

Customer Name: Select Environmental
Generator Name and Location: Crude Oil Bottoms from a Refinery
Ultimate Objective for Performing Analysis: Treatability: Please centrifuge a large sample so Durim can take the solids to a third party lab for analysis. On the oily sludge, please run % oil, % water and % solids. On the water phase, please run metals, TOC, and treatability. On the oil phase please run flash and Chlor-d-tect.

15% Solids

OIL LAYER IS JUST A SHEEN.

1800

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
_____ SAMPLE TREATS W/ HEAT & H_2SO_4

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-08 - NOV Rig Solutions Date: 3/13/08

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: ASAP.

Customer Name: Crescent Drilling ← 0308-09

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Being in water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

N/A.

Provide a detailed Composition to the best of your knowledge: Bottle - National Oil Well Bucket - Crescent Drilling

Component / Approximate Percentage or PPM:

N/A	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X	pH____
Phenols____	Oil and Grease (water phase)____	TOC X
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CHLOR-D-TEST	NAT. OIL 300	CRESCENT DRILLING — NO OIL
pH	7	8
Oil	10	— 0
Solids	5	10
Toc	1308	1315
Metals		
Cd	.075	.077
Cr	.103	.064
Cu	.078	.039
Ni	.427	.481
Zn	.189	.685
PHENOL	0	0

EPAHO113000311

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-49 **Date:** 3/12/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Standard

Customer Name: Rineco

Generator Name and Location: Schlumberger Rosharon

Ultimate Objective for Performing Analysis: pricing on water profile approval

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Rinsewater, neutralized

NON TREAT

Cd - .205
Cu - .179
Cr 1.414
Ni - 1.201
Zn 7.04

WATER TREAT - WHEN ACIDIFIED, GASES COME OFF - ? CARBONATES

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Neutralized Phos. Acid 6%			/
Water / 94%			/
/			/
/			/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids** ✓ - 18%	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** -9
Phenols - 38	**Oil and Grease (water phase)**___	**TOC** ✓ - 3993 2/00
Distillation Test____	**Metals** ✓	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

TREATED

Cd - .146
Cu - .403
Cr - .092
Ni - 1.018
Zn - 2.535 ↖ 2.535

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-35 **Date:** 3-11-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: 3-12-08

Customer Name: Hydrochem
Generator Name and Location: Hydrochem at Entergy
Ultimate Objective for Performing Analysis: disposal at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Ammoniated EDTA water from chemical cleaning

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water/____	____/____	
EDTA/____	____/____	
Solids____	____/____	
____/____	____/____	

Cd - .076
Cr - 1.971
Cu - 7.43
Ni - 2.873
Zn - 7.28

Oxidize w/ bleach

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:
Wastewater TreatabilityX **Percent Solids**X - TR **Percent Oil**____
Specific Gravity____ **Chlor-d-tect (oil phase)**____ **pH** - 10
Phenols____ <1 **Oil and Grease (water phase)**____ **TOC**X - 3973
Distillation Test____ **Metals** X **Flash**____
GC/MS____ **Chlor-n-oil (oil phase)**____ **Centrifuge Test**____
Other Internal Analysis (List)____
Off-site Lab Analysis (List) TCLP Metals, RCI, BTEX
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

NOT TREATED

AMMONIA WHEN TREATED IS EVOLVED -

TREATED

Cd - .216
HIGH - Cr - 1.241
Cu - .461
HIGH - Ni - 2.270
HIGH - Zn - 5.7

LIMITS

0.2 0.137
1.0 0.715
2.0 3.412
2.0 1.680
3.0 0.151

BLEACHED

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-47 **Date:** 3-12-08

CES Sales Representative: Brackman

Requested Turnaround / Completion Date: _____

Customer Name: Hexion - Hope, AR

Generator Name and Location: Hope AR

Ultimate Objective for Performing Analysis: Treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Process water

Provide a detailed Composition to the best of your knowledge: VERBAL PHENOLS TO GRAV/ NO FURTHER TESTING NEEDED

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓
Phenols ✓ ~250 ppm	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-32 **Date:** 3/7/08

CES Sales Representative: JB

Requested Turnaround / Completion Date: _____

Customer Name: DELTA CHEMICAL - RAILPIT

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓ (oily)	Percent Solids ✓ 0-TR	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) ✓ -500	pH ✓
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals ✓	Flash ✓ (oil) > 140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

GHP

CES SAMPLE EVALUATION FORM

Sample ID # 0308-31 **Date:** 3-8-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: RUSH

Customer Name: H. Hayes - Baytown

Generator Name and Location: Baytown

Ultimate Objective for Performing Analysis: TO Receive Wastewater

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of Rail Cars Last Containing Gasoline & Heptane

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	98-99		
Gasoline	<1.0		
Heptane	<1.0		
Soap	1-2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids___	Percent Oil___
Specific Gravity___	Chlor-d-tect (oil phase)___	pH ✓ 6
Phenols ✓ <1	Oil and Grease (water phase) ✓	TOC ✓ 1893
Distillation Test___	Metals___	Flash ✓ >140F
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

Generator must declare that this material has a flash point >140°F and does not contain benzene

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___
Off-site Lab Analysis (List)___
Note: Must have an approved P.O. for any external lab analysis

GSL-07-1596

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-30 **Date:** 3-6-08

CES Sales Representative: DC

Requested Turnaround / Completion Date: today/tomorrow

Customer Name: PL Manufacturing

Generator Name and Location: PL Manufacturing Houston TX

Ultimate Objective for Performing Analysis: disposal of water at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
water used to cool down equipment in metal forging shop

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	98-99%		/
dirt/solids	1-2		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids** X TR 40.1	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH** - 6
Phenols___	**Oil and Grease (water phase)** X 0	**TOC** X 1202
Distillation Test___	**Metals** X	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___ Ni Zn Cd Cu
*****Note: Must have an approved P.O. for any external lab analysis***** .941 .210 .154 .280

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)___
Off-site Lab Analysis (List)___
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-79 **Date:** 3/6/08

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: CALPINE, BAYTOWN

Generator Name and Location: ↓ SAME

Ultimate Objective for Performing Analysis: CAN WE TAKE THIS FLUSH WATER

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

FLUSH WATER

Provide a detailed Composition to the best of your knowledge: ?

Component / Approximate Percentage or PPM:

METALS- Cd - 0.198
Cu 6,000
Ni - 0.978
Zn - 0.710

_____ / _____ _____ / _____
_____ / _____ _____ / _____
_____ / _____ _____ / _____
_____ / _____ _____ / _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH – 10
Phenols____	Oil and Grease (water phase)___	TOC___ – 2119
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

0308-10

~~Process Die Cast Water~~ EVAPORATOR WASTE CLASS 1

Run

Metals
TOC
% oil
Chlor Detect on oil saved
Treat ability
Check for metals

Please send results to jwilson@cesenvironmental.com
CC dbowman@cesenvironmental.com

ASAP Please

Thanks
Joe

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com NELAP-accredited #02008

evap water

Report To

Bill Zeinert
C & H Die Casting
PO Box 1170
Temple, TX 76503-1170

Project 339009

Results for Client CHDC

Parameter	Results	Units	RL	Flags	CAS	Bottle
878778 Oily Wastewater	(Evaporator Waste)					Received: 12/14/2006
Organic Liquid	Collected by: RMS		Affiliation: Ana-Lab			12/13/2006 1130
EPA 6020			Analyzed: WOB 12/22/2006		1701	QCgroup 211555
TCLP Arsenic	**0.0406**	**mg/L**	0.0100		7440-38-2	13
TCLP Barium	**0.342**	**mg/L**	0.00500		7440-39-3	13
TCLP Silver	**ND**	**mg/L**	0.00500		7440-22-4	13
EPA 1010			Analyzed: RED 12/19/2006		1350	QCgroup 210891
Flash Point (Reg. Limit 140.0 F)	**>201**	**Degrees F**				04
EPA 9045C			Analyzed: RED 12/19/2006		1325	QCgroup 210890
pH Measured in Water	**7.1 @ 21C**	**SU**				04
EPA Method 6020			Analyzed: WOB 12/22/2006		1701	QCgroup 211555
TCLP Cadmium	**0.00580**	**mg/L**	0.00500		7440-43-9	13
TCLP Chromium	**0.755**	**mg/L**	0.00500		7440-47-3	13
TCLP Lead	**0.740**	**mg/L**	0.00500		7439-92-1	13
TCLP Selenium	**0.0429**	**mg/L**	0.0150		7782-49-2	13
EPA Method 7470A			Analyzed: RLB 12/21/2006		1905	QCgroup 211300
TCLP Mercury	**ND**	**mg/L**	0.00150		7439-97-6	15
EPA Method 8260B			Analyzed: JDF 12/21/2006		1931	QCgroup 211410
Acetone	**ND**	**ug/kg**	500		67-64-1	06
Acrolein	**ND**	**ug/kg**	1000		107-02-8	06
Acrylonitrile	**ND**	**ug/kg**	500		107-13-1	06
Benzene	**ND**	**ug/kg**	500		71-43-2	06
Bromobenzene	**ND**	**ug/kg**	500		108-86-1	06
Bromochloromethane	**ND**	**ug/kg**	500		74-97-5	06
Bromodichloromethane	**ND**	**ug/kg**	500		75-27-4	06
Bromoform	**ND**	**ug/kg**	500		75-25-2	06
Bromomethane (Methyl Bromi	**ND**	**ug/kg**	1250		74-83-9	06
tert-Butylbenzene	**ND**	**ug/kg**	500		98-06-6	06
sec-Butylbenzene	**ND**	**ug/kg**	500		135-98-8	06
n-Butylbenzene	**ND**	**ug/kg**	500		104-51-8	06
tert-Butylmethylether (MTBE)	**ND**	**ug/kg**	500		1634-04-4	06
Carbon Tetrachloride	**ND**	**ug/kg**	500		56-23-5	06
Chlorobenzene	**ND**	**ug/kg**	500		108-90-7	06
Chloroethane	**ND**	**ug/kg**	1000		75-00-3	06
2-Chloroethylvinyl ether	**ND**	**ug/kg**	500		110-75-8	06
Chloroform	**ND**	**ug/kg**	500		67-66-3	06
Chloromethane	**1020**	**ug/kg**	500		74-87-3	06
1,2-Dibromo-3-chloropropane	**ND**	**ug/kg**	500		96-12-8	06
2-Chlorotoluene	**ND**	**ug/kg**	500		95-49-8	06
4-Chlorotoluene	**ND**	**ug/kg**	500		106-43-4	06
Dibromochloromethane	**ND**	**ug/kg**	500		124-48-1	06
1,2-Dibromoethane	**ND**	**ug/kg**	500		106-93-4	06
Dibromomethane	**ND**	**ug/kg**	500		74-95-3	06

EPAHO113000320

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com NELAP-accredited #02008

Report To:

Bill Zeinert
C & H Die Casting
PO Box 1170
Temple, TX 76503-1170

Project 339009

Results for Client CHDC

Parameter	Results	Units	RL	Flags	CAS	Bottle
878778 Oily Wastewater	(Evaporator Waste)					*Received:* 12/14/2006
Organic Liquid	*Collected by:* RMS		*Affiliation:* Ana-Lab			12/13/2006 1130
EPA Method 8260B			*Analyzed:* JDF	*12/21/2006*	*1931*	*QCgroup* *211410*
1,3-Dichlorobenzene	ND	ug/kg	500		541-73-1	06
1,2-Dichlorobenzene	ND	ug/kg	500		95-50-1	06
1,4-Dichlorobenzene	ND	ug/kg	500		106-46-7	06
Dichlorodifluoromethane	ND	ug/kg	500		75-71-8	06
1,1-Dichloroethane	ND	ug/kg	500		75-34-3	06
1,2-Dichloroethane	ND	ug/kg	1000		107-06-2	06
trans-1,2-Dichloroethene	ND	ug/kg	500		156-60-5	06
cis-1,2-Dichloroethene	ND	ug/kg	500		156-59-2	06
1,1-Dichloroethylene	ND	ug/kg	500		75-35-4	06
1,2-Dichloropropane	ND	ug/kg	500		78-87-5	06
2,2-Dichloropropane	ND	ug/kg	500		594-20-7	06
1,3-Dichloropropane	ND	ug/kg	500		142-28-9	06
cis-1,3-Dichloropropene	ND	ug/kg	500		10061-01-5	06
trans-1,3-Dichloropropene	ND	ug/kg	500		10061-02-6	06
1,1-Dichloropropene	ND	ug/kg	500		563-58-6	06
Ethylbenzene	ND	ug/kg	500		100-41-4	06
Hexachlorobutadiene	ND	ug/kg	500		87-68-3	06
Isopropylbenzene (Cumene)	ND	ug/kg	500		98-82-8	06
p-Isopropyltoluene	ND	ug/kg	500		99-87-6	06
Methyl ethyl ketone(Butanone)	ND	ug/kg	1500		78-93-3	06
Methyl Isobutyl Ketone	ND	ug/kg	500		108-10-1	06
Methylene Chloride	ND	ug/kg	1000		75-09-2	06
Naphthalene	ND	ug/kg	500		91-20-3	06
n-Propylbenzene	ND	ug/kg	500		103-65-1	06
Styrene	ND	ug/kg	500		100-42-5	06
1,1,2,2-Tetrachloroethane	ND	ug/kg	500		79-34-5	06
1,1,1,2-Tetrachloroethane	ND	ug/kg	500		630-20-6	06
Tetrachloroethylene	ND	ug/kg	500		127-18-4	06
Toluene	ND	ug/kg	500		108-88-3	06
1,2,4-Trichlorobenzene	ND	ug/kg	500		120-82-1	06
1,2,3-Trichlorobenzene	ND	ug/kg	500		87-61-6	06
1,1,1-Trichloroethane	ND	ug/kg	500		71-55-6	06
1,1,2-Trichloroethane	ND	ug/kg	500		79-00-5	06
Trichloroethylene	ND	ug/kg	500		79-01-6	06
Trichlorofluoromethane	ND	ug/kg	500		75-69-4	06
1,2,3-Trichloropropane	ND	ug/kg	1000		96-18-4	06
1,2,4-Trimethylbenzene	ND	ug/kg	500		95-63-6	06
1,3,5-Trimethylbenzene	ND	ug/kg	500		108-67-8	06
Vinyl Chloride	ND	ug/kg	500		75-01-4	06
m- and p-Xylene	ND	ug/kg	500		108-38-3	06
o-Xylene	ND	ug/kg	500		95-47-6	06
EPA Method 8270C			*Analyzed:* KLB	*12/27/2006*	*1724*	*QCgroup* *211936*
Acenaphthene	ND	ug/kg	333000		83-32-9	17

EPAHO113000321

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com NELAP-accredited #02008

Report To

Bill Zeinert
C & H Die Casting
PO Box 1170
Temple, TX 76503-1170

Project 339009

Results for Client CHDC

Parameter	Results	Units	RL	Flags	CAS	Bottle
878778 Oily Wastewater	(Evaporator Waste)					*Received:* 12/14/2006
Organic Liquid	*Collected by:* RMS		*Affiliation:* Ana-Lab			12/13/2006 1130
EPA Method 8270C			*Analyzed: KLB*	*12/27/2006*	*1724*	*QCgroup* *211936*
Acenaphthylene	ND	ug/kg	333000		208-96-8	17
Anthracene	ND	ug/kg	333000		120-12-7	17
Benzidine	ND	ug/kg	9990		92-87-5	17
Benzo(a)anthracene	ND	ug/kg	333000		56-55-3	17
Benzo(a)pyrene	ND	ug/kg	333000		50-32-8	17
Benzo(b)fluoranthene	ND	ug/kg	333000		205-99-2	17
Benzo(ghi)perylene	ND	ug/kg	333000		191-24-2	17
Benzo(k)fluoranthene	ND	ug/kg	333000		207-08-9	17
Benzyl Butyl phthalate	ND	ug/kg	333000		85-68-7	17
4-Bromophenyl phenyl ether	ND	ug/kg	333000		101-55-3	17
Di-n-butylphthalate	ND	ug/kg	333000		84-74-2	17
Indeno(1,2,3-cd)pyrene	ND	ug/kg	333000		193-39-5	17
Bis(2-chloroethoxy)methane	ND	ug/kg	333000		111-91-1	17
Bis(2-chloroethyl)ether	ND	ug/kg	333000		111-44-4	17
Bis(2-chloroisopropyl)ether	ND	ug/kg	333000		108-60-1	17
2-Chloronaphthalene	ND	ug/kg	333000		91-58-7	17
2-Chlorophenol	ND	ug/kg	333000		95-57-8	17
4-Chlorophenyl phenyl ethe	ND	ug/kg	333000		7005-72-3	17
Chrysene	ND	ug/kg	333000		218-01-9	17
Dibenz(a,h)anthracene	ND	ug/kg	333000		53-70-3	17
1,3-Dichlorobenzene	ND	ug/kg	333000		541-73-1	17
1,2-Dichlorobenzene	ND	ug/kg	333000		95-50-1	17
1,4-Dichlorobenzene	ND	ug/kg	333000		106-46-7	17
3,3'-Dichlorobenzidine	ND	ug/kg	333000		91-94-1	17
2,4-Dichlorophenol	ND	ug/kg	333000		120-83-2	17
2,6-Dichlorophenol	ND	ug/kg	333000		87-65-0	17
Diethyl phthalate	ND	ug/kg	333000		84-66-2	17
Dimethyl phthalate	ND	ug/kg	333000		131-11-3	17
2,4-Dimethylphenol	ND	ug/kg	333000		105-67-9	17
2,4-Dinitrophenol	ND	ug/kg	333000		51-28-5	17
2,4-Dinitrotoluene	ND	ug/kg	333000		121-14-2	17
2,6-Dinitrotoluene	ND	ug/kg	333000		606-20-2	17
1,2-DPH (as azobenzene)	ND	ug/kg	333000		122-66-7	17
Bis(2-ethylhexyl)phthalate	ND	ug/kg	333000		117-81-7	17
Fluoranthene	ND	ug/kg	333000		206-44-0	17
Fluorene	ND	ug/kg	333000		86-73-7	17
Hexachlorobenzene	ND	ug/kg	333000		118-74-1	17
Hexachlorobutadiene	ND	ug/kg	333000		87-68-3	17
Hexachlorocyclopentadiene	ND	ug/kg	333000		77-47-4	17
Hexachloroethane	ND	ug/kg	333000		67-72-1	17
Isophorone	ND	ug/kg	333000		78-59-1	17
P-Chloro-M-Cresol (4-Chloro-3-me	ND	ug/kg	333000		59-50-7	17
4,6-Dinitro-2-methylphenol	ND	ug/kg	333000		534-52-1	17
Naphthalene	ND	ug/kg	333000		91-20-3	17

EPAHO113000322

Ana-Lab Corp. P.O. Box 9000 Kilgore, TX 75663

Phone 903/984-0551 FAX 903/984-5914 e-Mail corp@ana-lab.com NELAP-accredited #02008

Report To

Bill Zeinert
C & H Die Casting
PO Box 1170
Temple, TX 76503-1170

Project 339009

Results for Client CHDC

Parameter	Results	Units	RL	Flags	CAS	Bottle
878778 Oily Wastewater	(Evaporator Waste)				*Received:*	12/14/2006
Organic Liquid	*Collected by:* RMS		*Affiliation:* Ana-Lab		12/13/2006	1130
EPA Method 8270C			*Analyzed: KLB*	*12/27/2006*	*1724*	*QCgroup* *211936*
Nitrobenzene	ND	ug/kg	333000		98-95-3	17
2-Nitrophenol	ND	ug/kg	333000		88-75-5	17
4-Nitrophenol	ND	ug/kg	333000		100-02-7	17
N-Nitrosodimethylamine	ND	ug/kg	333000		62-75-9	17
N-Nitrosodiphenylamine (as DPA	ND	ug/kg	333000		86-30-6	17
Di-n-octylphthalate	ND	ug/kg	333000		117-84-0	17
Pentachlorophenol	ND	ug/kg	333000		87-86-5	17
Phenanthrene	ND	ug/kg	333000		85-01-08	17
Phenol	ND	ug/kg	333000		108-95-2	17
N-Nitrosodi-n-propylamine	ND	ug/kg	333000		621-64-7	17
Pyrene	ND	ug/kg	333000		129-00-0	17
1,2,4-Trichlorobenzene	ND	ug/kg	333000		120-82-1	17
2,4,6-Trichlorophenol	ND	ug/kg	333000		88-06-2	17
2,4,5-Trichlorophenol	ND	ug/kg	333000		95-95-4	17
EPA SW846 7.3.3.2			*Analyzed: MDD*	*12/19/2006*	*0121*	*QCgroup* *210860*
Reactivity Cyanide(Reg. Lim 250)	ND	mg/kg	100			07
SM 18th 2540 G			*Analyzed: LLW*	*12/19/2006*	*2027*	*QCgroup* *210889*
Total Solids	14.0	%	0.1			01
SW-846			*Analyzed: CAL*	*12/22/2006*		
Reactivity	Non-Reactive					
SW-846 Ch 7, 7.2.2			*Analyzed: TLK*	*12/20/2006*	*1200*	*QCgroup* *211019*
Corrosivity	Non-Corrosive		3			04
SW-846 Ch 7.3.4.2			*Analyzed: MDD*	*12/21/2006*	*1400*	*QCgroup* *211269*
Reactivity Sulfide(Reg. Lim 500)	ND	mg/kg	10.0			07
TX Method 1005			*Analyzed: MPM*	*12/22/2006*	*1857*	*QCgroup* *211527*
C12 to C28 TPH	426	mg/kg	80.0			08
C28 to C36 TPH	218	mg/kg	80.0			08
C6 to C12 TPH	ND	mg/kg	80.0			08
TX Method 1005			*Analyzed: CAL*	*12/26/2006*	*15:22*	
C6 to C36 TPH	644	mg/kg	80.0			

Sample Preparation

878778 **Oily Wastewater** (Evaporator Waste) *Received:* 12/14/2006

EPAHO113000323

0308-11

Process Die Cast Water

Run

Metals
TOC
% oil
Chlor Detect on oil saved
Treat ability
Check for metals

Please send results to jwilson@cesenvironmental.com
CC dbowman@cesenvironmental.com

ASAP Please

MSDS for constituents included

Water 0-90 %
Mineral oil 0-5 %
Glycols 0-5 %

Generator Knowledge

Thanks
Joe

7

MATERIAL SAFETY DATA SHEET

MANUFACTURER'S NAME: G.W. SMITH & SONS, INC. DATE PREPARED: 07-14-97
ADDRESS: 1700 SPAULDING ROAD SUPERSEDES: 09-03-96
DAYTON, OHIO 45432 TS = TRADE SECRET
EMERGENCY TELEPHONE NO.: (937) 253-5114
OTHER INFORMATION CALLS: (937) 253-5114

I. IDENTIFICATION

PRODUCT NAME: HYDRO SLICK #FR-200
CHEMICAL NAME: Not applicable (mixture)
CHEMICAL FAMILY: Glycols
FORMULA: Trade Secret
MOLECULAR WEIGHT: Not applicable (mixture)
SYNONYMS: None
CAS NO. & NAME: See Section III, "Ingredients"

II. PHYSICAL DATA

BOILING POINT, 760 mm Hg: 105.8 C (222°F.)
SPECIFIC GRAVITY (water=1): 1.087 at 20/20 C
VAPOR DENSITY (air=1): 1.3
FREEZING POINT: pour point -52 C (-61 F)
VAPOR PRESSURE at 20°C: 14.73
SOLUBILITY IN WATER, by wt.: 100%
EVAPORATION RATE (BUTYL ACETATE = 1): 1
APPEARANCE: Transparent Red
ODOR: Mild musty
PHYSICAL STATE: Liquid

III. INGREDIENTS

%	MATERIAL	CAS#	EXPOSURE LIMIT
<50	Diethylene Glycol	111-46-6	See Section V
<45	Water	7732-18-5	None established
<20	Trade secret Polyalkylene	None	None established
< 5	Trade secret additives	None	None established

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method(s): None
Pensky-Martens Closed Cup ASTM D 93
None
Cleveland Open Cup ASTM D 92

FLAMMABLE LIMITS IN AIR, % BY VOLUME:
Lower: Not Determined, Aqueous System
Upper: Not Determined, Aqueous System

SECTION V. CONTINUED

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION: A chronic dietary feeding study of diethylene glycol with rats showed mild kidney injury at 1% while concentrations of 2% and 4% caused more marked kidney injury. In addition, at 2% and 4% of diethylene glycol in the diet, some rats developed benign papillary tumors in the urinary bladder. These have been attributed to the presence of urinary bladder calcium oxalate stones. No evidence for carcinogenicity was found with a chronic skin-painting study with diethylene glycol in mice. The absence of a direct chemical carcinogenic effect accords with the results in in vitro genotoxicity studies which show that it does not produce mutagenic or clastogenic effects. A feeding study employing up to 5.0% diethylene glycol in the diet failed to produce any teratogenic effects.

In a mouse continuous breeding study with large doses of diethylene glycol in drinking water, there was evidence for reproductive toxicity at 3.5% (equivalent to 6.1 g/kg/day) as reduced number of litters, live pups per litter, and live pup weight. No such effects were seen at 1.75% (approximately 3.05 g/kg/day). The relevance of these very high dosages to human health is uncertain.

Pregnant rats receiving undiluted diethylene glycol by gavage over the period of organogenesis had toxic effects at 4.0 and 8.0 ml/kg/day as mortality, decreased body weight, decreased food consumption, increased water consumption, and increased liver and kidney weights.
Fetotoxicity was seen only at these maternally toxic dosages. Decreased fetal body weight occurred at 8.0 ml/kg/day, and increased skeletal variants at 4.0 and 8.0 ml/kg/day. No embryotoxic or teratogenic effects were seen. Neither maternal toxicity nor fetotoxicity occurred at 1.0 ml/kg/day. In a study with mice also receiving undiluted diethylene glycol over the period of organogensis, maternal toxicity occurred at 2.5 and 10.0 ml/kg/day, but not at 0.5 ml/kg/day. Definitive developmental toxicity was not seen in this species.
Contains one or more amines which may react with nitrites to form nitrosamines. Some nitrosamines have been shown to be carcinogenic in laboratory animals. A component of this material has been reported to cause embryofetal toxicity in laboratory animals.

SECTION V. CONTINUED

OTHER EFFECTS OF OVEREXPOSURE: Overexposure to vapor, aerosol or mist generated at high temperature may result in eye and respiratory tract irritation, dizziness, nausea and the inhalation of harmful amounts of material.
Short-term repeated ingestion of diethylene glycol may produce renal failure.

EMERGENCY AND FIRST AID PROCEDURES: SWALLOWING: If patient is fully conscious, give two glasses of water. Induce vomiting. Obtain medical attention without delay.

SKIN: Remove contaminated clothing. Wash skin with soap and water. If irritation persists or if contact has been prolonged, obtain medical attention.

INHALATION: Remove to fresh air

EYES: Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention.

NOTES TO PHYSICIAN: It is estimated that the lethal oral dose to adults is of the order of 1.0-1.2 ml/kg. Diethylene glycol produces metabolites that cause an elevated anion-gap metabolic acidosis and renal tubular injury. Liver injury may occur, but not as severe as kidney injury. The signs and symptoms in diethylene glycol poisoning are those of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria, and oxaluria.
The currently recommended medical management of diethylene glycol poisoning includes elimination of diethylene glycol and its metabolites, correction of metabolic acidosis, and prevention of kidney injury. It is essential to have immediate and follow-up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance, and liver and kidney function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance status is used to achieve correction of metabolic acidosis and forced diuresis. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood diethylene glycol concentration greater than 25 mg/dl, or compromise of renal function. There are no reported cases in which ethanol has been used antidotally, although a limited number of laboratory animal studies suggest that it may be effective.

SECTION V. CONTINUED

If used clinically, a therapeutically effective blood concentration is probably around 100-150 mg/dl, although this is unproven; this concentration should be achieved by a rapid loading dose and maintained by intravenous infusion. One animal study has suggested that pyrazole may be an effective early antidote, but its value in human diethylene glycol poisoning is unproven.
Exposure to the vapor may cause minor transient edema of the corneal epithelium. This condition, referred to as "glaucopsia", "blue haze" or "blue-gray haze", produces a blurring of vision against a general bluish haze and the appearance of halos around bright objects. The effect disappears spontaneously within a few hours of the end of an exposure and leaves no sequelae. Although not detrimental to the eye per se, glaucopsia predisposes an affected individual to physical accidents and reduces the ability to undertake skilled tasks, such as driving a motorized vehicle.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: **WARNING!** Do not mix this product with nitrites or other nitrosating agents because a nitrosamine may be formed. Nitrosamines may cause cancer.

INCOMPATIBILITY (Materials to avoid): Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Combustion may produce the following products: Oxides of carbon and nitrogen. See section V, "Other Effects of Overexposure". Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None known

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Wear suitable protective equipment, especially eye protection. See Section VIII.

SECTION VII. CONTINUED

Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.

WASTE DISPOSAL METHOD: Incinerate in a furnace or otherwise dispose of in accordance with applicable Federal, State, and local requirements.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type): If high vapor concentrations exist, wear NIOSH-approved breathing air equipment or NIOSH-approved face mask with organic vapor cartridge and dust or mist pre-filter (not for use in fire fighting or in atmospheres with reduced oxygen content).

VENTILATION: General (mechanical) room ventilation is satisfactory for use at low temperatures. If used at high temperatures, special local ventilation is recommended at points where vapors can be expected to escape to the workplace air.

PROTECTIVE GLOVES: Polyvinyl chloride coated

EYE PROTECTION: Monogoggles

OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DANGER! HARMFUL OR FATAL IF SWALLOWED.
CAUSES EYE IRRITATION. VAPOR, AEROSOL OR MIST OF THE PRODUCT AND THERMAL DEGRADATION PRODUCTS GENERATED AT HIGH TEMPERATURE CAN BE IRRITATING AND HARMFUL IF INHALED.
MAY CAUSE LIVER AND KIDNEY DAMAGE.
VAPOR MAY CAUSE TEMPORARY BLURRING OF VISION.
Do not swallow.
Avoid contact with eyes.
Avoid breathing vapor, aerosol and mist.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
Do not add nitrites or other nitrosating agents.
A nitrosamine, which may cause cancer, may be formed.

FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS: None Known.

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS: The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA: Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are: ***NONE***

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

Components present in this product at a level which could require reporting under the statute are: ***NONE***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are: ***NONE***

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS: The ingredients of this product are on the TSCA inventory.

STATE RIGHT-TO-KNOW

California Proposition 65: This product contains no levels of listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

SECTION X. CONTINUED

Components present in this product at a level which could require reporting under the statute are: ***NONE***

Pennsylvania Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

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

HAZARDOUS SUBSTANCES (= > 1%)

Chemical	CAS NUMBER	UPPER BOUND CONCENTRATION%
Diethylene Glycol	111-46-6	50.00000

California SCAQMD Rule 443.1 VOC's:
Volatiles = Substances with a vapor pressure of = > 0.5 mmHg at 104 C. (219.2 F.)

This product contains:

484.03 g/liter of VOC
835.36 g/liter of Material less Exempted Compounds

Other Regulatory Information: EPA Hazard Categories: Immediate Health, Delayed Health

NOTE---
We believe the information contained herein is reliable, but is given without warranty or guarantee of any kind, expressed or implied, and we assume no responsibility for any loss, damage or expense, arising out of its use. Since the use of this information and the conditions of use of the product are not within control of G.W. SMITH & SONS, INC., it is the user's obligation to determine the conditions of safe use of the product.

REVISED SECTIONS: Section II - Physical Data
Section IX - Special Precautions
Precautions to be taken in handling and storage

D/C RELEASE AGENT

QUICK IDENTIFIER (Is Plant Common Name)

Material Safety Data Sheet

(b) (4)

[redacted]

0308-12

Oily Water

Run

% oil
TOC on water
Metals on water
Chlor Detect

Please send results to jwilson@cesenvironmental.com
CC dbowman@cesenvironmental.com

ASAP Please

Thanks
Joe

CES Environmental Services, Inc.

WEST ENGINE ROOM SLUDGE

CES SAMPLE EVALUATION FORM

Sample ID # 0308-02 **Date:** 3/1/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Standard

Customer Name: Stoltharen

Generator Name and Location: Same

Ultimate Objective for Performing Analysis: Pricing and treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Engine room oily water from barges incoming

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	90-100		
Oil	1-10%		
Solids	0-2%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ___	Percent Oil ✓
Specific Gravity D- 0.953	Chlor-d-tect (oil phase) ___	pH ✓
Phenols ___	Oil and Grease (water phase) ___	TOC ✓
Distillation Test ___	Metals ✓	Flash ___ >140°F
GC/MS ___	Chlor-n-oil (oil phase) ~700	Centrifuge Test ___

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability ___	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___

Off-site Lab Analysis (List) ___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0308-01 **Date:** 3/1/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP - By Mon 10AM

Customer Name: Arrow Recycling

Generator Name and Location: Same

Ultimate Objective for Performing Analysis: pricing for Judge to be brought into Jacicity Monday

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Sludge / tank bottoms from [redacted] Oil storage tank

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Oil	10-40%		
Solids	10-20%		
Sludge	10-40%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids ✓ 35%	Percent Oil ✓ 20% - THICK & CHUNKY
Specific Gravity____	Chlor-d-tect (oil phase) ✓ 700 mg/L	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash ✓ > 140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test ✓

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-61 **Date:** 7/26/08

CES Sales Representative: Joy Baker

Requested Turnaround / Completion Date: ASAP

Customer Name: Schlumberger

Generator Name and Location: 110 Schlumberger Dr.

Ultimate Objective for Performing Analysis: Waste Management

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

N/A

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-47 Date: 2-22-08

CES Sales Representative: Brauchmann

Requested Turnaround / Completion Date: RUSH

Customer Name: Allstate.

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Diesel spill in water

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH ✓ > 6
Phenols____	Oil and Grease (water phase)___	TOC ✓ 710
Distillation Test____	Metals____	Flash ✓ > 140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-42 **Date:** 2-20-08

CES Sales Representative: MB
Requested Turnaround / Completion Date: _____

Customer Name: Kmco
Generator Name and Location: Crosby
Ultimate Objective for Performing Analysis: _____
Run filtration through 1 Micron filter, then give 1 sample back to Matt & store thy other
Provide a Detailed Description of the Process Generating the Waste, Material, or Product: _____ N/A

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	Percent Solids_____	Percent Oil_____
Specific Gravity_____	Chlor-d-tect (oil phase)_____	pH_____
Phenols_____	Oil and Grease (water phase)_____	TOC_____
Distillation Test_____	Metals_____	Flash_____
GC/MS_____	Chlor-n-oil (oil phase)_____	Centrifuge Test_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	Black Oil Suitability_____	Viscosity_____
Specific Gravity_____	Light End Suitability_____	Distillation Test_____
Flash_____	CES Fuel Suitability_____	Hydro-scout_____
Chlor-d-tect_____	Color_____	Chlor-n-oil_____
Water by Distillation_____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	Specific Gravity_____	Sulfides_____
Percent Sodium Hydroxide_____	Chlorides_____	Sodium_____
Percent Solids by Centrifuge_____	Oil by Centrifuge_____	TOC_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-33 **Date:** 2-15-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: Tesco Industries-Bellville

Generator Name and Location: Bellville

Ultimate Objective for Performing Analysis: Black Oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Used oil from equipment fluid changes

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

motor oil	40-60		/
water	40-60		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash >140°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ < 500 ppm	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 020829 (2-Jars) **Date:** 2-13-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: TEPPCO

Generator Name and Location: TX City

Ultimate Objective for Performing Analysis: See if we can solubilize in Light Ends or diesel & send solution out to Fuels

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of Crude Oil Tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

	/	Crude Tank 174 Hours	100%
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End ~~Suitability~~ Solubility	Distillation Test____
Flash____	CES Fuel Suitability ✓	Hydro-scout____
Chlor-d-tect ✓ (Consolation if Joe)	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Sulfur. Determine if solid content is organic is it parakins or Rust scale

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CETANE
HT 4103

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 020830 **Date:** 2-13-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: Ethyl

Generator Name and Location: Pasadena

Ultimate Objective for Performing Analysis: Fuels, or Base oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Off spec fuel additive product
4103 cetane Improver

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:
Petroleum product 100%
(See MSDS) / ____
____ / ____
____ / ____
____ / ____
____ / ____
____ / ____
____ / ____
____ / ____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Low Viscosity - Light Color - Light Ends Recommended

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability✓	Distillation Test____
Flash____	CES Fuel Suitability✓	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) Base Oil Suitability ✓
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

LED3

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-31 **Date:** 2-13-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: Ethyl

Generator Name and Location: Pasadena

Ultimate Objective for Performing Analysis: Fuels or Base oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Out of spec Fuel Additive

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Petroleum	/		/
(see MSDS)	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability ✓	Viscosity____
Specific Gravity____	Light End Suitability ✓	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

SAVOTOQUIN

CES SAMPLE EVALUATION FORM

Sample ID # 0208-32 **Date:** 2-13-08

CES Sales Representative: Gary B

Requested Turnaround / Completion Date: ASAP

Customer Name: Ethyl

Generator Name and Location: Pasadena

Ultimate Objective for Performing Analysis: Fuels or Base Oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Out of Spec Fuel Additive

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Petroleum	/		/
(See MSDS)	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____ Viscous, Dark-

Off-site Lab Analysis (List)_____ Base or Black Oil

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability✓	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-21 (2 bottles) **Date:** 2-11-08

CES Sales Representative: Dana

Requested Turnaround / Completion Date: ASAP

Customer Name: IESI Hardin County Landfill
Generator Name and Location: IESI Hardin County Landfill, Kountze
Ultimate Objective for Performing Analysis: disposal of wastewater at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Rainwater that came in contact with trash

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/99-100%	____/____
Soilds/0-1% - maybe more	____/____
____/____	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids** X <0.1	**Percent Oil** ~ - none
Specific Gravity_____ ok	**Chlor-d-tect (oil phase)**_____	**pH** X - 6
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X - 988
Distillation Test_____	**Metals**X	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-15 **Date:** 2/6/2008

CES Sales Representative: Matt Bowman
Requested Turnaround / Completion Date: 2/7/2008

Customer Name: Kinder Morgan - Pasadena
Generator Name and Location: Kinder Morgan – Pasadena vac box
Ultimate Objective for Performing Analysis: To determine if we can take material and see how to handle it; see if we can recover diesel; if not run black oil tests; suitability to blend. IF we can recover the diesel, don't run black oil tests requested….

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
One of two vac boxes of water/diesel sludge from washing out diesel tanks.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

dirt/0-40%	diesel/30-40%	THIS IS A H_2O SOL. SLUDGE - FILTER PRESS OR TALK TO LAND FILL
rust/0-40%	_____/_____	
sand/0-40%	_____/_____	
water/30-40 %	_____/_____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	**Black Oil Suitability** X	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect X	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-14 **Date:** 2/6/2008

CES Sales Representative: Matt Bowman
Requested Turnaround / Completion Date: 2/7/2008

Customer Name: Kinder Morgan - Pasadena
Generator Name and Location: Kinder Morgan – Pasadena vac box
Ultimate Objective for Performing Analysis: To determine if we can take material and see how to handle it; see if we can recover diesel; if not run black oil tests; suitability to blend. IF we can recover the diesel, don't run black oil tests requested....

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
One of two vac boxes of water/diesel sludge from washing out diesel tanks.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

dirt/0-40%	diesel/30-40%
rust/0-40%	_____/_____
sand/0-40%	_____/_____
water/30-40 %	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH_____**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	**Black Oil Suitability** X	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect X	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-13 **Date:** 2/6/08

CES Sales Representative: Dan

Requested Turnaround / Completion Date: ASAP

Customer Name: Ball Corp

Generator Name and Location: Ball Container Corp. Conroe, TX

Ultimate Objective for Performing Analysis: Determine what market if any this material can be recycled

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Lube Oils, Hydrolic Oils, Water Soluable lubricant used in making of Aluminum Cans

CRUCIBLE - 51.6814
" +5x - 52.7460
CRUCIBLE + ASH 51.6735

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Lube Oils	/ 3-5 %		/
Hydrolic Oils	/ 3-5 %		/
(MSDS) Quaker 201 CLA410B	50-75%		/
Water	/ 5-25%		/

BTU - 18,130 %H_2O - 1.5 VOL%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) 500	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals x on solids	Flash X >140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test X

Other Internal Analysis (List) Call Dan when you get Flash - will determine Further Testing

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

↓ Depends on Flash Point

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-05 **Date:** 2/6/08

CES Sales Representative: Dan Bowman
Requested Turnaround / Completion Date: 2/7/08

Customer Name: Precision Fluids
Generator Name and Location: 1210 West Sam Houston Pkwy
Ultimate Objective for Performing Analysis: Recycle as coolant & oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Coolant & Oil from

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Coolant	/ 25-50%		/
Oil	/ 2-5%		/
Water	/ 50-75%		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X ~ 0.5	Percent Oil X ~ 2%
Specific Gravity____	Chlor-d-tect (oil phase) X > 4000	pH X ~ 7
Phenols____	Oil and Grease (water phase)___	TOC X 7050
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Cd	Cr	Cu	Ni	Zn
.013	0.00	3.196	0.230	3.475

Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-04 **Date:** 2/6/08

CES Sales Representative: Dan Bowman
Requested Turnaround / Completion Date: 2/7/08

Customer Name: Precision Fluids (Dresser
Generator Name and Location: 1210 West Sam Houston Pkwy
Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Degreaser / Water used to clean metal cutting machines.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	/ 75-95%		/
Degreaser (MSDS)	/ 5-25%		/
Debris Dirt/Sand Etc	/ 1-5%		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ~~X~~	Percent Solids X - 1.5%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X - 10
Phenols____	Oil and Grease (water phase)____	TOC X - 1420
Distillation Test____	Metals X	Flash X -> 140
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____ Cd Cr Cu Ni Zn .029 0.01 0.224 0.126 0.330
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT INFORMATION

ame: TORNADO
Subtitle: HEAVY DUTY DEGREASER
Supplier's Name: Precision Fluids, Inc.
Supplier's Address: 5230 Brittmoore Rd. * Houston, TX 77041
ShippingName: Cleaning Compound, Liquid NOS
HazardClass: NON REGULATED

ChemicalFamily: N/A
Formula: N/A
Phone Number: (713) 896-0606

NPCA Hazardous Materials Identification System

Health	2
Flammability	0
Reactivity	0
Maximum Personal Protection	B

SECTION 2 - INGREDIENTS

NAME	CAS#	Wt%	PEL	TWA-TLV	STE-TLV	CARCINOGEN
Potassium Hydroxide 45%	1310-58-3	0 to 5	N/E	2mg/m3	N/E	No
Sodium Metasilicate	6834-92-0	10 to 15	2mg/m3	2mg/m4	N/E	No
2-Butoxyethanol	111-76-2	5 to 10	25 ppm	25 ppm	N/E	No

NO OTHER HAZARDOUS INGREDIENTS ARE CONTAINED IN THIS PRODUCT

SECTION 3 - PHYSICAL DATA

Boiling Range: 212+ **Specific Gravity:** 1.07
Vapor Pressure: 20 **Vapor Density:** >1
% Volatile: >71 **pH:** 12.0+
Solubility: 100% **Evaporation Rate:** <1
Physical Description: *Clear purple liquid with mild butyl scent.*

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point (Method Used TCC): N/A
Upper Explosive Limit: N/A
Lower Explosive Limit: N/A
Extinguishing Media: N/A
Special Fire Fighting Procedures: Not Flammable
Unusual Fire & Explosion Hazards: N/A

SECTION 5 - REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility (Materials to Avoid): Strong Acids
Hazardous Decomposition Products: Alkaline vapors in a fire

SECTION 6 - STORAGE AND HANDLING INFORMATION

Precautions to be taken in Handling & Storage: Keep out of reach of children. For use by trained personnel only. Keep container closed during storage. For institutional and industrial use only.

SECTION 7 - HEALTH HAZARDS

EFFECTS OF OVEREXPOSURE

Primary Route of Entry:

Skin:
Skin irritant. Prolonged or repeated exposure may cause moderate reddening or swelling.

Eyes:
Severe eye irritant. Liquid and mists can cause corneal injury.

Inhalation:
Vapors may be irritating to mucous membranes of the nose, throat and lungs.

Ingestion:
May be irritating to the mouth, throat, esophagus and gastrointestinal system. Vomiting and diarrhea expected with large doses.

FIRST AID PROCEDURES

Skin:
Remove contaminated clothing. Flush exposed area with large quantities of water. Seek medical attention if irritation persists.

Eyes:
Flush eyes with large quantities of water. Seek medical attention if irritation persists.

Inhalation:
Get to fresh air. Seek medical attention if symtoms persist.

Ingestion:
Drink two glasses of water. Seek medical attention immediately.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Information: Use with adequate ventilation.
Protective Gloves: Waterproof recommended
Other Protective: N/A
Ventilation: Provide local exhaust to keep TLV of Section 2 ingredients below acceptable limit.
Eye Protection: Safety glasses

SECTION 9 - SPILL OR LEAK PROCEDURE

Steps to be taken in case Material is Released or Spilled:
Mop up or otherwise absorb and hold for disposal
Waste Disposal Method:
Any method in accordance with local applicable law

Prepared According to 29 CFR 1910.1200

Product# : 0201
Updated: August 11, 2007

EPAHO113000350

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0208-02 **Date:** 2-4-08

CES Sales Representative: DC
Requested Turnaround / Completion Date: ASAP

Customer Name: Hydrochem
Generator Name and Location: Hydrochem at Targa
Ultimate Objective for Performing Analysis: Wastewater disposal at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Chemical cleaning of boiler prior to use, water will be neutralized prior to shipment

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water/95-99%	Soda Ash /0.5-1.5
Trisodium Phosphate /0.5-1.5	_____/_____
Sodium Metasilicate /0.5-1.5	_____/_____
Surfactant F057/__0-0.5___	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pHX** - 9
Phenols_____	**Oil and Grease (water phase)_____**	**TOCX** - 1214
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # ~~08~~ 010883 **Date:** 1-31-08

CES Sales Representative: Braudaman.
Requested Turnaround / Completion Date: ASAP

Customer Name: OEM
Generator Name and Location: W. J. H. Plant #
Ultimate Objective for Performing Analysis: Disposal/Recycling

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
D-Limonene used to Degrease pipe
D-LIMONENE

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

D-limonene	80-90		
water	10-20		
oil	3-5		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability ✓ - Ok	Viscosity____
Specific Gravity ✓	Light End Suitability____	Distillation Test____
Flash ✓ > 140	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect - 400	Color____	Chlor-n-oil____
Water by Distillation ✓ 50 ml/s	Water Extractability____	

Other Internal Analysis (List) 0.8 - 1.6 %
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-76 **Date:** 1/29/07

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: ASAP

Customer Name: LaBarge Southern

Generator Name and Location: Channelview, TX

Ultimate Objective for Performing Analysis: Treatment of water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Quench & Cooling water used on Carbon Steel Pipe (new)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water	/ 95-99%		/
Scale / Debris	/ 1-3%		/
Oil	/ 0-2%		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X Does not need treatment	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X 6.9
Phenols____	Oil and Grease (water phase)____	TOC X 1,117 ppm
Distillation Test____	Metals X Cd = .05 Cr = 0 Cu = .01	Flash____
GC/MS____	Chlor-n-oil (oil phase) Ni = .09	Centrifuge Test____
Other Internal Analysis (List) Zn = 27		
Off-site Lab Analysis (List)____		

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	
Other Internal Analysis (List)____		
Off-site Lab Analysis (List)____		

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____
Other Internal Lab Analysis (List)____		
Off-site Lab Analysis (List)____		

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-73 **Date:** 1/29/08

CES Sales Representative: mb
Requested Turnaround / Completion Date: 1/30/08

Customer Name: Houston International Terminals
Generator Name and Location: HIT – Houston on I-10
Ultimate Objective for Performing Analysis: Run a spin out on the sample and denote percent oil, percent water, and percent solids. Then run a chlor-d-tect and a flash on the oil phase only and check to see if it blends with black oil (or light ends if the flash is low).

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Used oil and oily wastewater and sludge had been stored in tanks for years.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/15-40%	44%
Water/15-50%	45%
Solids/1-15%	11%
____/____	____/____

Mix with black oil in the ratio 2|1 ↓ BLACK OIL

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: water phase only

Wastewater Treatability x	**Percent Solids** x	**Percent Oil** x
Specific Gravity	**Chlor-d-tect (oil phase)**	**pH**
Phenols	**Oil and Grease (water phase)**	**TOC**
Distillation Test	**Metals**	**Flash** x
GC/MS	**Chlor-n-oil (oil phase)**	
CentrifugeTest x		

Other Internal Analysis (List)
Off-site Lab Analysis (List)
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Oil phase only

Ash x	**Black Oil Suitability** x	**Viscosity**
Specific Gravity x	**Light End Suitability** x	**Distillation Test**
Flash 100-110°	**CES Fuel Suitability**	**Hydro-scout**
Chlor-d-tect Fail >x (4000 ppm)	**Color**	**Chlor-n-oil** x
Water by Distillation	**Water Extractability**	

Other Internal Analysis (List)
Off-site Lab Analysis (List)
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide	**Specific Gravity**	**Sulfides**
Percent Sodium Hydroxide	**Chlorides**	**Sodium**

Percent Solids by Centrifuge_____ Oil by Centrifuge_____ TOC_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # D108-69 **Date:** 1/28/08

CES Sales Representative: Jay

Requested Turnaround / Completion Date: STD

Customer Name: Rads Phoenix

Generator Name and Location: Rain for Rent

Ultimate Objective for Performing Analysis: treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Box washout

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

____/____		____/____	
____/____		____/____	
____/____		____/____	
____/____		____/____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X OK	Percent Solids X - 4%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X - 6
Phenols X O	Oil and Grease (water phase)___	TOC X - 315
Distillation Test____	Metals X	Flash X >140°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-08 **Date:** 1/28/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: Std

Customer Name: Phoenix

Generator Name and Location: Intra

Ultimate Objective for Performing Analysis: treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Box washout

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X ok	Percent Solids X <0.5%	Percent Oil___
Specific Gravity___	Chlor-d-tect (oil phase)___	pH X - 6
Phenols X - 0	Oil and Grease (water phase)___	TOC X - 950
Distillation Test___	Metals X	Flash X > 140°F
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-64 **Date:** 1/28/08

CES Sales Representative: DC

Requested Turnaround / Completion Date: ASAP

Customer Name: Momentum Biofuels

Generator Name and Location: Momentum - Pasadena

Ultimate Objective for Performing Analysis: Check zinc & nickle - Customer does not feel it should have any

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Wastewater from biodiesel production

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	90-95%	TOC 45'340	
biodiesel	5-10%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) Zinc Nickle

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

	TREATED	5X. UNTREAT
Zn	0	~8
Ni	0	0

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-55 **Date:** 1/24/08

CES Sales Representative: Dan Bowman

Requested Turnaround / Completion Date: Coming in

Customer Name: Nov Rig Solutions

Generator Name and Location: N

Ultimate Objective for Performing Analysis: How to treat upon arrival

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste water and oil from pressure washing

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

water	/ 95-99%		/
Oil	/ 2-5%		/
Solids	/ 0-3%		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids 0-3%	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase) X	✓pH X = 4.8
✓Phenols 7 = 0	Oil and Grease (water phase)____	TOC X = 2,662
Distillation Test____	✓Metals	Flash X > 150°F
GC/MS____	Chlor-n-oil (oil phase)	Centrifuge Test____

Other Internal Analysis (List) NA

Off-site Lab Analysis (List) NA

Note: Must have an approved P.O. for any external lab analysis

Cd .06
Cr .27
Cu .09
Ni .10
Zn .101

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) NA

Off-site Lab Analysis (List) NA

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)

Off-site Lab Analysis (List)

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-34 A & B (Totes) **Date:** 1-16-08

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: _____

Customer Name: Canrig (Production Waste)

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Receive Waste

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

High Flash Cleaning Solvent 170°F used to degrease pipe.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____ ✓	Percent Oil____
Specific Gravity ✓	Chlor-d-tect (oil phase)____	pH ✓
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) Can material be put in Black oil or Fuels

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

SELIG INDUSTRIES
Acuity Specialty Products Group, Inc.
P.O. BOX 43106
ATLANTA, GA 30336
TECH SERVICE 1 (800) 832-4724
www.seligind.com

Material Safety Data Sheet
and Safe Handling and Disposal Information

Canrig

Printing date: 01/16/08

Section 1. Chemical Product and Company Identification

Product name KLEENAPART 170
Product Use Liquid Parts Cleaner
Product Code J286
Date of issue 04/18/06 **Supersedes** 04/04/01

Emergency Telephone Numbers
For MSDS Information:
Selig Industries
Technical Services (800) 832-4724

For a Medical Emergency:
INFOTRAC
(877) 541-2016 Toll Free - All Calls Recorded

For a Transportation Emergency:
CHEMTREC
(800) 424-9300 - All Calls Recorded
In District of Columbia: (202) 483-7616

Prepared by Compliance Services Group
Acuity Specialty Products Group
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
HYDROTREATED LIGHT PETROLEUM DISTILLATES; paraffinic, naphthenic solvent	64742-47-8	>95	**Supplier Suggested (United States).** TWA: 100 ppm 8 hour(s).

Section 3. Hazards Identification

HMIS	
Health	1
Flammability	2
Reactivity	0
Personal Protection	B

Acute Effects **Routes of Entry** Eye contact. Inhalation.

Skin No known acute effects of this product resulting from skin contact.

Eyes Causes eye irritation. Inflammation of the eye is characterized by redness, watering, and itching.

Inhalation Avoid breathing vapors or spray mists. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system depression.

Ingestion Harmful if swallowed. Aspiration hazard if swallowed- can enter lungs and cause damage. Can cause gastrointestinal disturbances.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse health effects are lessened by following all prescribed safety precautions, including use of proper personal protective equipment.

Carcinogenic Effects Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Chronic Effects Inhalation of spray mists or vapors may cause central nervous system depression characterized by headache, dizziness, nausea, stupor, weakness and/or numbness and tingling in the extremities (medical term - peripheral neuropathy). Prolonged or repeated contact may dry skin and cause irritation.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact Wash with soap and water. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion Aspiration hazard if swallowed- can enter lungs and cause damage. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head lower than hips to help prevent aspiration. Never give anything by mouth to an unconscious person. Get medical attention immediately.

EPAHO113000361

Section 5. Fire Fighting Measures

Flash Point Closed cup: 81°C (177.8°F). (Tagliabue.) **Flammable Limits** LOWER: 0.6% UPPER: 7%

Flammability Combustible liquid and vapor.

Fire Hazard Vapors can travel to a source of ignition and flashback. May emit toxic fumes under fire conditions.

Fire-Fighting Procedures In case of fire, use water spray (fog), foam, dry chemical, or CO_2. Cool closed containers exposed to fire with water. Wear special protective clothing and positive pressure, self-contained breathing apparatus.

Section 6. Accidental Release Measures

Spill Clean up Eliminate all ignition sources. Put on appropriate personal protective equipment (see Section 8). Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Section 7. Handling and Storage

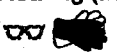
Handling Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Do not ingest. Wash contaminated clothing before reusing. Wash thoroughly after handling.

Storage Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Section 8. Exposure Controls, Personal Protection

Personal Protection

Protective Clothing (Pictograms)



Eyes Safety glasses.

Body Protective gloves should be worn during handling. Recommended: Neoprene gloves. Nitrile gloves. Rubber gloves.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Wear appropriate respirator when ventilation is inadequate. Approved/certified respirator with organic vapor cartridges.

Section 9. Physical and Chemical Properties

Physical State Liquid. (Oily liquid.)

pH Not applicable.

Boiling Point >213°C (415.4°F)

Specific Gravity 0.813 (Water = 1)

Solubility Insoluble in cold water, hot water.

Color Clear. Colorless.

Odor Hydrocarbon. (Slight.)

Vapor Pressure 0.007 kPa (0.05 mmHg) (at 20°C)

Vapor Density >1 (Air = 1)

Evaporation Rate Not determined.

VOC (Consumer) 0 (g/l).

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Carbon Dioxide, Carbon Monoxide and other organic materials..

Section 11. Toxicological Information

Toxicity to Animals **Hydrotreated Light Petroleum Distillates**:

ORAL (LD50): Acute: >5000 mg/kg [Rat].

DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Section 12. Ecological Information

Ecotoxicity Not available.

Biodegradable/OECD Not available.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Stream Non-hazardous waste

Consult your local or regional authorities.

Section 14. Transport Information

Proper shipping name Not applicable.

DOT Classification Not a DOT controlled material (United States).

UN number Not regulated.

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

EPAHO113000362

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:
No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.
All Components of this product are listed or exempt from listing on TSCA inventory.

State Regulations

California prop. 65: No products were found.

Section 16. Other Information

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

Selig Industries

1310 Seaboard Industrial Boulevard, N. W.
Atlanta, GA 30318-2807

To: GARY BRAUCKMAN

Company: CHES ENVIRONMENTAL

Fax: 7136761676

From:

Subject: DISPOSAL

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-35 **Date: 1/17/2008**

CES Sales Representative: Matt
Requested Turnaround / Completion Date: ASAP

Customer Name: Enterprise Products Port Allen LA
Generator Name and Location: Port Allen LA
Ultimate Objective for Performing Analysis: TO see if we can get it into De Ridder mill

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
__Propylene purification process

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water__/__%85-98___	_____/_____
KOH_____/__2-10%_	_____/_____
___Inert Solids_____/__1-5%____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide__X__	Specific Gravity__X__	Sulfides X
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge__X__	Oil by Centrifuge__X__	TOC____

Other Internal Lab Analysis (List)_____pH_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-29 **Date:** 1/16/08

CES Sales Representative: Joy

Requested Turnaround / Completion Date: 1 week

Customer Name: Noltex

Generator Name and Location: Noltex - Strang Rd

Ultimate Objective for Performing Analysis: alternative to incineration for stream. Ideally recover saleable Methanol

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Methanol / Water flush from EVOH / EV-Ac production

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Methanol /		/	
Water /		/	
Methyl Acetate /	57°C - AZEO - 54°C	/	
Ethylene Vinyl Acetate Alcohol " "		/	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity ✓	Light End Suitability____	Distillation Test____
Flash ✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) % Methanol recoverable overhead. Sg. of distillate flash pt of ~~overhead~~
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

100 mL POT CHARGE

	OH	POT
	58°C OH	63
85%	68	73
90%	68	76
93	69	80
95	69→68	84→86

95 RECOVERY

<70°F

NEED FP & DENSITY - 0.833 ON DISTILLATE-

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0108-25 Date: 1-14-08

CES Sales Representative: matt
Requested Turnaround / Completion Date: 1-16-08

Customer Name: Southcoast Terminals
Generator Name and Location: East Ave. S
Ultimate Objective for Performing Analysis: Determine if CES can take the material as non-haz. By performing pH and flash first. If not, take sample and profile to Texas Molecular.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Cleaning of tank with water and soap. Tank previously contained WFE-B Feed

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:
See MSDS

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH__X__
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash__X__
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

0108-26+27 **CES SAMPLE EVALUATION FORM**

Sample ID # 010823 **Date:** ? (Brought in by Dustin)

CES Sales Representative: Braughman

Requested Turnaround / Completion Date: RUSH

Customer Name: TEPPCO

Generator Name and Location: TX City

Ultimate Objective for Performing Analysis: Determine if Diesel will cut to make Fluid so can be pumped

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Crude Tank Bottoms

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

	/	Crude Tank Bottoms	100%
	/		
	/		
	/		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-234 **Date:** 12-21-07

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: STD

Customer Name: Basell

Generator Name and Location: Bayport

Ultimate Objective for Performing Analysis: Fuels potential

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Mineral oil used to strip light organics from teal process 2 (can we mix w/ process oil?)
SEE 1207-23

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Mineral oil	90-95%		
Light Ends	5-10		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash✓	Black Oil Suitability____	Viscosity✓
Specific Gravity✓	Light End Suitability✓	Distillation Test____
Flash✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect✓	Color____	Chlor-n-oil____
Water by Distillation✓	Water Extractability____	

Other Internal Analysis (List) need pricing how much can we pay
Off-site Lab Analysis (List) we are competing w/ Intergulf
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 120723 **Date:** 12-21-07

CES Sales Representative: Brauchman
Requested Turnaround / Completion Date: ~~ASAP~~ STD.

Customer Name: Basell
Generator Name and Location: Bayport Facility
Ultimate Objective for Performing Analysis: Fuels Potential

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Mineral oil used to strip light organic stream from process 1 (can we mix w/ process oil 2 see 1207-24

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

mineral oil	90-95%		
Light Ends	5-10		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) need pricing how much can we pay
Off-site Lab Analysis (List) we are competing w/ Interfuel
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-22 **Date:** 12-21-07

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ~~ASAP~~ 3TD

Customer Name: Specialty Heat Treat

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Treatment/Recycle

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Diesel/water from tank containment
Oil from Equipment fluid changes

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Oil/Diesel	10%		
water	88		
Scale/Mill	2		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)✓	pH ✓ water
Phenols____	Oil and Grease (water phase)___	TOC✓ oil
Distillation Test____	Metals____	Flash✓ Oil
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) Need pH only
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-20 Date: 12/20/07

CES Sales Representative: DANA

Requested Turnaround / Completion Date: _____

Customer Name: OIL TANKING

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

WASTE KOH SOLUTION

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity~~X~~	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity X	Sulfides____	pH
Percent Sodium Hydroxide____	Chlorides____	Sodium X	
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC X	FP

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

1207-18

CES SAMPLE EVALUATION FORM

Sample ID # Southcoast firefighting product **Date:** 12-18-07

CES Sales Representative: matt

Requested Turnaround / Completion Date: 12-19-07

Customer Name: Southcoast Terminals

Generator Name and Location: Walliville Rd.

Ultimate Objective for Performing Analysis: Check BTU to see if can go to cement kiln as fuel

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
mixing of fire fighting foam w/ Aromatic 250

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Phosphate Ester fire foam 70%
Aromatic 250 / 30%
/
/
/
/
/
/
/
/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU 10,848
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-17 **Date:** 12-18-07

CES Sales Representative: Brachman FOR Joy
Requested Turnaround / Completion Date: RUSH

Customer Name: Select EWV (Houston P/C
Generator Name and Location: HPL - P/C
Ultimate Objective for Performing Analysis: Treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Collection of P/C Fluids

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Gas Condensate	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil✓
Specific Gravity____	Chlor-d-tect (oil phase)✓	pH✓ (water)
Phenols____	Oil and Grease (water phase)___	TOC✓ (water)
Distillation Test____	Metals____	Flash✓ (Oil)
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Laboratory Report

Houston Pipeline Co., LP
Contact: David Wigzell
Project: Pigging Waste

Job Number: 12057006
Date Received: 12/5/07

EAS Lab Number: 12057006-001
Sample ID: Chevron 6" 3037 pigging waste - Grab
Date Sampled 12/4/07 13:30 Matrix: Sludge

		SAMPLE RESULT	UNITS	PQL	REG. LIMIT	METHOD	ANALYST	DATE / TIME ANALYZED
Ignitability								
	Ignitability	123	Deg. F			SW846 1010	RD	12/6/07 11:50
TCLP Metals								
	TCLP Arsenic	0.13	mg/L	0.05	5	SW846 6010B	TE	12/10/07 10:48
	TCLP Barium	0.07	mg/L	0.05	100	SW846 6010B	TE	12/10/07 10:48
	TCLP Cadmium	< 0.05	mg/L	0.05	1	SW846 6010B	TE	12/10/07 10:48
	TCLP Chromium	0.06	mg/L	0.05	5	SW846 6010B	TE	12/10/07 10:48
	TCLP Lead	0.13	mg/L	0.05	5	SW846 6010B	TE	12/10/07 10:48
	TCLP Selenium	< 0.05	mg/L	0.05	1	SW846 6010B	TE	12/10/07 10:48
	TCLP Silver	< 0.05	mg/L	0.05	5	SW846 6010B	TE	12/10/07 10:48
TCLP Mercury								
	TCLP Mercury	< 0.0020	mg/L	0.0020	0.2	SW846 7470	BW	12/6/07 13:31
Reactive Cyanide								
	Reactive Cyanide	< 10	mg/kg	10		SW846_9014	RD	12/6/07 7:45
Reactive Sulfide								
	Reactive Sulfide	< 8.0	mg/kg	8.0		SW846_9034	RD	12/6/07 7:45
Corrosivity								
	Corrosivity	6.10	pH units			SW846 9040B	RD	12/6/07 11:10
Benzene								
	Benzene	0.414	mg/L	0.100		SW846 8260B	BDS	12/5/07 7:18
	Toluene-d8 (S)	99	%			SW846 8260B	BDS	12/5/07 7:18

Earth Analytical Sciences, Inc.
4825 Ward Dr. Beaumont, Tx. 77705 Phone (409) 842-0658 Fax (409) 842-9793
www.earthanalytical.com

EPAHO113000376

QA/QC REPORT

Houston Pipeline Co . LP
Job Number 12057006

	METHOD	ORGINAL SAMPLE	SAMPLE RESULT	QC RESULT	UNITS	TRUE ADDED	RELATED QC CALCULATIONS	
BLK								
Benzene	SW846 8260B			< 0 002	mg/L			
Toluene-d8 (S)	SW846 8260B			99	%	100		
TCLP Arsenic	SW846 6010B			< 0.05	mg/L			
TCLP Barium	SW846 6010B			< 0.05	mg/L			
TCLP Cadmium	SW846 6010B			< 0.05	mg/L			
TCLP Chromium	SW846 6010B			< 0 05	mg/L			
TCLP Lead	SW846 6010B			< 0 05	mg/L			
TCLP Selenium	SW846 6010B			< 0 05	mg/L			
TCLP Silver	SW846 6010B			< 0 05	mg/L			
TCLP Mercury	SW846 7470			< 0 0005	mg/L			
Reactive Cyanide	SW846_9014			< 5 0	mg/kg			
Reactive Sulfide	SW846_9034			< 4 0	mg/kg			
BMS								
TCLP Silver	SW846 6010B			0.194	mg/L	0.200	%R: 97	
TCLP Mercury	SW846 7470			0 0048	mg/L	0 0050	%R: 96	
BMSD								
TCLP Silver	SW846 6010B			0 192	mg/L	0 200	%R: 96	RPD: 1 0
TCLP Mercury	SW846 7470			0 0049	mg/L	0.0050	%R: 98	RPD: 2 1
Dup								
Corrosivity	SW846 9040B		7.60	7 60	pH units		RPD: 0.0	
Reactive Cyanide	SW846_9014	12057006-001	< 10	< 10	mg/kg		RPD: 0 0	
Reactive Sulfide	SW846_9034	12057006-001	< 8 0	< 8 0	mg/kg		RPD: 0 0	
Ignitability	SW846 1010		> 200	> 200	Deg F			
LCS								
Benzene	SW846 8260B			0.054	mg/L	0 050	%R: 108	
Toluene-d8 (S)	SW846 8260B			103	%	100	%R: 103	
Ignitability	SW846 1010			81	Deg F	81	%R: 100	
TCLP Arsenic	SW846 6010B			2 25	mg/L	2 00	%R: 113	
TCLP Barium	SW846 6010B			2 21	mg/L	2.00	%R: 111	
TCLP Cadmium	SW846 6010B			2 16	mg/L	2.00	%R: 108	
TCLP Chromium	SW846 6010B			2.16	mg/L	2 00	%R: 108	
TCLP Lead	SW846 6010B			2.10	mg/L	2 00	%R: 105	
TCLP Selenium	SW846 6010B			2 11	mg/L	2 00	%R: 106	
TCLP Silver	SW846 6010B			0 190	mg/L	0.200	%R: 95	
TCLP Mercury	SW846 7470			0 0053	mg/L	0 0050	%R: 106	
Corrosivity	SW846 9040B			5.03	pH units	5 00	%R: 101	

Earth Analytical Sciences, Inc.
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www earthanalytical com

QA/QC REPORT

Houston Pipeline Co , LP
Job Number 12057006

	METHOD	ORGINAL SAMPLE	SAMPLE RESULT	QC RESULT	UNITS	TRUE ADDED	RELATED QC CALCULATIONS	
LCS2								
Ignitability	SW846 1010			80	Deg F	81	%R: 99	
TCLP Arsenic	SW846 6010B			2.19	mg/L	2.00	%R: 110	
TCLP Barium	SW846 6010B			2 14	mg/L	2 00	%R: 107	
TCLP Cadmium	SW846 6010B			2.10	mg/L	2 00	%R: 105	
TCLP Chromium	SW846 6010B			2.10	mg/L	2 00	%R: 105	
TCLP Lead	SW846 6010B			2.02	mg/L	2 00	%R: 101	
TCLP Selenium	SW846 6010B			2.06	mg/L	2 00	%R: 103	
TCLP Silver	SW846 6010B			0.190	mg/L	0 200	%R: 95	
TCLP Mercury	SW846 7470			0 0053	mg/L	0 0050	%R: 106	
Corrosivity	SW846 9040B			7.96	pH units	8 00	%R: 100	
MS								
Benzene	SW846 8260B		< 0 002	0 053	mg/L	0.050	%R: 106	
Toluene-d8 (S)	SW846 8260B			103	%	100	%R: 103	
TCLP Arsenic	SW846 6010B	12057006-001	0 13	2 32	mg/L	2 00	%R: 110	
TCLP Barium	SW846 6010B	12057006-001	0 07	2 23	mg/L	2 00	%R: 108	
TCLP Cadmium	SW846 6010B	12057006-001	< 0 05	2 17	mg/L	2 00	%R: 109	
TCLP Chromium	SW846 6010B	12057006-001	0 06	2 26	mg/L	2 00	%R: 110	
TCLP Lead	SW846 6010B	12057006-001	0 13	2 15	mg/L	2 00	%R: 101	
TCLP Selenium	SW846 6010B	12057006-001	< 0 05	1 94	mg/L	2 00	%R: 97	
MSD								
Benzene	SW846 8260B		< 0.002	0 053	mg/L	0 050	%R: 106	RPD: 0.0
Toluene-d8 (S)	SW846 8260B			103	%	100	%R: 103	
TCLP Arsenic	SW846 6010B	12057006-001	0.13	2 28	mg/L	2 00	%R: 108	RPD: 1 7
TCLP Barium	SW846 6010B	12057006-001	0 07	2 20	mg/L	2 00	%R: 107	RPD: 1 4
TCLP Cadmium	SW846 6010B	12057006-001	< 0 05	2.13	mg/L	2 00	%R: 107	RPD: 1 9
TCLP Chromium	SW846 6010B	12057006-001	0 06	2 22	mg/L	2 00	%R: 108	RPD: 1 8
TCLP Lead	SW846 6010B	12057006-001	0 13	2 11	mg/L	2 00	%R: 99	RPD: 1 9
TCLP Selenium	SW846 6010B	12057006-001	< 0 05	1 84	mg/L	2 00	%R: 92	RPD: 5 3

EPAHO113000378

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-16 **Date:** 12/14/07

CES Sales Representative: DAWA

Requested Turnaround / Completion Date: 12/17/2007

Customer Name: TRIMAC

Generator Name and Location: TRIMAC - DEER PARK

Ultimate Objective for Performing Analysis: SEE IF WE CAN TREAT AT CES.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
TREATABILITY, TDC + metals to determine Can take it.

THIS IS S/S. 5.2 wt%

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-14 Date: 12-14-07

CES Sales Representative: GM

Requested Turnaround / Completion Date: ASAP

Customer Name: Hexion

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Quit Fluctuating the POTWs can we continue testing @ current price

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Pond water - process / wash down

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X - 4328
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-13 T-404 **Date:** 12/13/07

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: 12/17/07

Customer Name: ~~DAN BOWMAN~~

Generator Name and Location: GREENHUNTER BIOFUELS, INC.

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals____	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-12 T-403 Date: 12/13/07

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: 12/17/07

Customer Name: GREENHUNTER BIOFUELS, INC.

Generator Name and Location: SAME

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals____	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-11 T-402 Date: 12/13/07

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: 12/17/07

Customer Name: GREEN (HUNTER) BIOFUELS, INC.

Generator Name and Location: SAME -

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals____	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU - 1633

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-10A T-401 Date: 12/13/07

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: 12/17/07

Customer Name: GREENHUNTER BIOFUELS, INC

Generator Name and Location: SAME - 13605 INDUSTRIAL RD. HOU, TX 77015

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X (ENTIRE SX)	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals____	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

GREENHUNTER
BIOFUELS INC.

BRUCE BAUGHMAN
VICE PRESIDENT ENGINEERING & TECHNOLOGY

13605 INDUSTRIAL RD • HOUSTON, TX 77015
OFFICE 713.574.9509 **MOBILE** 972.951.1495 **FAX** 713.450.1591
EMAIL bbaughman@greenhunterenergy.com

(b) (6)

GREENHUNTER
BIOFUELS INC.

BRUCE BAUGHMAN
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EPAHO1130003 85

CES Environmental Services, Inc.

RUSH.

CES SAMPLE EVALUATION FORM

Sample ID # 12010 Date: 12-13-07

CES Sales Representative: Brackman

Requested Turnaround / Completion Date: ASAP

Customer Name: Coastal Chemical / NSPEC @ Kinder Morgan-Vote

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Disposal

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Pressure Test Pipeline

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

FEG	2-10		
oil	0.5-1.0		
water	90-98		
Dirt/Scale	0-1		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids____	Percent Oil____
Specific Gravity ✓	Chlor-d-tect (oil phase)____	pH ✓
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-08 **Date:** 12/11/07

CES Sales Representative: GRL

Requested Turnaround / Completion Date: 12/12/07

Customer Name: Deriddor

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: UNDERSTAND WHAT this Sludge Is and where it came from

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
this is from deriddors frac tank for spent caustic.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____ ✓	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge ✓	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List) Solubility in oil or H_2O
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

HAS OIL + AQUEOUS PORTIONS -
LOOKS LIKE SLUDGE - MOST H_2O SOLUBLE.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1202-07 Date: 12/10/07

CES Sales Representative: _____

Requested Turnaround / Completion Date: 12/11

Customer Name: VERTEX 24° API

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals X	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-06 Date: 12/10/07

CES Sales Representative: _____

Requested Turnaround / Completion Date: 12/11

Customer Name: VERTEX 37° API

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals X	Flash X
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 120703 **Date:** 12-5-07

CES Sales Representative: Braughmac

Requested Turnaround / Completion Date: ASAP

Customer Name: NOV Tuboscope

Generator Name and Location: Holmes Road

Ultimate Objective for Performing Analysis: Recycle oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Used motor oil ~ 5 DRUMS

NEW SX - 12/6/07 - Cl - ~100 ppm F.P. > 147°F

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Oil	60		
Wash	5		SG - 0.850
Water	35		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____ 3800	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____ >150°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

TOC= 3150
56. 60020
SOLIDS - NO
TREATABILITY - LOTS OF SOLIDS FORMED
TREAT & FILTER PRESS

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 110716 **Date:** 11-30-07

CES Sales Representative: Brandenburg

Requested Turnaround / Completion Date: 12/3

Customer Name: AQUA Solutions

Generator Name and Location: Hwy 22W

Ultimate Objective for Performing Analysis: WWater.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

From Rinsing of Lab Equipment

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

98.9% water.
Traces of Dyes, Misc
Acids & Bases

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil____
Specific Gravity ✓	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC ✓
Distillation Test____	Metals ✓	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-02 **Date:** 12/3/07

CES Sales Representative: GARY LEWERTZ
Requested Turnaround / Completion Date: _____

Customer Name: Lubrizol Bayport
Generator Name and Location: Bayport TX
Ultimate Objective for Performing Analysis: To determine if good restricted Light end

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
used as A solvent / cutter. This sample has been flashed from heavier product.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Light Ends	~80%	_____	_____
Toluene	20%	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity~~✓~~	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓ ~ 0	Black Oil Suitability____	Viscosity____
Specific Gravity ✓ 0.864 - DENSITY	Light End Suitability ✓	Distillation Test____
Flash ✓ <95°C	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ 1200 mg/L	Color ✓ > PALE YELLOW	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) % other liquids (bottom phase)
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

ASH -

CRUCIBLE TARE -	51.6148
CRUCIBLE + SX	52.6261
CRUCIBLE + ASH	51.6091

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1207-01 **Date:** 12/3/07

CES Sales Representative: GARY LENERTZ
Requested Turnaround / Completion Date: 12/5/07

Customer Name: Lubrizol, Bayport
Generator Name and Location: BAYPORT TX
Ultimate Objective for Performing Analysis: To be determined, For now to Gauge suitability for mereisol

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
In the production of C22-Phenol, this sample has C4-C8 phenol (alkane)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

90+ % C4-C8 Phenol	/		/
trace toluene	/		/
" oil	/		/
" phenol	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity ✓ ~ 0.933	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash ✓ > 145°F
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Use this ↗
Other Internal Analysis (List) melting point
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

WHEN MELTED, THIS SX. HAS ~ 25% H_2O LAYER ON BTM.

SLUSH pt. ~ 103°F

TOC= 1417

~~PH= 6.0~~
PH= 2.5

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1107-15 **Date:** 11/30/07

CES Sales Representative: Dan Bowman
Requested Turnaround / Completion Date: 3 days

Customer Name: Labarge
Generator Name and Location: Channelview, TX
Ultimate Objective for Performing Analysis: For waste water Disposal @ CES
metals subcategory A

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Neutralized Acid wash (Sample may not be neutralized). Neutralized with Sodium Hydroxide. Phosphate Solution used to clean Carbon Steel Pipe.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

water	/		/
Phosphoric Acid (neutral)	1-5%		/
Sodium Hydroxide	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals X zinc, city metals	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

1107 - 10

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # tales **Date:** 11/16/07

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Mon - AM

Customer Name: TX Blending

Generator Name and Location: Soltex

Ultimate Objective for Performing Analysis: Cost or Payment of Material
Determine Market use or treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Separation phase from loading of C-12 hydrocarbons in tank

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

C+12	/		/
Water	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: NEED 5.6, 0.746 DENSITY

Ash____	Black Oil Suitability✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash✓ < 90°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

WATER LAYER - TOC - 3863 mg/L

EPAHO113000398

1107-09

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # Tank B5 **Date:** 11/16/07

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Mon AM

Customer Name: TX Blending

Generator Name and Location: Solutia

Ultimate Objective for Performing Analysis: Cost / Payment of Matl
Determine end use

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

~~Separator~~ Polybutene tank bottoms

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Polybutene	100 %		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

NEED BTU

Ash ✓ N.D.	Black Oil Suitability ✓ OK	Viscosity____ 19,000
Specific Gravity ✓ 0.8597 g/L	Light End Suitability____	Distillation Test____
Flash ✓ > 145°F	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓ 800 ppm	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	H_2O - N.D.

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

1107-08

832-754-5759
CITGO S/B

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # Tank 51 **Date:** 11/16/07

CES Sales Representative: Jay

Requested Turnaround / Completion Date: Mon - AM

Customer Name: Gulf Texas Blending

Generator Name and Location: Solex

Ultimate Objective for Performing Analysis: Cost / payment of material
Determine end use

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
tank bottoms from product of C-12
THIS SAMPLE IS AQUEOUS

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

→ H_2O Water / ?
C12 / ?
/
/

/
/
/
/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability ✓	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash ✓	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

TOC - 944. TREATED H_2O

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1107-07 **Date:** 11-16-07

CES Sales Representative: Brueckman

Requested Turnaround / Completion Date: ASAP

Customer Name: National Oil well - Rosenberg

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: Chlor-D-Tect, FP
Recycle evaluation

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Wash Bay Sump.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Water	80-95
Oil	2-5
Dirt/Sludge	5-10

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

Sample Evaluation Form

Sample ID # 1107-06 **Date** 11 / 15 / 07

Please Complete This Section

Generator / Customer Name :	VERTEX
Name or Type of Waste :	NONE GIVEN
Process Generating Waste :	THIS IS ETHANOL/H_2O
Number of Samples :	1 **Submitted By :**
Analysis To Be Completed :	TREATABILITY, TOC, METALS
Turnaround Time :	
Other :	

(Lab Use Only)

Sample Results : _____

Suggested Method of Treatment : _____

Suggested Price Range : _____

Sample Results Reported to _____

Test Completed By : _____ **Date :** ____ / ____ / ____ **Time:** _____

White - CES Salesperson Copy Pink - Processing Facility Copy

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1107-05 Date: 11/19/07

CES Sales Representative: JOY

Requested Turnaround / Completion Date: 11/20/07

Customer Name: SHELL

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

EMULSION / WATER

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

After Heating the Sample with acid + emulsion breaker 90% water and 10% oil

May look for around 20c -> 23c /g for this waste

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X
Phenols____	Oil and Grease (water phase)___	TOC X
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cr : 0.0 PPM

Cd 0.041 PPM

Ni 0.069 PPM

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Zn 0.306 PPM

Cu 0.017 PPM

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

Sample Evaluation Form

Sample ID # 1109-05 **Date** 11 / 15 / 07

Please Complete This Section

Generator / Customer Name :	SHELL
Name or Type of Waste :	EMULSION WATER
Process Generating Waste :	
Number of Samples :	1 **Submitted By :**
Analysis To Be Completed :	TREATABILITY, TOC, METALS
Turnaround Time :	
Other :	

(Lab Use Only)

Sample Results : _____

Suggested Method of Treatment : _____

Suggested Price Range : _____

Sample Results Reported to _____

Test Completed By : _____ **Date :** ____ / ____ / _____ **Time:** _____

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CES Environmental Services, Inc.

Sample Evaluation Form

Sample ID # 1107-03 **Date** 11 / 15 / 07

Please Complete This Section

Generator / Customer Name :	MOBIL THERM USED OIL
Name or Type of Waste :	
Process Generating Waste :	
Number of Samples :	1 **Submitted By :** JOY
Analysis To Be Completed :	BTU ASH
Turnaround Time :	
Other :	

(Lab Use Only)

Sample Results : _____

Suggested Method of Treatment : _____

Suggested Price Range : _____

Sample Results Reported to _____

Test Completed By : _____ **Date :** ____ / ____ / _____ **Time:** _____

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CES Environmental Services, Inc.

Sample Evaluation Form

Sample ID # 252 ~~TIOR-03~~ **Date** 11 / 6 / 07

Please Complete This Section RESAMPLED AS 1107-07

Generator / Customer Name :	NOV - Richmond
Name or Type of Waste :	Sump Water
Process Generating Waste :	collection of wash Bay water
Number of Samples :	1 **Submitted By :** Gary
Analysis To Be Completed :	Chlor-D-Tect, EP, %o water,
Turnaround Time :	o/o oil o/o sludge
Other :	

(Lab Use Only)

Sample Results : Sludge Need to be only ~~filter~~ Press

Suggested Method of Treatment : _____

Suggested Price Range : _____

Sample Results Reported to _____

Test Completed By : GG **Date :** 11 / 14 / 07 **Time:** 2:35 PM

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CES Environmental Services, Inc.

Sample Evaluation Form

Sample ID # 11/07-01 **Date** 11 / 08 / 07

Please Complete This Section

Generator / Customer Name : Biggler

Name or Type of Waste : Hydrocarbon & water

Process Generating Waste : Product & water in storage tank

Number of Samples : 1 **Submitted By :**

Analysis To Be Completed : Treatability / Flash on Light Ends / TOC on water

Turnaround Time : ASAP

Other : Suggested Market for light Ends & $ing

(Lab Use Only)

Sample Results : Top layer SG 0.77 FP above 140

Suggested Method of Treatment : Mix with black oil

Suggested Price Range : Water Phase TOC 1207

Sample Results Reported to _____

Test Completed By : _____ **Date :** ____/____/____ **Time:** _____

White - CES Salesperson Copy Pink - Processing Facility Copy

CES Environmental Services, Inc.

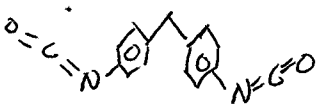
CES SAMPLE EVALUATION FORM

Sample ID # 0708-38 **Date:** 7-22-08

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: ASAP

Customer Name: Stolt Neilson Transporation
Generator Name and Location: same
Ultimate Objective for Performing Analysis: pH test, can we bring it in under profile 2173 (non hazardous)

METHYLENE DIPHENYL DIISOCYANATE



Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
removal of heel prior to cleaning iso containers

pH - 11.2

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

MEA/75-95%	_____/_____
Reacted MDI/5-25%	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pHX**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

COMPLETED EVALS
APRIL → JUNE 2009

EPAHQ1113000409

LAB
T-48
8/4/09
CC

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0509-17 **Date:** 5-14-09
CES Sales Representative: Gary B.
Requested Turnaround/Completion Date: _____
Customer Name: Cliff Berry **Quantity:** 10K gall
Generator Name and Location: Boling, TX **Frequency:** one time
Hazardous Waste Codes: N/A
MSDS Attached: _____ Yes ✓ No
Ultimate Objective for Performing Analysis: w/w treatability purge water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: _____
11

Provide a Detailed Composition to the best of your knowledge: water 98-99%
DIRT, Rocks 0-2%

Component/Approximate Percentage or PPM:
EASY TREAT - NYCE CHARGE FLOC - CLEAN H2O
Ni - .0124
Zn - .014
Cu - 0.101
Cd - .027
Cr - .002

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:
Wastewater Treatability: ✓ **Percent Solids:** ✓ **Percent Oil:** _____
Specific Gravity: _____ **Chlor-d-tect(Oil Phase):** _____ **pH:** 7
Phenols: ✓ **Oil and Grease (Water Phase):** _____ **TOC:** ✓ 468
Distillation Test: _____ **Metals:** _____ **Flash:** _____
GC/MS: _____ **Chlor-n-oil(Oil Phase):** _____ **Centrifuge Test:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash: _____ **Black Oil Suitability:** _____ **Viscosity:** _____
Specific Gravity: _____ **Light End Suitability:** _____ **Distillation Test:** _____
Flash: _____ **CES Fuel Suitability:** _____ **Hydro-scout:** _____
Chlor-d-tect: _____ **Color:** _____ **Chlor-n-oil:** _____
Water by Distillation: _____ **Water Extractability:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide: _____ **Specific Gravity:** _____ **Sulfides:** _____
Percent Sodium Hydroxide: _____ **Chlorides:** _____ **Sodium:** _____
Percent Solids by Centrifuge: _____ **Oil by Centrifuge:** _____ **TOC:** _____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0509-13 Date: 5/12/09

CES Sales Representative: MATT B.

Requested Turnaround/Completion Date: _____

Customer Name: KMCO, CROSBY Quantity: _____

Generator Name and Location: AFTON CHEMICALS Frequency: _____

Hazardous Waste Codes: _____

MSDS Attached: _____ Yes _____ No S6 - 1.135

Ultimate Objective for Performing Analysis: _____

H2O - 228 ppm

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: _____

BTU .7614 - MISPIKE

Provide a Detailed Composition to the best of your knowledge: → 0.7162

BTU - 11,425

Component/Approximate Percentage or PPM:

/	CRUCIBLE TARE - 61.0082	/
/	+SX. 65.1078	/
/	+ASH 61.0069	/
/	NOT TOTALLY MISCIBLE W/BLACK OIL	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____ Percent Solids: _____ Percent Oil: _____

Specific Gravity: _____ Chlor-d-tect(Oil Phase): _____ pH: _____

Phenols: _____ Oil and Grease (Water Phase): _____ TOC: _____

Distillation Test: _____ Metals: _____ Flash: _____

GC/MS: _____ Chlor-n-oil(Oil Phase): _____ Centrifuge Test: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ Black Oil Suitability: _____ Viscosity: _____

Specific Gravity: _____ Light End Suitability: _____ Distillation Test: _____ T

Flash: _____ CES Fuel Suitability: _____ Hydro-scout: _____

Chlor-d-tect: _____ Color: _____ Chlor-n-oil: _____

Water by Distillation: _____ Water Extractability: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ Specific Gravity: _____ Sulfides: _____

Percent Sodium Hydroxide: _____ Chlorides: _____ Sodium: _____

Percent Solids by Centrifuge: _____ Oil by Centrifuge: _____ TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0509-08 **Date:** 5-7-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date: ASAP
Customer Name: Hydrochem **Quantity:** 1 load (5000 gal)
Generator Name and Location: Deer Park **Frequency:** One time
Hazardous Waste Codes: NOne
MSDS Attached: ☒ Yes ☐ No
Ultimate Objective for Performing Analysis:
treat at ces

Ni- .050
Zn- .055
Cu .085
Cd .021
Cr .001

Provide a detailed description of the process generating the waste, material, or product:
rain water contaminated with sodium carbonate - out of date product

Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Water	90-99%		
Sodium Carbonate	1-10%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☒	OK-	Percent Solids:	☐	Percent Oil:	☐	
Specific Gravity:	☐		Chlor-d-tect(Oil Phase):	☐	pH:	☒	
Phenols:	☒	0	Oil and Grease (Water Phase):	☐	TOC:	☒	2242
Distillation Test:	☐		Metals:	☐	Flash:	☐	
GC/MS:	☐		Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐	

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0505-07 Date: 5/5/09

CES Sales Representative: D. Bowman

Requested Turnaround/Completion Date: ASAP

Customer Name: BJ SERVICES Quantity: 1 TOTE

Generator Name and Location: SAME AS CUST. Frequency: _____

Hazardous Waste Codes: _____

MSDS Attached: _____ Yes X No

Ultimate Objective for Performing Analysis: BRINE IN WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: MOP WATER & USED COOLANT

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

/	Ni- 6.475
/	Zn- 2.068
/	Cu- .071
/	Cd - 0.000
/	Cr- 0.000

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: OK - EMULSION BEFORE TREAT
Specific Gravity: _____
Phenols: 0
Distillation Test: _____
GC/MS: _____
Percent Solids: 4
Chlor-d-tect(Oil Phase): _____
Oil and Grease (Water Phase): _____
Metals: X
Chlor-n-oil(Oil Phase): _____
Percent Oil: _____
pH: 4.5
TOC: 441 - TREATED
Flash: _____
Centrifuge Test: _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): GLYCOL ~ 1%

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____
Specific Gravity: _____
Flash: _____
Chlor-d-tect: _____
Water by Distillation: _____
Black Oil Suitability: _____
Light End Suitability: _____
CES Fuel Suitability: _____
Color: _____
Water Extractability: _____
Viscosity: _____
Distillation Test: _____
Hydro-scout: _____
Chlor-n-oil: _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____
Percent Sodium Hydroxide: _____
Percent Solids by Centrifuge: _____
Specific Gravity: _____
Chlorides: _____
Oil by Centrifuge: _____
Sulfides: _____
Sodium: _____
TOC: _____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

.1883 g
240 ml
0.1 N
51% NaOH

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 05-09-05 Date: 5/01/09
CES Sales Representative: Don Bowne
Requested Turnaround/Completion Date: ASAP

Customer Name: PCI Quantity: _____
Generator Name and Location: ? Frequency: _____
Hazardous Waste Codes: _____
MSDS Attached: X Yes _____ No
Ultimate Objective for Performing Analysis: Reuse Applications

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Caustic Botoms

Provide a Detailed Composition to the best of your knowledge:
Product left over Bottoms

Component/Approximate Percentage or PPM:
Sodium Hydroxide/ See MSDS _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____	Percent Solids: X	Percent Oil: _____
Specific Gravity: X D-1.518	Chlor-d-tect(Oil Phase): _____	pH: X
Phenols: _____	Oil and Grease (Water Phase): _____	TOC: _____
Distillation Test: _____	Metals: X	Flash: _____
GC/MS: _____	Chlor-n-oil(Oil Phase): _____	Centrifuge Test: _____

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____	Black Oil Suitability: _____	Viscosity: _____
Specific Gravity: _____	Light End Suitability: _____	Distillation Test: _____
Flash: _____	CES Fuel Suitability: _____	Hydro-scout: _____
Chlor-d-tect: _____	Color: _____	Chlor-n-oil: _____
Water by Distillation: _____	Water Extractability: _____	

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____	Specific Gravity: _____	Sulfides: _____
Percent Sodium Hydroxide: X 51 %	Chlorides: _____	Sodium: _____
Percent Solids by Centrifuge: _____	Oil by Centrifuge: _____	TOC: _____

Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Univar USA Inc.
17425 NE Union Hill Road
Redmond, WA 98052
(425) 889-3400

For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

The Version Date and Number for this MSDS is : 02/27/2009 - #021

PRODUCT NAME:	CAUSTIC SODA LIQUID (ALL GRADES)
MSDS NUMBER:	OZ32415
DATE ISSUED:	01/07/2009
SUPERSEDES:	11/12/2008
ISSUED BY:	008730

****
****

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Distributed by:
Univar USA Inc.
17425 NE Union Hill Rd.
Redmond, WA 98052
425-889-3400

Trade Name:
Caustic Soda Diaphragm Grade 10%, 15%, 18%, 20%, 25%, 30%, 35%, 40%, 50%, Caustic Soda Rayon Grade 18%, 20%, 25%, 30%, 50%, 50% Caustic Soda Rayon Grade OS, Caustic Soda Membrane 6%, 18%, 20%, 25%, 30%, 48%, 50%, 50% Caustic Soda Membrane OS, 50% Caustic Soda Diaphragm OS, Caustic Soda Low Salt 50%, 25% Caustic Soda Purified, 50% Caustic Soda Purified, 50% Caustic Soda Purified OS, Caustic Soda Liquid 70/30, Membrane Blended, 50% Caustic Soda Membrane (Northeast), 50% Caustic Soda Diaphragm (West Coast), 50% Blended Rayon Grade Blended, Membrane Cell Liquor

Synonyms: Sodium hydroxide solution, Liquid Caustic, Lye Solution, Caustic, Lye, Soda Lye

Product Use: Metal finishing, Cleaner, Process chemical, Petroleum industry

2. HAZARDS IDENTIFICATION EMERGENCY OVERVIEW:

Color: Colorless to slightly colored

EPAHO113000416

Physical State:	Liquid
Odor:	Odorless
Signal Word:	Danger

MAJOR HEALTH HAZARDS: CORROSIVE. CAUSES BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND GASTROINTESTINAL TRACT. CAUSES PERMANENT EYE DAMAGE.

PHYSICAL HAZARDS: CORROSIVE. Mixing with water, acid or incompatible materials may cause splattering and release of heat.

ECOLOGICAL HAZARDS: Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters. This material has exhibited moderate toxicity to aquatic organisms.

PRECAUTIONARY STATEMENTS: Avoid breathing vapors or mist. Avoid contact with skin, eyes and clothing. Keep container tightly closed. Wash thoroughly after handling. Use only with adequate ventilation.

POTENTIAL HEALTH EFFECTS:

Inhalation: May cause irritation (possibly severe), chemical burns, and pulmonary edema.

Skin contact: May cause irritation (possibly severe) and chemical burns.

Eye contact: May cause irritation (possibly severe), chemical burns, eye damage, and blindness.

Ingestion: May cause irritation (possibly severe), chemical burns, nausea, and vomiting.

Target Organs Effected: Respiratory System, Skin, Eye

Medical Conditions Aggravated by Exposure: Asthma, Respiratory disorders

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component	Concentration (by weight %)	CAS - No.
Water	48.5 - 94.5	7732-18-5
Sodium hydroxide	5.5 - 51.5	1310-73-2
Sodium chloride (NaCl)	1 - 5	7647-14-5

4. FIRST AID MEASURES

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer basic life support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.

Skin Contact: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.

Eye Contact: Immediately flush eyes with a directed stream of water for at

EPAHO113000417

least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

Notes to Physician: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Negligible fire hazard.

Extinguishing Media: Use media appropriate for surrounding fire

Fire Fighting: Move container from fire area if it can be done without risk. Cool containers with water. Avoid contact with skin.

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Flash point: Not flammable

6. ACCIDENTAL RELEASE MEASURES

Occupational Release:
Wear appropriate personal protective equipment recommended in Section 8 of the MSDS. Completely contain spilled material with dikes, sandbags, etc. Shovel dry material into suitable container. Liquid material may be removed with a vacuum truck. Remaining material may be diluted with water and neutralized with dilute acid, then absorbed and collected. Flush spill area with water, if appropriate. Keep product and flush water out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

Storage Conditions: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances.

Handling Procedures: Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA Regulatory Exposure limit(s):

Hazardous Component	CAS-No.	OSHA Final PEL	OSHA Final PEL	OSHA Final PEL

		TWA	STEL	Ceiling
Sodium hydroxide	1310-73-2	2 mg/m3		

Non-Regulatory Exposure Limit(s):
The Non-Regulatory OSHA limits shown in the table are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

Hazardous Component	CAS-No.	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Sodium hydroxide	1310-73-2			2 mg/m3			2 mg/m3

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear chemical safety goggles with a faceshield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Contaminated clothing should be removed, then discarded or laundered.

Hand Protection: Wear appropriate chemical resistant gloves Protective Material Types: Natural rubber, Neoprene, Nitrile

Hazardous Component	Immediately Dangerous to Life/ Health (IDLH)
Sodium hydroxide	10 mg/m3 IDLH

Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. If eye irritation occurs, a full face style mask should be used. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Clear to opaque
Color:	Colorless to slightly colored
Odor:	Odorless
Boiling Point/Range:	230 291 F (110 144 C)
Freezing Point/Range:	-26 to 59 F (-32 to 15 C)
Vapor Pressure:	13 - 135 mmHg @ 60 C
Vapor Density (air=1):	No data available
Specific Gravity (water=1):	1.11 1.53 @ 15.6 C
Water Solubility:	100%
pH:	14.0 (7.5% solution)
Volatility:	No data available
Evaporation Rate (ether=1):	No data available
Partition Coefficient (n-octanol/water):	No data available

EPAHO113000419

10. STABILITY AND REACTIVITY

Reactivity/ Stability: Stable at normal temperatures and pressures.

Conditions to Avoid: Mixing with water, acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

Incompatibilities/Materials to Avoid: Acids, Halogenated compounds, Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

Hazardous Decomposition Products: Toxic fumes of sodium oxide

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Hazardous Component	LD50 Oral	LC50 Inhalation	LD50 Dermal
Sodium hydroxide	Not listed	Not listed	1350 mg/kg (Rabbit)
Sodium chloride (NaCl)	3 g/kg (Rat)	42 g/m3 (1 hr-Rat)	10 g/kg (Rabbit)

TOXICITY:
The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation and possible burns with pulmonary edema, which may lead to pneumonitis. Skin contact with this material may cause severe irritation and corrosion of tissue. Eye contact can cause severe irritation, corrosion with possible corneal damage and blindness. Ingestion may cause irritation, corrosion/ulceration, nausea, and vomiting. In general, chronic effects are due to long-term irritation. This material may cause dermatitis. In rare cases reports have noted long-term inhalation causes bronchial inflammatory reaction or obstructive airway dysfunction.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY: This material has exhibited moderate toxicity to aquatic organisms. Data provided are for sodium hydroxide.

Freshwater Fish Data:
LC50 brook trout: 25 ppm/24 hr
LC50 king salmon: 48 ppm

Invertebrate Toxicity Data:
EC50 daphnia magna: 100 ppm
EC50 shrimp: 33 100 ppm/48 hr
EC50 cockle: 330 1000 ppm/48 hr

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is alkaline and may raise the pH of surface waters with low buffering capacity. This material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION: This material is not expected to bioconcentrate in organisms.

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

13. DISPOSAL CONSIDERATIONS

Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations. May be subject to disposal regulations: U.S. EPA 40 CFR 261. Hazardous Waste Number(s): D002

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME:	Sodium Hydroxide Solution
DOT UN NUMBER:	UN1824
HAZARD CLASS/ DIVISION:	8
PACKING GROUP:	II
LABELING REQUIREMENTS:	8
DOT RQ (lbs):	RQ 1000 lbs. (Sodium Hydroxide)

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

SHIPPING NAME:	Sodium hydroxide solution
UN NUMBER:	UN1824
CLASS:	8
PACKING/RISK GROUP:	II

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) (US).

CERCLA SECTIONS 102a1103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 4262675.

Hazardous Component	CERCLA Reportable Quantities:
Sodium hydroxide	1000 lb (final RQ)

EPCRA EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): No components are listed.

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.21):
Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65): No components are listed.

OSHA PROCESS SAFETY (29 CFR 1910.119): Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS (TSCA): All components are listed or exempt

TSCA 12(b): This product is not subject to export notification

CANADIAN DOMESTIC SUBSTANCE LIST (DSL/NDSL): All components are listed.

STATE REGULATIONS

California Proposition 65: This product is not listed

Hazardous Component	Sodium hydroxide
California Proposition 65 Cancer WARNING:	Not Listed
California Proposition 65 CRT List - Male reproductive toxin:	Not Listed
California Proposition 65 CRT List - Female reproductive toxin:	Not Listed
Massachusetts Right to Know Hazardous Substance List	Listed
New Jersey Right to Know Hazardous Substance List	Listed
New Jersey Special Health Hazards Substance List	Listed
Pennsylvania Right to Know Hazardous Substance List	Listed
Pennsylvania Right to Know Environmental Hazard List	Listed
Rhode Island Right to Know Hazardous Substance List	Listed

CANADIAN REGULATIONS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification: E

16. OTHER INFORMATION

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health:	3	Flammability:	0	Reactivity:	1

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health:	3	Flammability:	0	Reactivity:	1

For Additional Information:
Contact: MSDS Coordinator - Univar USA
During business hours, Pacific Time - (425) 889-3400

NOTICE
Univar USA expressly disclaims all express or implied warranties of merchantibility and fitness for a particular purpose with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar USA Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar USA makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar USA's control. Therefore, users are responsible to verify this data under their own operating

conditions to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.

END OF MSDS

EPAHO113000423

$$\frac{.1 \times 30 \times 4}{55} = .50$$

WD- .6989

D - 1.252

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 05-0a-01 Date: 05/01/09

CES Sales Representative: Don Bamm

Requested Turnaround/Completion Date: ASAP

Customer Name: PCI Quantity: _____

Generator Name and Location: ? Frequency: _____

Hazardous Waste Codes: _____

MSDS Attached: _____ Yes X No

Ultimate Objective for Performing Analysis: Reuse Applications - NASA? any other

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: left over products

Provide a Detailed Composition to the best of your knowledge: See MSDS

Component/Approximate Percentage or PPM:

Sulfalane	/ See MSDS		/ BTU- 831
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____	Percent Solids: _____	Percent Oil: _____
Specific Gravity: _____	Chlor-d-tect(Oil Phase): _____	pH: _____
Phenols: _____	Oil and Grease (Water Phase): _____	TOC: _____
Distillation Test: _____	Metals: _____	Flash: _____
GC/MS: _____	Chlor-n-oil(Oil Phase): _____	Centrifuge Test: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____	Black Oil Suitability: _____	Viscosity: _____
Specific Gravity: _____	Light End Suitability: _____	Distillation Test: _____
Flash: _____	CES Fuel Suitability: _____	Chlor-d-tect: _____
Color: _____	Base Oil Suitability: _____	BTU: _____
Hydro-scout: _____	Water by Distillation: _____	Chlor-n-oil: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____	Specific Gravity: _____	Sulfides: _____
Percent Sodium Hydroxide: _____	Chlorides: _____	Sodium: _____
Percent Solids by Centrifuge: _____	Oil by Centrifuge: _____	TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Univar USA Inc.
17425 NE Union Hill Road
Redmond, WA 98052
(425) 889-3400

For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

The Version Date and Number for this MSDS is : 10/28/2005 - #003

PRODUCT NAME: SULFOLANE - A ANHYDROUS

MSDS NUMBER: 44112

DATE ISSUED: 06/21/2005

SUPERSEDES: 03/30/2001

ISSUED BY: 008806

****
****

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

SULFOLANE - A ANHYDROUS

Product Use: Solvent

Product Number(s): 0001024641, 0001024640, 0001024634, 0001024635, 0001024636, 0001024637, 0001024638, 0001024639, 0001093880

Synonyms: Tetramethylene Sulfone; Sulfolane Anhydrous; Tetrahydrothiophene 1,1-dioxide Product Cas No.: 126-33-0

Company Identification:
Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Product Information:
MSDS Requests: (800) 852 - 5530
Technical Information:
(832) 813 - 4862

24-Hour Emergency Telephone Numbers
HEALTH: Chevron Phillips Emergency Information Center 866.442.9628 (North America) and 1.832.813.4984 (International)

TRANSPORTATION: North America: CHEMTREC 800.424.9300 or 703.527.3887
ASIA: +1.703.527.3887
EUROPE: BIG .32.14.584545 (phone) or .32.14.583516 (telefax)
SOUTH AMERICA SOS-Cotec Inside Brazil: 0800.111.767

EPAHO113000426

Outside Brazil: 55.19.3467.1600

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	AMOUNT	EINECS	SYM	R-PHRASES
Sulfolane	126-33-0	>= 99.0 % weight	204-783-1	Xn	R22
Related Materials	Various	<= 1 % weight	NA	NA	NA

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
Sulfolane	CPCHEM	5 ppm	NA	NA	NA

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Clear liquid with pungent odor.

- CAUSES EYE IRRITATION
- MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA
- MAY CAUSE DAMAGE TO:
 ----- KIDNEY

IMMEDIATE HEALTH EFFECTS:
Eye: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision. Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. Contact with the skin is not expected to cause an allergic skin response.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled.

DELAYED OR OTHER HEALTH EFFECTS:
Reproduction and Birth Defects: Swallowing this material may cause adverse reproductive effects based on animal data.

Target Organs: Repeated ingestion of this material may cause damage to the following organ(s) based on animal data. - Kidney

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Skin: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop.

Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give

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anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 1 Flammability: 0 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: 166 deg C (330.8 deg F) (Cleveland Open Cup)
Autoignition: NDA
Flammability (Explosive) Limits (% by volume in air): Lower: NDA
Upper: NDA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form: Sulfur Oxides, Carbon Oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: U.S.A. regulations require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL . REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL .

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Precautionary Measures: Do not get in eyes. Do not taste or swallow. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

General Handling Information: Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity' (liquids, powders and dusts), and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids).

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3) applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS: Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT:
Eye/Face Protection: Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact.

Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include:
Neoprene

Respiratory Protection: If exposure is anticipated to be greater than

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applicable exposure limits, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air-purifying respirators: Air-Purifying Respirator for Organic Vapors
Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
Sulfolane	CPCHEM	5 ppm	NA	NA	NA

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear liquid with pungent odor.
pH: NA
VAPOR PRESSURE: 1.14 mmHg @ 37.8 deg C (100 deg F)
VAPOR DENSITY (AIR=1): >3
BOILING POINT: 282 deg C (539.6 deg F) - 288 deg C (550.4 deg F)
SOLUBILITY (in water): Appreciable
PERCENT VOLATILE: 100 % volume
FREEZING PT: 26 deg C (78.8 deg F)
SPECIFIC GRAVITY: 1.264 @ 4 deg C (39 deg F) DENSITY: 1.264 g/ml @ 30 deg C (86 deg F)
EVAPORATION RATE: <1

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: No Data Available

Incompatibility With Other Materials: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: Sulfur Oxides. Carbon Oxides.

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS:

Acute Oral Toxicity: Sulfolane: LD50 / rat / >2000 mg/kg
Acute Dermal Toxicity: Sulfolane: LD50 / rat / > 2000 mg/kg
Acute Inhalation Toxicity: Sulfolane: LC50 / rat / > 12,000 mg/m3 / 4 hour(s)

Eye Irritation: This material is irritating to the eyes.
Skin Irritation: Sulfolane: This material is not expected to be irritating to the skin.
Sensitization: Dermal - not a sensitizer

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains SULFOLANE:
Repeated Dose: 28 days / oral / rat / 0, 60, 200, 700 mg/kg/day / LOAEL = 200 mg/kg/day (males-kidney changes; altered blood chemistry-increases in cholinesterase and total bilirubin, decreases in chloride); LOAEL=700 mg/kg/day (females-reduced locomotor activity; altered blood chemistry-decreases in glucose, increases in GPT)

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27-90 days/ inhalation of SULFOLANE AEROSOL / rat, monkey, dog/ LOAEL >200 mg/m3/day (all species-convulsions, vomiting, increased agression)
Reproductive Toxicity: 49 days (males), 41-50 days (females) / oral / rat / 0, 60, 200, 700 mg/kg/day gavage / NOAEL = 700 mg/kg/day (male), LOAEL =200 mg/kg/day (Dams-decreased oestrus stages, decreased birth index, and decreased number of pups)
Developmental Toxicity: 41-50 days (dams exposed 14 days prior to mating to day 3 of lactation) / oral / rat / 0, 60, 200, 700 mg/kg/day/ NOAEL>700 mg/kg/day
Genetic Toxicity: AMES - Negative; Mouse Lymphoma Forward Mutational Assay Negative; In Vitro
Sister Chromatid Exchange Negative

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY:
This material is not expected to be harmful to aquatic organisms.

Sulfolane - 72 hour(s) / EC50 / green algae (Selenastrum capricornutum) / > 1000 mg/L
Sulfolane - 48 hour(s) / EC50 / water flea (Daphnia magna) / 852 mg/L
Sulfolane - 96 hour(s) / LC50 / rainbow trout (Salmo gairdnen)/ > 1000 mg/L
Sulfolane - 96 hour(s) / LC50 / Orange killifish (Oryzias latipes) / > 100 mg/L

ENVIRONMENTAL FATE:
Biodegradability: 14 day(s) / 10 %
This material is expected to be ultimately biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

Shipping Descriptions per regulatory authority.

US DOT
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

ICAO / IATA
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

IMO / IMDG
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

RID / ADR
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION

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Additional Information: This material is regulated when shipped by AIR.

SECTION 15 REGULATORY INFORMATION

SARA 311/312 CATEGORIES:

1. Immediate (Acute) Health Effects:	YES
2. Delayed (Chronic) Health Effects:	YES
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01= CA Prop 65	17 = FDA 178	33 = RCRA Waste Appendix VIII
02 = LA RTK	18 = FDA 179	34 = RCRA Waste D-List
03 = MA RTK	19 = FDA 180	35 = RCRA Waste P-List
04 =MN Hazardous Substance	20 = FDA 181	36 = RCRA Waste U-List
05 =NJ RTK	21 = FDA 182	37 = SARA Section 311/312
06 = PA RTK	22 = FDA 184	38 = SARA Section 313
07 = CAA Section 112 HAPs	23 = FDA 186	39 = TSCA 12 (b)
08 = CWA Section 307	24 = FDA 189	40 = TSCA Section 4
09 = CWA Section 311	25 = IARC Group 1	41 = TSCA Section 5(a)
10 =DOT Marine Pollutant	26 = IARC Group 2A	42 = TSCA Section 8(a) CAIR
11 = FDA 172	27 = IARC Group 2B	43 = TSCA Section 8(a) PAIR
12 = FDA 173	28 = IARC Group 3	44 = TSCA Section 8(d)
13 = FDA 174	29 = IARC Group 4	45 = WHIMS - IDL
14 = FDA 175	30 = NTP Carcinogen	46 = Germany D TAL
15 = FDA 176	31 = OSHA Carcinogen	47 = Germany WKG
16 = FDA 177	32 = OSHA Highly Hazardous	48 = DEA List 1 49 = DEA List 2

The following components of this material are found on the regulatory lists indicated.
Sulfolane 3, 6

WHMIS CLASSIFICATION:
Class D, Division 2, Subdivision A: Very Toxic Material
Reproductive Toxicity
Class D, Division 2, Subdivision B: Toxic Material
Skin or Eye Irritation

CHEMICAL INVENTORY LISTINGS:
AUSTRALIA: All the components of this material are listed on the Australian Inventory of Chemical Substances (AICS).
CANADA: All the components of this material are on the Canadian Domestic Substances List (DSL).
PEOPLE'S REPUBLIC OF CHINA: All the components of this product are listed on the draft Inventory of Existing Chemical Substances in China.
EUROPEAN UNION: All the components of this material are in compliance with the EU Seventh Amendment Directive 92/32/EEC.
JAPAN: All the components of this product are on the Existing & New Chemical Substances (ENCS) inventory in Japan, or have an exemption from listing.
KOREA: All the components of this product are on the Existing Chemicals List (ECL) in Korea.
PHILIPPINES: All the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).
UNITED STATES: All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory.

EU RISK AND SAFETY PHRASES:
R36: Irritating to eyes.

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R60: May impair fertility.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.

EU Symbols: Xn

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 0 Reactivity: 0 Special: NA (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	Threshold Limit Value
TWA	Time Weighted Average
STEL	Short-term Exposure Limit
PEL	Permissible Exposure Limit
ACGIH	American Conference of Government Industrial Hygienists
OSHA	Occupational Safety & Health Administration
NIOSH	National Institute for Occupational
NFPA	National Fire Protection Agency - Safety & Health
WHMIS	Workplace Hazardous Materials
IARC	Intl. Agency for Research on Cancer - Information System
EINECS	European Inventory of existing
RCRA	Resource Conservation Recovery Act - Commercial Chemical Substances
SARA	Superfund Amendments and Reauthorization Act.
TSCA	Toxic Substance Control Act -
EC50	Effective Concentration
LC50	Lethal Concentration
LD50	Lethal Dose
CAS	Chemical Abstract Service
NDA	No Data Available
NA	Not Applicable
<=	Less Than or Equal To
>=	Greater Than or Equal To
CNS	Central Nervous System
MAK	Germany Maximum Concentration Values

For Additional Information:
Contact: MSDS Coordinator - Univar USA
During business hours, Pacific Time - (425) 889-3400

NOTICE
Univar USA expressly disclaims all express or implied warranties of merchantibility and fitness for a particular purpose with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar USA Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar USA makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar USA's control. Therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.

END OF MSDS

EPAHO113000434

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-30 **Date:** 4-23-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Gulbrandsen Technologies **Quantity:** approx 20,000 gals
Generator Name and Location: Laporte TX **Frequency:** one time
Hazardous Waste Codes: NA
MSDS Attached: ☒ Yes ☐ No ZN - ~80 ppm
Ultimate Objective for Performing Analysis:
disposal/treat at CES
Provide a detailed description of the process generating the waste, material, or product:
off spec product WHEN TREATED THIS, MATERIAL SOLIDIFIES
Provide a detailed composition to the best of your knowledge:
off spec product

Component	% or PPM	Component	%or PPM
ACH	30-40%		
Water	remainder		

Internal analysis to be performed on WW sludge and city water sludge

WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒ 3
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☒
Distillation Test:	☐	Metals:	☒	Flash:	☒
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

*****Note: Must have an approved P.O. for any External Lab Analysis.*****

THIS MATERIAL JUST DOES NOT TREAT.- NO FLOCULATION OR PHASING OUT.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-31 **Date:** 4-23-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Gulbrandsen Technologies **Quantity:** approx 20,000 gals
Generator Name and Location: Laporte TX **Frequency:** one time
Hazardous Waste Codes: NA
MSDS Attached: ☒ Yes ☐ No
Ultimate Objective for Performing Analysis: PHENOLS ~ 40 ppm
disposal/treat at CES
Provide a detailed description of the process generating the waste, material, or product:
water from containment and production floor - facility makes ACH
Provide a detailed composition to the best of your knowledge: Ni - 0.000
off spec product Zn - 9 ppm

Component	% or PPM	Component	%or PPM
Water	98-100%		
ACH	trace		
dirt/debris	2%		

Internal analysis to be performed on WW sludge and oily water sludge

WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒ 3
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☒
Distillation Test:	☐	Metals:	☒	Flash:	☒
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

*****Note: Must have an approved P.O. for any External Lab Analysis.*****

$AlCl_3 - 6H_2O$?
IS AN INORGANIC POLYMER

GULBRANDSEN

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

SUBSTANCE: **CF 50**
Aluminum Chlorhydrate Solution

CHEMICAL FAMILY: Inorganic basic salt, solution

MANUFACTURER: Gulbrandsen Mfg., Inc.
P.O. Box 5523
Clinton, NJ 08809

PRODUCT INFORMATION: (908) 735-5458

TRANSPORTATION EMERGENCY (CHEMTREC): (800) 424-9300

NSF®
Certified to ANSI/NSF 60

INGREDIENTS

INGREDIENT	CAS #	PERCENTAGE
Aluminum chlorhydrate	12042-91-0	25 - 50

ALL INGREDIENTS ARE LISTED ON THE TSCA CHEMICAL SUBSTANCE INVENTORY

PHYSICAL DATA

BOILING POINT:	110°C (230°F)	pH (15% w/w):	4.0 - 4.4
MELTING POINT:	-7°C (20°F)	SOLUBILITY IN WATER:	Complete
SPECIFIC GRAVITY:	1.3	VAPOR PRESSURE:	N/F[1]
% VOLATILE:	approx. 50 (water)	EVAPORATION RATE:	N/F
FORM:	Liquid	COLOR:	Colorless to yellow
ODOR:	None		slightly yellow

FIRE AND EXPLOSION HAZARDS

FLASH POINT:	N/A[2]
FLAMMABLE LIMITS IN AIR:	UFL: N/A LFL: N/A
EXTINGUISHING MEDIA:	Will not burn; use materials appropriate for surrounding fire.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Cool exposed tanks with water.
SPECIAL FIRE AND EXPLOSION HAZARDS:	Possible formation of hazardous chlorine compounds.

REACTIVITY

STABILITY:	Stable
DECOMPOSITION:	Will not occur
POLYMERIZATION:	Will not occur
INCOMPATIBILITY:	N/F

HEALTH HAZARDS

EXPOSURE LIMITS: Not specifically regulated as toxic or hazardous by OSHA. The ACGIH TLV for mists or dusts of soluble aluminum salts is 2 mg/m^3 as Al (8 hour time-weighted average).

CARCINOGENICITY: None of the components of this material are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

TOXICOLOGY

INGESTION: Effects of small amount are negligible; large amounts may injure slightly.

EYE CONTACT: Eye contact results in mild irritation and redness.

SKIN CONTACT: Skin contact may cause irritation. Skin may dry or crack due to astringent nature of material.

INHALATION: Although unlikely to occur, inhalation may result in an adverse reaction to persons previously sensitized to the material.

FIRST AID

EYE: Immediately flush eyes for 15 minutes with plenty of water. Call a physician.

SKIN: Flush skin with water. Remove contaminated clothing; wash before reuse.
INHALATION: Remove to fresh air.
INGESTION: None needed.

PERSONAL PROTECTION

Adequate general ventilation should be provided to keep vapor and mists below exposure limits.

Wear safety glasses with side shields. Wear a face shield if possibility of material splashing or spraying exists. Where there is possibility of skin contact, use the following as appropriate: gloves impervious to material, apron, boots, hood, pants and jacket. Wear a NIOSH/OSHA approved respirator with a dust/mist cartridge if there is potential of exposure to mists in excess of applicable limits.

SPILL/LEAK PROCEDURE

Review safety precautions before proceeding with cleanup. Use appropriate personal protection equipment.

Dike area around spill to prevent spreading, and use absorbent material to pick up spill.

DISPOSAL: Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine whether a substance should be classified as a hazardous waste at the time of disposal. This is due to the fact that product use, transformation, synthesis, mixtures, etc. may change the nature of the product. Dispose of waste in accordance with applicable federal, state, and local laws.

SHIPPING INFORMATION

DOT

PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN/NA #: N/A
DOT LABELS: N/A
DOT PLACARDS: N/A
STORAGE CONDITIONS: Keep containers closed

TITLE III HAZARD CLASSIFICATIONS

ACUTE: No
CHRONIC: No
FIRE: No
REACTIVITY: No
PRESSURE: No

EXTREMELY HAZARDOUS SUBSTANCE: No
CERCLA HAZARDOUS SUBSTANCE: No
TOXIC CHEMICAL: No

NFPA/HMIS RATINGS:
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
Personal protection rating to be supplied by user depending on use conditions.

ADDITIONAL INFORMATION AND REFERENCES

This Material Safety Data Sheet refers only to the specific material designated herein, and does not relate to use in combination with any other material or in any process.

[1]N/F = None found
[2]N/A = Not applicable

MSDS compiled by: JGS
Last revised: 07-00

Ni-7
Zn-.449

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-29 Date: 4-23-09
CES Sales Representative: CB
Requested Turnaround/Completion Date: ASAP

Customer Name: C-4 Env. Quantity: 1 Dm
Generator Name and Location: TX City TX Frequency: QTR
Hazardous Waste Codes: —
MSDS Attached: ____ Yes ____ No
Ultimate Objective for Performing Analysis: Can we add Zn:S to our sodium Hypochlorite product for WW use

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: out of spec

Provide a Detailed Composition to the best of your knowledge: O

Component/Approximate Percentage or PPM:
10% / Sodium Hypochlorite / ____
/ ____ / ____
/ ____ / ____
/ ____ / ____

NO Cl- - 0%
PHENOLS - O
pH - 11

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:
Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ____
Phenols: CCCCC Oil and Grease (Water Phase): CCCCC TOC: ____
Distillation Test: ____ Metals: ____ Flash: ____
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): Concentration - Verify TOC - 1260
Off-Site Lab Analysis (List): ____ TREATS OK
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Hydro-scout: ____
Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____
Water by Distillation: ____ Water Extractability: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 04/09/-35 **Date:** 2/24/09
CES Sales Representative: Pam Bowman
Requested Turnaround/Completion Date: ASAP

Customer Name: Bigler **Quantity:** 1-2 loads/wk
Generator Name and Location: Pasadena TX **Frequency:** _____
Hazardous Waste Codes: NA
MSDS Attached: No Yes ____ No
Ultimate Objective for Performing Analysis: Waste Water treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Scrubber water from Isobutelyne

Provide a Detailed Composition to the best of your knowledge: Ni .230
Zn .143

Component/Approximate Percentage or PPM:

Water	93-99.90		FP. 105
Hydrocarbons	0-3.50		
Alcohols	0-3.50		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: X - LOTS of SOLIDS **Percent Solids:** ____ **Percent Oil:** ____
Specific Gravity: X **Chlor-d-tect(Oil Phase):** ____ **pH:** X 6
Phenols: X - 0 **Oil and Grease (Water Phase):** ____ **TOC:** X - 42,580
Distillation Test: ____ **Metals:** X **Flash:** X
GC/MS: ____ **Chlor-n-oil(Oil Phase):** ____ **Centrifuge Test:** ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ **Black Oil Suitability:** ____ **Viscosity:** ____
Specific Gravity: ____ **Light End Suitability:** ____ **Distillation Test:** ____
Flash: ____ **CES Fuel Suitability:** ____ **Chlor-d-tect:** ____
Color: ____ **Base Oil Suitability:** ____ **BTU:** ____
Hydro-scout: ____ **Water by Distillation:** ____ **Chlor-n-oil:** ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ **Specific Gravity:** ____ **Sulfides:** ____
Percent Sodium Hydroxide: ____ **Chlorides:** ____ **Sodium:** ____
Percent Solids by Centrifuge: ____ **Oil by Centrifuge:** ____ **TOC:** ____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

THIS IS 13% ETHYLENE GLYCOL WITH A TRACE OF OIL - THAT'S GREEN

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-32 Date: 4-23-09

CES Sales Representative: _____

Requested Turnaround/Completion Date: _____

Customer Name: Weatherford Quantity: 500gal

Generator Name and Location: Pinemont AR Frequency: QTR.

Hazardous Waste Codes: D001

MSDS Attached: ✓ Yes ____ No

Ultimate Objective for Performing Analysis: WW Treat

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Dye used to inspect for cracks in metal

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

Dye	30-60		
Oil	10-20		
water	30-60		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓ Percent Solids: ____ Percent Oil: ✓

Specific Gravity: ✓ Chlor-d-tect(Oil Phase): ✓ pH: ✓

Phenols: ✓ Oil and Grease (Water Phase): ____ TOC: ✓

Distillation Test: ____ Metals: ✓ Flash: ____

GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____

Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____

Flash: ____ CES Fuel Suitability: ____ Chlor-d-tect: ____

Color: ____ Base Oil Suitability: ____ BTU: ____

Hydro-scout: ____ Water by Distillation: ____ Chlor-n-oil: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____

Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____

Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-28 (2 QTS) Date: 4-23-09
CES Sales Representative: GB
Requested Turnaround/Completion Date: ASAP
Customer Name: C-4 Environmental Quantity: 20 ms
Generator Name and Location: TX City HS. Frequency: QTR
Hazardous Waste Codes: _____
MSDS Attached: ____ Yes ~~No~~
Ultimate Objective for Performing Analysis: can we use this here for WW, chem cleaning, tank washs?
Provide a Detailed Description of the Process Generating the Waste, Material, or Product: UN used material
Provide a Detailed Composition to the best of your knowledge: ~~Unknown~~ un used - Out of spec
Component/Approximate Percentage or PPM:

HCl	20%	/	
Water	80%	/	
/		/	
/		/	
/		/	

Don't want to use this forming HCl - #1

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____	Percent Solids: ____	Percent Oil: ____
Specific Gravity: ____	Chlor-d-tect(Oil Phase): ____	pH: ____
Phenols: CCCCC	Oil and Grease (Water Phase): CCCCC	TOC: ____
Distillation Test: ____	Metals: ____	Flash: ____
GC/MS: ____	Chlor-n-oil(Oil Phase): ____	Centrifuge Test: ____

Other Internal Analysis (List): concentration - verify.
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

#2 - 56 - 1005
#1 - 56 - 1147 - 29%

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	Black Oil Suitability: ____	Viscosity: ____
Specific Gravity: ____	Light End Suitability: ____	Distillation Test: ____
Flash: ____	CES Fuel Suitability: ____	Hydro-scout: ____
Chlor-d-tect: ____	Color: ____	Chlor-n-oil: ____
Water by Distillation: ____	Water Extractability: ____	

Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	Specific Gravity: ____	Sulfides: ____
Percent Sodium Hydroxide: ____	Chlorides: ____	Sodium: ____
Percent Solids by Centrifuge: ____	Oil by Centrifuge: ____	TOC: ____

Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

MATERIAL BROUGHT IN W/O A REPORT. NOTHING COULD REMOVE HAZE.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-14 **Date:** 4/13/09

CES Sales Representative: Jay

Requested Turnaround/Completion Date: Std

Customer Name: Afton **Quantity:** 10 rail cars

Generator Name and Location: Afton **Frequency:** 1 time

Hazardous Waste Codes: None

MSDS Attached: ✓ Yes _____ No

Ultimate Objective for Performing Analysis: to see if it is possible to do a tolling project to remove haze

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Hitec 552 GP that has haze

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

Hitec 552 GP / 99-100 %

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____ **Percent Solids:** _____ **Percent Oil:** _____

Specific Gravity: _____ **Chlor-d-tect(Oil Phase):** _____ **pH:** _____

Phenols: _____ **Oil and Grease (Water Phase):** _____ **TOC:** _____

Distillation Test: _____ **Metals:** _____ **Flash:** _____

GC/MS: _____ **Chlor-n-oil(Oil Phase):** _____ **Centrifuge Test:** _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ **Black Oil Suitability:** _____ **Viscosity:** _____

Specific Gravity: _____ **Light End Suitability:** _____ **Distillation Test:** _____

Flash: _____ **CES Fuel Suitability:** _____ **Chlor-d-tect:** _____

Color: _____ **Base Oil Suitability:** _____ **BTU:** _____

Hydro-scout: X **Water by Distillation:** _____ **Chlor-n-oil:** _____

Other Internal Analysis (List): ① bench scale distill. check for haze ② ran through clay to see if haze clears

Off-Site Lab Analysis (List): (simulate if we were to run through clay unit for motor oil plant)

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ **Specific Gravity:** _____ **Sulfides:** _____

Percent Sodium Hydroxide: _____ **Chlorides:** _____ **Sodium:** _____

Percent Solids by Centrifuge: _____ **Oil by Centrifuge:** _____ **TOC:** _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

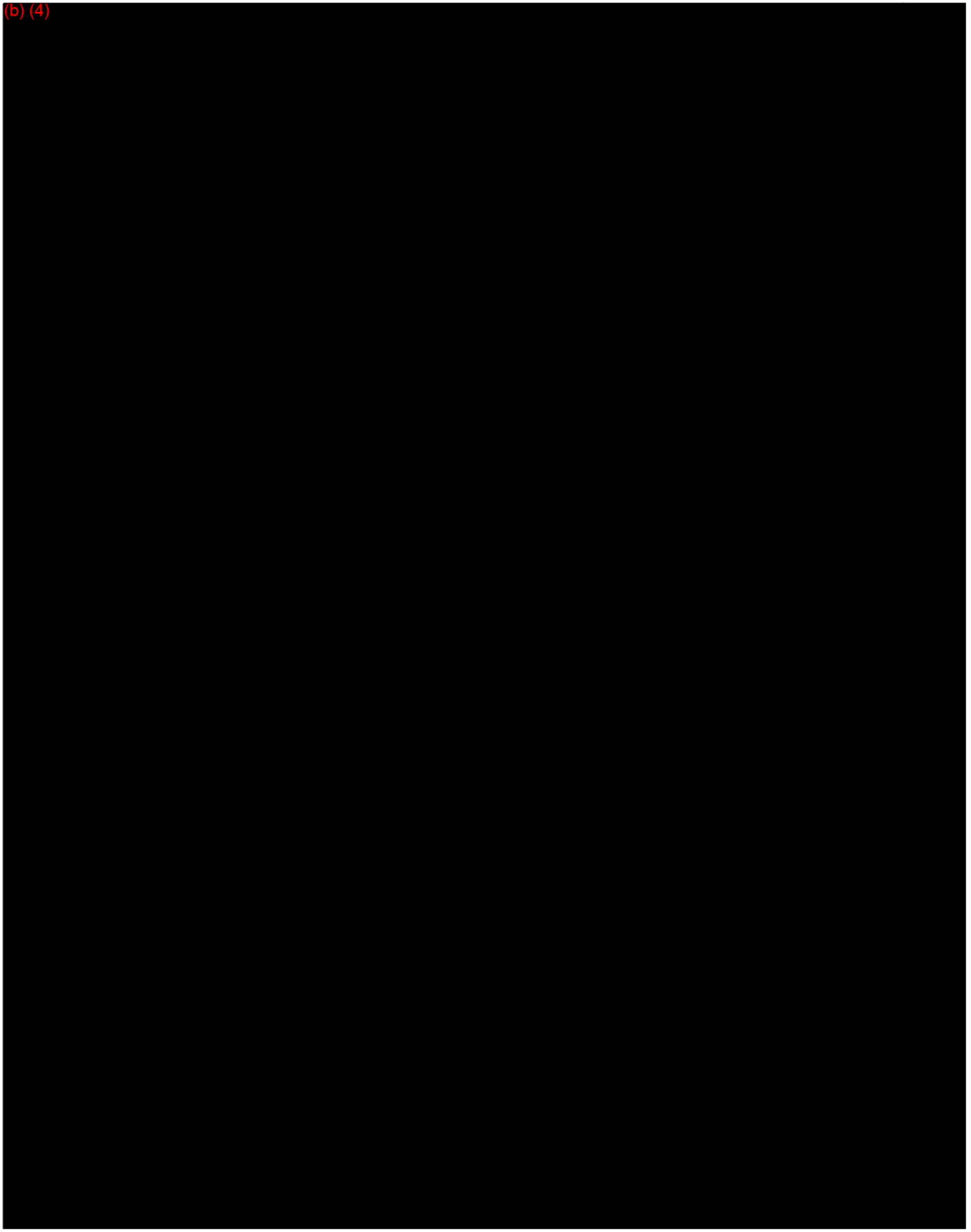
Afton®

Material Safety Data Sheet

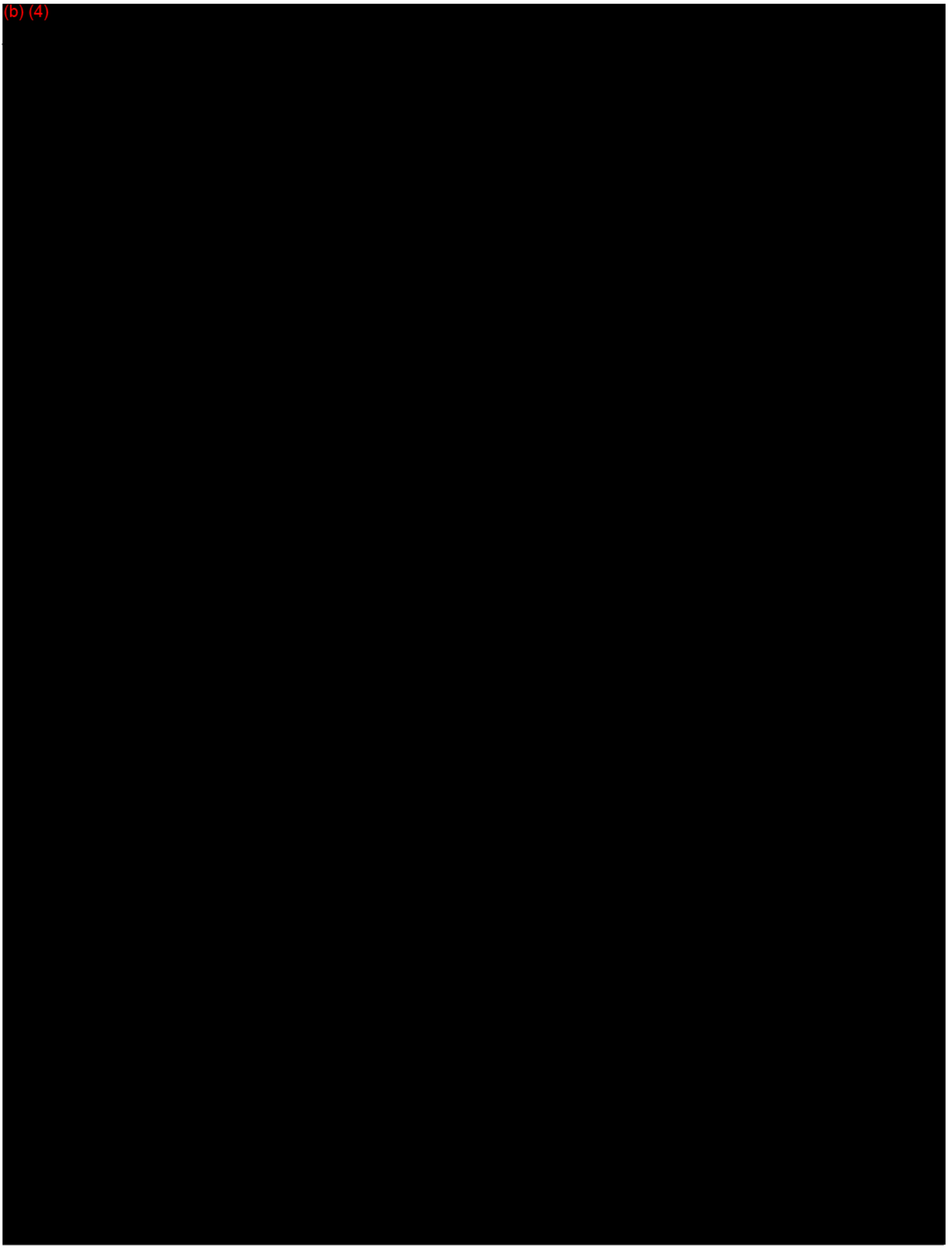
(b) (4)

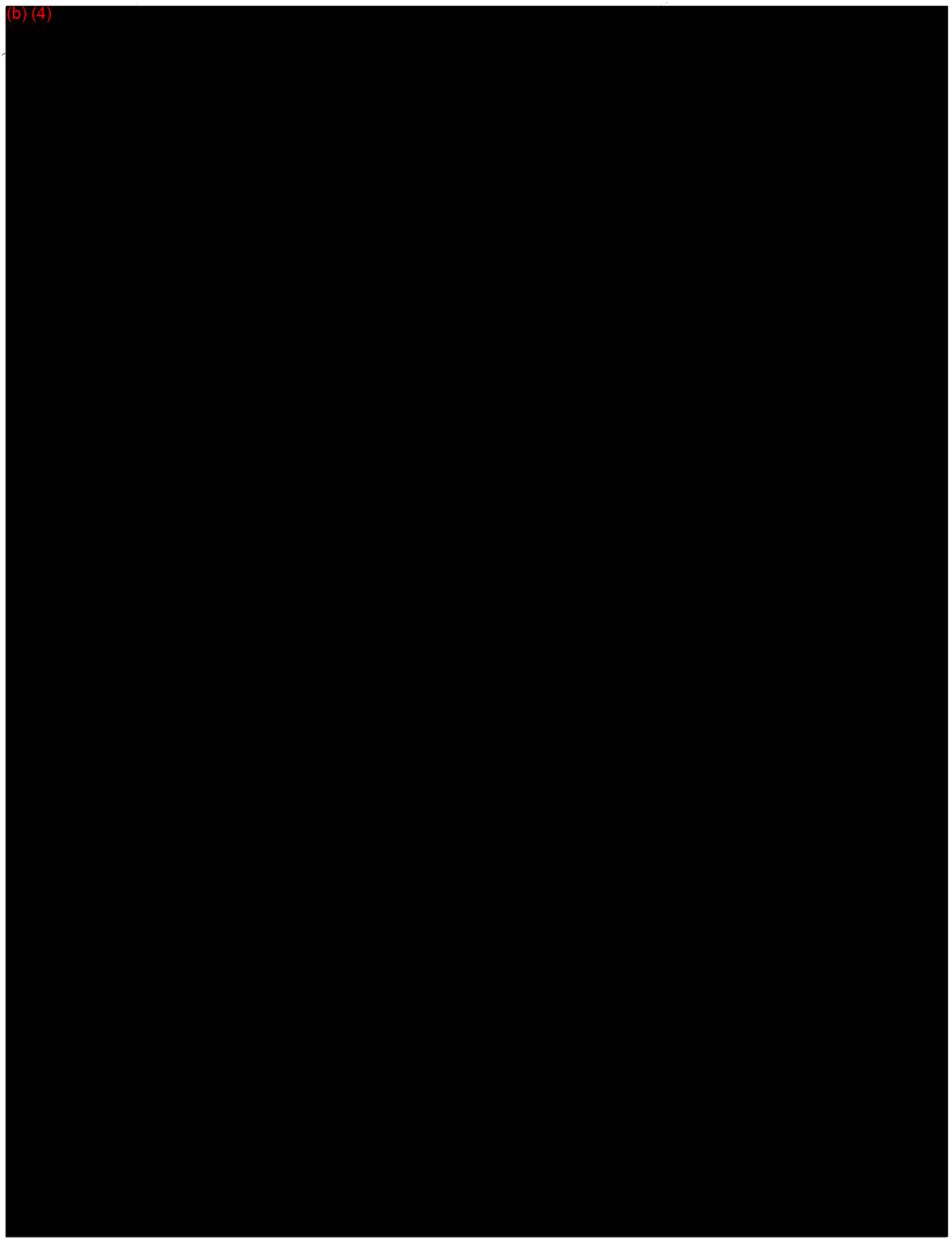
[redacted]

(b) (4)


(b) (4)

(b) (4)




(b) (4)

(b) (4)

[redacted]

*** END OF MSDS ***

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-25 Date: 4-20-09
CES Sales Representative: Branchburg
Requested Turnaround/Completion Date: ASAP
Customer Name: Martin Transport Quantity: _____
Generator Name and Location: Houston Frequency: _____
Hazardous Waste Codes: NA
MSDS Attached: _____ Yes ~~No~~
Ultimate Objective for Performing Analysis: Lube oil Sale 8,000

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Lube oil line Flush.

Provide a Detailed Composition to the best of your knowledge: ??

Component/Approximate Percentage or PPM:

~~Water~~ / 100% - Lube oil		/	
/	various vis.	/	
/		/	
/		/	

CHLOR-D-TECT- 400
VISC @ 100 - @ 12.9 Color 6
H_2O - 2022 ppm
22 - API - D- 0.92

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____	Percent Solids: _____	Percent Oil: _____
Specific Gravity: _____	Chlor-d-tect(Oil Phase): _____	pH: _____
Phenols: CCCCC	Oil and Grease (Water Phase): CCCCC	TOC: _____
Distillation Test: _____	Metals: _____	Flash: _____
GC/MS: _____	Chlor-n-oil(Oil Phase): _____	Centrifuge Test: _____

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ✓	Black Oil Suitability: _____	Viscosity: ✓
Specific Gravity: ✓	Light End Suitability: _____	Distillation Test: _____
Flash: _____	CES Fuel Suitability: _____	Hydro-scout: _____
Chlor-d-tect: ✓	Color: _____	Chlor-n-oil: _____
Water by Distillation: ✓	Water Extractability: ✓	

Other Internal Analysis (List): _____ Provide Results Volatiles.
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____	Specific Gravity: _____	Sulfides: _____
Percent Sodium Hydroxide: _____	Chlorides: _____	Sodium: _____
Percent Solids by Centrifuge: _____	Oil by Centrifuge: _____	TOC: _____

Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Visc @ 100

11:39:49
11:41:52
123 sec

11:42:14
11:44:17

.010477 x 123 = 12.9 cSt

$$\frac{N \times V \times EW}{5.5} = \text{wt\%}$$

$$EW = \frac{\text{wt\%} \times 5.5}{N \times V}$$

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-24 Date: 4-16-09
CES Sales Representative: GB
Requested Turnaround/Completion Date: ASAP
Customer Name: Valero Three Rivers Quantity: 30m
Generator Name and Location: Valero Three River Frequency: month
Hazardous Waste Codes: none
MSDS Attached: ____ Yes ✓ No
Ultimate Objective for Performing Analysis: Blend w/ Blacktoil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Asphalt test oil From Valero Research Labs

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

60-100	Asphaltene	/	
60-100	Base oils	/	
/		/	
/		/	

CHLOR-D-TECT- 700
D- 0.95

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____	Percent Solids: ____	Percent Oil: ____
Specific Gravity: ____	Chlor-d-tect(Oil Phase): ____	pH: ____
Phenols: CCCCC	Oil and Grease (Water Phase): CCCCC	TOC: ____
Distillation Test: ____	Metals: ____	Flash: ____
GC/MS: ____	Chlor-n-oil(Oil Phase): ____	Centrifuge Test: ____

Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	Black Oil Suitability: ✓	Viscosity: ____
Specific Gravity: ____	Light End Suitability: ____	Distillation Test: ____
Flash: ____	CES Fuel Suitability: ____	Hydro-scout: ____
Chlor-d-tect: ✓ (on dissolved material)	Color: ____	Chlor-n-oil: ____
Water by Distillation: ____	Water Extractability: ____	

Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	Specific Gravity: ____	Sulfides: ____
Percent Sodium Hydroxide: ____	Chlorides: ____	Sodium: ____
Percent Solids by Centrifuge: ____	Oil by Centrifuge: ____	TOC: ____

Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

NEED BTU - DENSITY OR API

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-20 **Date:** 4/15/09
CES Sales Representative: Shannon
Requested Turnaround/Completion Date: Regular Turnaround
Customer Name: Kinder Morgan **Quantity:** 1 Vacuum Box
Generator Name and Location: Kinder Morgan - Galena Park **Frequency:** One Time
Hazardous Waste Codes: Non-Hazardous
MSDS Attached: ☒ Yes ☐ No BTU - 14070 API - 14
Ultimate Objective for Performing Analysis:
I want to see if we can take this as a product. Not sure whether this could be used as a fuel.
Provide a detailed description of the process generating the waste, material, or product:
This is cashew nutshell liquid taken from the bottom of a tank. When this tank is cleaned, it will also have a cleaning solution in it.
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Cashew Nutshell Liquid	80%		
Water	10%		
Delimonine	10%		

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Shannon Ward

From: Salinas, Johnny [Johnny_Salinas@kindermorgan.com]
Sent: Tuesday, March 31, 2009 1:26 PM
To: Shannon Ward
Subject: Emailing: searchdetail
Attachments: ViewSection.gif; 1.gif; 2.gif; 3.gif; 4.gif; 5.gif; 6.gif; 7.gif; 8.gif; 9.gif; 10.gif; printbut.gif; emailbut.gif; labelbut.gif; originalbut.gif; glossary.gif; glossarysubmit.gif; top.gif

ACTIO MSDS ID: 602609

View Section: 1 2 3 4 5 6 7 8 9 10

PRINT EMAIL LABEL ORIGINAL MSDS GLOSSARY

Cardolite Corporation

HMIS

HEALTH	1
FIRE	1
REACTIVITY	1
PPE	B

RM-9359 Cashew Nutshell Liquid

* Customer says some people are very allergic to this material. - Shannon

SECTION 1 : Chemical Product and Company Identification

MSDS Name: RM-9359 Cashew Nutshell Liquid
Manufacturer Name:Cardolite Corporation
Address:
500 Doremus Avenue
Newark, NJ 07105

24 HOUR EMERGENCY ASSISTANCE (CHEMTREC): (800) 424-9300

Business Phone: (201) 344-5015
For information in North America, call: (201) 344-5015
Manufacturer MSDS Revision Date:
February 23, 1999
Chemical Family: Alkylated Phenolic Resin
HMIS
Health Hazard: 1
Fire Hazard: 1
Reactivity: 1
Personal Protection: B

TOP

SECTION 2 : Hazardous Ingredients/Identity Information

EPAHO113000456

Chemical Name	CAS#	Percent	
CASHEW NUTSHELL LIQUID	8007-24-7	100%	

OSHA PEL TWA: NOT AVAILABLE

ACGIH TLV TWA: NOT AVAILABLE

Hazardous Paragraph:

NONHAZARDOUS COMPONENTS

Hazardous Components: NONE

TOP

SECTION 3 : Physical And Chemical Characteristics

Physical State/Appearance:

Liquid

Color:

Dark brown

Odor:

Oil like odor.

pH:

APPROX. 7

Vapor Pressure:

0.01 mm Hg (STP)

Vapor Density:

(AIR=1): NOT AVAILABLE

Boiling Point:

NOT AVAILABLE

Solubility:

In Water: Nil

Specific Gravity:

(H2O=1): -1.0

Evaporation Point:

(Butyl Acetate=1): NOT AVAILABLE

Percent Volatile:

NIL

FlashPoint:

> 500 Deg F.

TOP

SECTION 4 : Fire And Explosion Hazards

Fire:

Flammable Limits: NOT AVAILABLE

Flash Point:

> 500 Deg F.

Flash Point Method:

SETA FLASH CC

Extinguishing Media:

FOAM, CO2, DRY CHEMICAL

Fire Fighting Instructions:

NONE KNOWN

EPAHO113000457

Unusual Fire Hazards:

NONE KNOWN

TOP

SECTION 5 : Health Hazards

CASHEW NUTSHELL LIQUID:

Route of Exposure:

NOT AVAILABLE

Potential Health Effects:

Eye Contact:

May be irritating. Avoid eye contact.

Skin Contact:

May be irritating to the skin. May cause a sensitization reaction similar to poison ivy in certain susceptible individuals.

Inhalation:

The inhalation hazard potential has not been determined. Avoid inhalation of vapors.

Ingestion:

The acute oral toxicity of RM-9359 has not been determined.

Carcinogenicity:

NOT AVAILABLE

Signs/Symptoms:

NOT AVAILABLE

Aggravation of Pre-Existing Conditions:

NOT AVAILABLE

TOP

SECTION 6 : Emergency And First Aid Procedures

Eye Contact:

Immediately flush with plenty of water. Call a physician.

Skin Contact:

IMMEDIATELY wash affected area with soap and water.

Inhalation:

Remove to fresh air. Call a physician.

Ingestion:

Give two glasses of water. IMMEDIATELY call a physician or Poison Control Center.

TOP

SECTION 7 : Reactivity Data

Chemical Stability:

STABLE

Conditions to Avoid:

NOT AVAILABLE

Incompatibilities with Other Materials:

NOT AVAILABLE

Hazardous Polymerization:

WILL NOT OCCUR

Conditions to avoid: NOT AVAILABLE

Hazardous Decomposition Products:

EPAHO113000458

NOT AVAILABLE

TOP

SECTION 8 : Precautions For Safe Handling

Spill Cleanup Measures:

Observe precautions from other sections. Cover with absorbent material. Collect spilled material. Clean up residue with an appropriate solvent. Place in a U.S. DOT approved container and seal.

Other Precautions:

NOT AVAILABLE

Handling:

Avoid heat and flame. Avoid all contact with eyes and skin. Use in well ventilated area. Avoid prolonged breathing of fumes. Immediately remove all contaminated clothing and launder before reuse. When cured above 300 deg F, released vapors may cause skin irritation.

Hygiene Practices:

NOT AVAILABLE

Waste Disposal:

Incinerate in an industrial or commercial facility. Disposal alternative: Dispose of completely absorbed waste product in a facility permitted to accept chemical wastes. Since regulations vary, consult applicable regulations or authorities before disposal.

EPA Waste Number:

None

DOT:

Department Of Transportation: NONHAZARDOUS

TOP

SECTION 9 : Control Measures

Ventilation System:

LOCAL EXHAUST RECOMMENDED.

Hand Protection Description:

Protective Gloves: RUBBER GLOVES

Eye/Face Protection:

SAFETY GLASSES OR GOGGLES

Protective Clothing/Body Protection:

NOT AVAILABLE

Respiratory Protection:

USE IN A WELL VENTILATED AREA.

Work/Hygienic Practices: NOT AVAILABLE

TOP

SECTION 10 : Other Information

CASHEW NUTSHELL LIQUID:

TSCA 8(b): Inventory Status

EPA: TSCA REGISTERED

HMIS:

EPAHO113000459

Health Hazard: 1

Fire Hazard: 1

Reactivity: 1

Personal Protection: B

MSDS Revision Date:

February 23, 1999

Disclaimer:

The information an this data sheet represents our current data and best opinion as to the proper use and handling of this product 'under normal conditions. Any use of this product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any process is the responsibility of the user.

Abbreviations:
NA=NOT AVAILABLE
NE=NOT ESTABLISHED

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2-QTS

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-19 **Date:** 4-14-07
CES Sales Representative: GB
Requested Turnaround/Completion Date: ASAP
Customer Name: NCRA Refinery **Quantity:** 20,000 gal
Generator Name and Location: Kansas **Frequency:** 1 x/month
Hazardous Waste Codes: _____
MSDS Attached: ✓ Yes _____ No
Ultimate Objective for Performing Analysis: NaOH production

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
scrubbing Sulfides from Gas

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

Sulfides	.1-1%		
NaOH	4-10%		
water	90-95%		
organics	.1-1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____ **Percent Solids:** _____ **Percent Oil:** _____
Specific Gravity: _____ **Chlor-d-tect(Oil Phase):** _____ **pH:** _____
Phenols: _____ **Oil and Grease (Water Phase):** _____ **TOC:** _____
Distillation Test: _____ **Metals:** _____ **Flash:** _____
GC/MS: _____ **Chlor-n-oil(Oil Phase):** _____ **Centrifuge Test:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ **Black Oil Suitability:** _____ **Viscosity:** _____
Specific Gravity: _____ **Light End Suitability:** _____ **Distillation Test:** _____
Flash: _____ **CES Fuel Suitability:** _____ **Chlor-d-tect:** _____
Color: _____ **Base Oil Suitability:** _____ **BTU:** _____
Hydro-scout: _____ **Water by Distillation:** _____ **Chlor-n-oil:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ **Specific Gravity:** ✓ **Sulfides:** ✓
Percent Sodium Hydroxide: ✓ **Chlorides:** ✓ **Sodium:** ✓
Percent Solids by Centrifuge: ✓ **Oil by Centrifuge:** _____ **TOC:** ✓
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-17 **Date:** 4.13.09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Andrews Transport **Quantity:** 5-6 drums
Generator Name and Location: Andrews Transport **Frequency:** per year
Hazardous Waste Codes: None
MSDS Attached: ☒ Yes ☐ No
Ultimate Objective for Performing Analysis: recycle
59% + GLYCOL ET.
Provide a detailed description of the process generating the waste, material, or product: removal of used coolant from trucks
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Shellzone Coolant	99-100 %		
Dirt, etc	0-1 %		

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List): % glycol
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

MATERIAL SAFETY DATA SHEET

Review Date: 08/29/2005

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: SHELLZONE® ALL-SEASON Antifreeze/Coolant Prediluted 50/50

MSDS NUMBER: 400930E - 3
PRODUCT CODE(S): 5060208, 94067, 9406700001, 9406700055, 9406706021

MANUFACTURER
SOPUS Products
P.O. Box 4427
Houston, TX. 77210-4427

TELEPHONE NUMBERS
Spill Information: (877) 242-7400
Health Information: (877) 504-9351
MSDS Assistance Number: (877) 276-7285

SECTION 2 PRODUCT/INGREDIENTS

INGREDIENTS	CAS#	CONCENTRATION
Antifreeze/Coolant		
Ethylene Glycol	107-21-1	45 - 55 %weight
Deionized water	7732-18-5	45 - 55 %weight

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Appearance & Odor: Fluorescent green liquid. Mild odor.
Health Hazards: May be harmful or fatal if swallowed. May cause acidosis, cardiopulmonary and kidney effects. May cause CNS depression.
NFPA Rating (Health, Fire, Reactivity): 2, 1, 0
Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Inhalation:
In applications where vapors (caused by high temperature) or mists (caused by mixing or spraying) are created, breathing may cause a mild burning sensation in the nose, throat and lungs.

Eye Irritation:
If irritation occurs, a temporary burning sensation, minor redness, swelling, and/or blurred vision may result.

Skin Contact:
May cause slight irritation of the skin. If irritation occurs, a temporary burning sensation and minor redness and/or swelling may result. Other adverse effects not expected from brief skin contact.

Ingestion:
May be harmful or fatal if swallowed. Contains ethylene glycol and/or diethylene glycol which are toxic when swallowed. A

EPAHO113000463

lethal dose for an adult is 1 ml per kilogram or about 4 ounces (1/2 cup). Severe kidney damage can occur as a result of ingestion. Ingestion may result in nausea, vomiting and abdominal cramps. Metabolic acidosis and cardiopulmonary effects can occur following ingestion. May cause Central Nervous System (CNS) depression.

Other Health Effects:
Refer to Section 11, Toxicological Information, for specific information on the following effects:
Developmental Toxicity

Primary Target Organs:
The following organs and/or organ systems may be damaged by overexposure to this material and/or its components:
Cardiovascular System, Kidney, Liver, Lungs

Signs and Symptoms:
May cause cardiopulmonary effects including rapid respiration and heartbeat, cyanosis and in severe cases, pulmonary edema and pneumonia. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness and nausea. In extreme cases, unconsciousness and death may occur. Kidney damage may be indicated by changes in urine output or appearance, pain upon urination or in the lower back or general edema (swelling from fluid retention). Liver damage may be indicated by loss of appetite, jaundice (yellowish skin and eye color), fatigue and sometimes pain and swelling in the upper right abdomen.

Aggravated Medical Conditions:
Pre-existing eye, skin, respiratory, liver and kidney disorders and may be aggravated by exposure to this product.

For additional health information, refer to section 11.

SECTION 4 FIRST AID MEASURES

Inhalation:
Move victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

Skin:
Flush exposed area with water and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. If skin irritation persists after washing, get medical advice.

Eye:
Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment. If eye irritation persists, seek medical advice.

Ingestion:
DO NOT take internally. If swallowed, IMMEDIATELY contact a poison control center, emergency treatment center, or physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Note to Physician:
IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. May cause cardiopulmonary effects. For ETHYLENE GLYCOL POISONING, intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for ethylene glycol poisoning.

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SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: >239 °F/>115 °C [Cleveland Open Cup]

Extinguishing Media:
Prevent run off from fire control or dilution from entering streams, sewers or drinking water supply. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:
Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. This material is non-flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures:
May burn although not readily ignitable.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:
Shut off source of leak if safe to do so. Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Reporting:
U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity to the National Response Center at (800)424-8802.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:
Do not ingest. Avoid prolonged or repeated contact with eyes, skin or clothing. Avoid breathing of vapors, fumes or mists. Use with adequate ventilation. Wash thoroughly after handling. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage:
Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:
Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EPAHO113000465

Chemical	Limit	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH TLV			100 mg/m3	
Ethylene Glycol	OSHA PEL - 1989(revoked)			50 ppmv	

Exposure Controls

Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

Personal Protection

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection:
Chemical Goggles - If liquid contact is likely., or Safety glasses with side shields

Skin Protection:
Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:
Neoprene, or Nitrile Rubber

Respiratory Protection:
If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:
For Mist: Air Purifying, R or P style NIOSH approved respirator.
For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Fluorescent green liquid. Mild odor.
Substance Chemical Family: Ethylene Glycols

Boiling Point	388 °F	**Flash Point**	> 239 °F [Cleveland Open Cup]
Freezing Point	-34 °F	**Odor**	Mild odor.
Specific Gravity	1.06 - 1.09		

NOTE: The freezing and boiling point values reflect a 50% solution in water at atmospheric pressure.

SECTION 10 REACTIVITY AND STABILITY

Mobile 512442400 512929733 512385381 512837268 5 4047735705 5129282088 5123496500 5123851227 5124767592 5123852100 5128367286 5128367286 5122728207 5124591388 8179392993 5128363670 5128363670 5129293261

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Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketonesand other unidentified organic compounds may be formed upon combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity

TEST	Result	OSHA Classification	Material Tested
Dermal LD50	9.5 g/kg(Rabbit)	Non-Toxic	Based on components(s)

Carcinogenicity Classification

Chemical Name	NTP	IARC	ACGIH	OSHA
Antifreeze/Coolant	No	Not Reviewed	No	No

Cardiovascular System	Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects.
Developmental Toxicity	Oral exposure of pregnant rats and mice to ethylene glycol has produced birth defects in the offspring.
Kidney	Ingestion of ethylene glycol can cause bladder stones and kidney damage which can be fatal.
Liver	Prolonged and repeated ingestion of ethylene glycol has produced liver damage in rats.
Lungs	Ingestion of large doses can cause metabolic acidosis that results in cardiopulmonary effects.
Whole Animal	Orally, humans are more sensitive to ethylene glycol than rodents. The reported lethal dose range for an adult human is 1 -2 ml/kg, or 1/4 to 1/2 cup.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Impact Summary:
There is no ecological data available for this product.

Environmental Fate:
The toxicity of this material to aquatic organisms has not been fully evaluated. This material must not be discharged or allowed to come into contact with sewage and drainage systems and any surface water body.

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SECTION 13 DISPOSAL CONSIDERATIONS

RCRA Information:

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal. Follow all applicable laws and regulations. Used antifreeze recycling is recommended. Do not drain on the ground or into storm drainage systems. Do not dispose in sanitary sewer systems except where permitted by law.

SECTION 14 TRANSPORT INFORMATION

US Department of Transportation Classification
This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less. If shipped in a container of over 119 gallon capacity then the DOT information must be accompanied with RQ notation, or, an otherwise 'Not Regulated' product will be classified as Environmentally Hazardous (solid/liquid) N.O.S., Class 9, Packing group III unless the product qualifies for the petroleum exemption (49 CFR 171.8).

Hazardous Substance/Material RQ: Ethylene glycol / 10539.7068 lbs

International Air Transport Association

Hazard Class/Division:	9 (Miscellaneous)
Identification Number:	UN3082
Packing Group:	III
Proper Shipping Name:	Environmentally Hazardous Substances, Liquid, N.O.S.
Technical Name(s):	Ethylene Glycol

International Maritime Organization Classification

Hazard Class/Division:	9 (Miscellaneous)
Identification Number:	UN3082
Packing Group:	III
Proper Shipping Name:	Environmentally Hazardous Substances, Liquid, N.O.S.
Technical Name(s):	Ethylene Glycol

SECTION 15 REGULATORY INFORMATION

Federal Regulatory Status

OSHA Classification:
Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA):

Ethylene Glycol	RQ 5000 lbs	Reportable Spill => 10539.706764 lbs or 1264.21 gal
Potassium hydroxide	RQ 1000 lbs	Reportable Spill => 266666.666667 lbs or 31985.93 gal

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Ozone Depleting Substances (40 CFR 82 Clean Air Act):
This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

Superfund Amendment & Reauthorization Act (SARA) Title III:
There are no components in this product on the SARA 302 list.

SARA Hazard Categories (311/312):

Immediate Health	Delayed Health	Fire	Pressure	Reactivity
YES	YES	NO	NO	NO

SARA Toxic Release Inventory (TRI) (313):
Ethylene Glycol

Toxic Substances Control Act (TSCA) Status:
All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:
Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, Chinese Inventory, European EINECS, Korean Inventory, Philippines PICCS,

State Regulation

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

New Jersey Right-To-Know Chemical List:

Ethylene Glycol (0878)	45 - 55 %weight	Special Hazard

Pennsylvania Right-To-Know Chemical List:

1,2-Ethanediol (107-21-1)	45 - 55 %weight	Environmental Hazard

SECTION 16 OTHER INFORMATION

Revision#: 3
Review Date: 08/29/2005
Revision Date: 04/14/2005
Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-2003). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17 LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE

EPAHO113000469

CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 5060208, 94067, 9406700001, 9406700055, 9406706021

SHELLZONE® ALL-SEASON Antifreeze/Coolant Prediluted 50/50

WARNING!

MAYBE HARMFUL OR FATAL IF SWALLOWED. MAY CAUSE ACIDOSIS, CARDIOPULMONARY AND KIDNEY EFFECTS. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. The following organs and/or organ systems may be damaged by overexposure to this material and/or its components.

MAY CAUSE DAMAGE TO: Cardiovascular System, Kidney, Liver, Lungs

Refer to Section 11, Toxicological Information, for specific information on the following effects: Developmental Toxicity

Precautionary Measures:
Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid breathing of vapors, fumes, or mist. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container closed when not in use. Wash thoroughly after handling.

FIRST AID

Inhalation: Move victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.
Skin Contact: Flush exposed area with water and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. If skin irritation persists after washing, get medical advice.
Eye Contact: Flush eyes with plenty of water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment. If eye irritation persists, seek medical advice.
Ingestion: DO NOT take internally. If swallowed, IMMEDIATELY contact a poison control center, emergency treatment center, or physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

SPILL OR LEAK

Dike and contain spill.
FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Ethylene Glycol, 107-21-1; Deionized water, 7732-18-5

NFPA Rating (Health, Fire, Reactivity): 2, 1, 0

TRANSPORTATION

EPAHO113000470

US Department of Transportation Classification
This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less. If shipped in a container of over 119 gallon capacity then the DOT information must be accompanied with RQ notation, or, an otherwise 'Not Regulated' product will be classified as Environmentally Hazardous (solid/liquid) N.O.S., Class 9, Packing group III unless the product qualifies for the petroleum exemption (49 CFR 171.8).

Hazardous Substance/Material RQ: Ethylene glycol / 10539.7068 lbs

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flames or heat. Keep container closed and drum bungs in place.

Name and Address

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427

ADMINISTRATIVE INFORMATION	
MANUFACTURER ADDRESS:	SOPUS Products, P.O. Box 4427, Houston, TX. 77210-4427

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT : IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN AS A RESULT OF THAT DATA, IS THE PROPERTY OF SOPUS PRODUCTS AND IS NOT TO BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF SOPUS PRODUCTS.

43747-11639-100R-08/22/2005

EPAHO113000471

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-16 **Date:** 4-13-09.
CES Sales Representative: G. Braucksmay
Requested Turnaround/Completion Date: _____

Customer Name: NCRA **Quantity:** _____
Generator Name and Location: NCRA-Kansas **Frequency:** 20,000 month.
Hazardous Waste Codes: _____
MSDS Attached: ✓ Yes _____ No
Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: _____

Provide a Detailed Composition to the best of your knowledge: Sulfide Stripper.

Component/Approximate Percentage or PPM:

Caustic	5-20	water	80-90
Soda	2-4%		
Sulfide	0-1		
Phenol	0-1		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____	**Percent Solids:** _____	**Percent Oil:** _____
Specific Gravity: _____	**Chlor-d-tect(Oil Phase):** _____	**pH:** _____
Phenols: _____	**Oil and Grease (Water Phase):** _____	**TOC:** _____
Distillation Test: _____	**Metals:** _____	**Flash:** _____
GC/MS: _____	**Chlor-n-oil(Oil Phase):** _____	**Centrifuge Test:** _____

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____	**Black Oil Suitability:** _____	**Viscosity:** _____
Specific Gravity: _____	**Light End Suitability:** _____	**Distillation Test:** _____
Flash: _____	**CES Fuel Suitability:** _____	**Chlor-d-tect:** _____
Color: _____	**Base Oil Suitability:** _____	**BTU:** _____
Hydro-scout: _____	**Water by Distillation:** _____	**Chlor-n-oil:** _____

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ✓	**Specific Gravity:** ✓	**Sulfides:** ✓
Percent Sodium Hydroxide: ✓	**Chlorides:** ✓	**Sodium:** ✓
Percent Solids by Centrifuge: ✓	**Oil by Centrifuge:** ✓	**TOC:** ✓

Other Internal Lab Analysis (List): ✓
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

NCRA cresylic caustic.

BEGIN MSDS NCR86618

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

National Cooperative Refinery Association
1391 Iron Horse Road
McPherson, KS 67460
(620) 241-2340

EMERGENCY RESPONSE
CHEMTREC: 1-800-424-9300 (USA)

SUBSTANCE: CRESYLIC CAUSTIC

TRADE NAMES/SYNONYMS:
NCR86618

CHEMICAL FAMILY: aqueous

CREATION DATE: Sep 12 1994
REVISION DATE: Sep 13 2007

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2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: CRESYLIC CAUSTIC
CAS NUMBER: Not assigned.
EC NUMBER: Not assigned.
PERCENTAGE: 100

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3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=0

EMERGENCY OVERVIEW:
PHYSICAL DESCRIPTION: Reddish to black liquid.
MAJOR HEALTH HAZARDS: respiratory tract burns, skin burns, eye burns, mucous membrane burns

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation (possibly severe), difficulty breathing, dizziness, bluish skin color, lung congestion
LONG TERM EXPOSURE: digestive disorders
SKIN CONTACT:
SHORT TERM EXPOSURE: burns
LONG TERM EXPOSURE: same as effects reported in short term exposure
EYE CONTACT:
SHORT TERM EXPOSURE: burns, blindness
LONG TERM EXPOSURE: same as effects reported in short term exposure
INGESTION:
SHORT TERM EXPOSURE: burns, difficulty breathing, kidney damage
LONG TERM EXPOSURE: same as effects reported in short term exposure

CARCINOGEN STATUS:
OSHA: No

NTP: No
IARC: No

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4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing and shoes before reuse. Destroy contaminated shoes.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: DO NOT induce vomiting. Never make an unconscious person vomit or drink fluids. Give large amounts of water or milk. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN: For inhalation, consider oxygen. For ingestion, consider esophagoscopy. Avoid gastric lavage.

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5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. Large fires: Flood with fine water spray. Reduce vapors with water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT: No data available.

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6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:
Do not touch spilled material. Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Small dry spills: Move

containers away from spill to a safe area. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards.

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8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
CRESYLIC CAUSTIC:
  SODIUM HYDROXIDE:
    2 mg/m3 OSHA TWA
    2 mg/m3 OSHA ceiling (vacated by 58 FR 35338, June 30, 1993)
    2 mg/m3 ACGIH ceiling
    2 mg/m3 NIOSH recommended ceiling
    2 mg/m3 UK WEL STEL

    MEASUREMENT METHOD: NIOSH IV # 7401

VENTILATION: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
  Any chemical cartridge respirator with organic vapor cartridge(s).
  Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
  Any air-purifying respirator with a full facepiece and an organic vapor canister.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
  Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
  Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Reddish to black liquid.
BOILING POINT: Not available
FREEZING POINT: Not available
VAPOR PRESSURE: Not available
VAPOR DENSITY: Not available
SPECIFIC GRAVITY (water=1): 1.38
WATER SOLUBILITY: soluble
PH: >12
VOLATILITY: Not available
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.

INCOMPATIBILITIES:
CRESYLIC CAUSTIC:
No data available.

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

CRESYLIC CAUSTIC:
LOCAL EFFECTS:
Corrosive: inhalation, skin, eye, ingestion

HEALTH EFFECTS:
INHALATION:
CRESYLIC CAUSTIC: See information on alkaline corrosives.

ACUTE EXPOSURE:
ALKALINE CORROSIVES: May cause irritation of the respiratory tract with coughing, choking, pain, and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop, either immediately in severe cases or more often with a latent period of 5-72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include hypotension, weak and rapid pulse and moist rales. Severe cases may be fatal.

CHRONIC EXPOSURE:

ALKALINE CORROSIVES: Depending on the concentration and duration of exposure, repeated or prolonged exposure may cause inflammatory and ulcerative changes in the mouth. There may also be bronchial and gastrointestinal disturbances leading to effects similar to those in acute exposure.

SKIN CONTACT:

CRESYLIC CAUSTIC: See information on alkaline corrosives.

ACUTE EXPOSURE:

ALKALINE CORROSIVES: Direct contact may cause severe pain, burns and possibly brownish stains. The corroded areas may be soft, gelatinous, and necrotic. Tissue destruction may be deep.

CHRONIC EXPOSURE:

ALKALINE CORROSIVES: Effects depend on the concentration and duration of exposure. Repeated or prolonged contact may cause dermatitis or effects similar to acute exposure.

EYE CONTACT:

CRESYLIC CAUSTIC: See information on alkaline corrosives.

ACUTE EXPOSURE:

ALKALINE CORROSIVES: Direct contact may cause pain and burns. There may be edema, destruction of epithelium, corneal opacification and iritis. When damage is less than excessive, these symptoms tend to ameliorate. In severe burns, the full extent of the injury may not be immediately apparent. Late complications may include persistent edema, vascularization and scarring of the cornea, permanent opacity, staphyloma, cataract, symblepharon and blindness.

CHRONIC EXPOSURE:

ALKALINE CORROSIVES: Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in conjunctivitis or effects as in acute exposure.

INGESTION:

CRESYLIC CAUSTIC: See information on alkaline corrosives.

ACUTE EXPOSURE:

ALKALINE CORROSIVES: May cause immediate pain, circumoral burns and corrosion of the mucous membranes which at first turn white and soapy and then become brown, edematous and ulcerated. There may be profuse salivation and difficulty or inability to swallow or speak. Even when there is no evidence of oral burns, the esophagus and stomach may be involved with burning pain, vomiting and diarrhea. The vomitus may be thick and slimy with mucous, and later contain blood and shreds of mucosa. Epiglottal edema may result in respiratory distress and possibly asphyxia. Shock with marked hypotension, weak and rapid pulse, shallow respiration, and clammy skin may occur. Circulatory collapse may ensue, and if uncorrected, lead to renal failure. In severe cases, esophageal or gastric perforation are possible and may be accompanied by mediastinitis, substernal pain, peritonitis, abdominal rigidity, and fever. Esophageal, and possibly gastric or pyloric stricture, may occur within a few weeks, but may be delayed for months or even years. Death may result within a short time from asphyxia, circulatory collapse, or aspiration of even minute amounts. If death is delayed it may be due to the complications of

perforation, pneumonia, or the effects of stricture formation.

CHRONIC EXPOSURE:
ALKALINE CORROSIVES: Depending on the concentration, repeated ingestion may result in inflammatory and ulcerative effects on the oral mucous membranes and other effects as with acute ingestion.

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Sodium hydroxide solution
ID NUMBER: UN1824
HAZARD CLASS OR DIVISION: 8
PACKING GROUP: II
LABELING REQUIREMENTS: 8

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR:
PROPER SHIPPING NAME: Sodium hydroxide solution
UN NUMBER: UN1824
CLASS: 8
CLASSIFICATION CODE: C5
PACKING GROUP: II
LABELS: 8

LAND TRANSPORT RID:
PROPER SHIPPING NAME: Sodium hydroxide solution
UN NUMBER: UN1824
CLASS: 8
CLASSIFICATION CODE: C5
PACKING GROUP: II
LABELS: 8

AIR TRANSPORT IATA:
PROPER SHIPPING NAME: Sodium hydroxide solution
UN/ID NUMBER: UN1824
CLASS OR DIVISION: 8
HAZARD LABELS: 8
PACKING GROUP: II

AIR TRANSPORT ICAO:

PROPER SHIPPING NAME: Sodium hydroxide solution
UN NUMBER: UN1824
CLASS OR DIVISION: 8
LABELS: 8
UN PACKING GROUP: II

MARITIME TRANSPORT IMDG:
PROPER SHIPPING NAME: Sodium hydroxide solution
UN NUMBER: UN1824
CLASS OR DIVISION: 8
PACKING GROUP: II

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15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
SODIUM HYDROXIDE: 1000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:
California Proposition 65: Not regulated.

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:
EC CLASSIFICATION (CALCULATED):
C Corrosive

DANGER/HAZARD SYMBOL:
C Corrosive

EC RISK AND SAFETY PHRASES:

R 34	Causes burns.
S 2	Keep out of the reach of children.
S 20	When using do not eat or drink.
S 24	Avoid contact with skin.
S 25	Avoid contact with eyes.

S 26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 27	Take off immediately all contaminated clothing.
S 39	Wear eye/face protection.
S 46	If swallowed, seek medical advice immediately and show this container or label.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Not listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

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16. OTHER INFORMATION

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715-725-9611

CHECJY10

THECJY10

A - Unit 2
B - Unit 12
C - Unit 16

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-15(A-C) **Date:** 4/13/09
CES Sales Representative: Matt Bowman
Requested Turnaround/Completion Date: std

Customer Name: Exxon - Baton Rouge **Quantity:** 2 barges/month
Generator Name and Location: same **Frequency:** ↑
Hazardous Waste Codes: _____
MSDS Attached: X **Yes** _____ **No**
Ultimate Objective for Performing Analysis: run series of tests on napthenic acid for Pete Mford. amount of napthenic oil that breaks out, ~~phenol in water~~, TOC, phenol, treat on water

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: _____
Spent VLE Caustic - napthenic

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

Water	90-95%	Naptha	0-5%
NaOH	4%	Na_2CO_3	<1%
Na_2S	<1%		
Na_2SO_4	Not determined		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____ **Percent Solids:** _____ **Percent Oil:** _____
Specific Gravity: _____ **Chlor-d-tect(Oil Phase):** _____ **pH:** _____
Phenols: _____ **Oil and Grease (Water Phase):** _____ **TOC:** _____
Distillation Test: _____ **Metals:** _____ **Flash:** _____
GC/MS: _____ **Chlor-n-oil(Oil Phase):** _____ **Centrifuge Test:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ **Black Oil Suitability:** _____ **Viscosity:** _____
Specific Gravity: _____ **Light End Suitability:** _____ **Distillation Test:** _____
Flash: _____ **CES Fuel Suitability:** _____ **Chlor-d-tect:** _____
Color: _____ **Base Oil Suitability:** _____ **BTU:** _____
Hydro-scout: _____ **Water by Distillation:** _____ **Chlor-n-oil:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ **Specific Gravity:** _____ **Sulfides:** _____
Percent Sodium Hydroxide: _____ **Chlorides:** _____ **Sodium:** _____
Percent Solids by Centrifuge: _____ **Oil by Centrifuge:** _____ **TOC:** X
Other Internal Lab Analysis (List): WW treatability, amount of napthenic acid recovered, series of tests required by Pete Mford on napthenic acid.
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

DRAFT

WST-013

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

SPENT VLE CAUSTIC

DATE ISSUED: 11/15/93
SUPERSEDES DATE: 12/20/88

MATERIAL SAFETY DATA SHEET

EXXON COMPANY, U.S.A. P. O. BOX 2180 HOUSTON, TEXAS 77252-2180

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME
Spent VLE Caustic

PRODUCT CODE
Not determined

PRODUCT CATEGORY
Basic Aqueous Solution

SYNONYMS
Spent Sulfidic Caustic

PRODUCT APPEARANCE AND ODOR
Dark oily liquid slightly viscous with possible hydrogen sulfide (rotten egg) odor

MEDICAL EMERGENCY TELEPHONE NUMBER
(713) 656-3424

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS	CAS No. OF COMPONENTS	APPROXIMATE CONCENTRATION
Water	7732-18-5	90 - 95%
Sodium Hydroxide	1310-73-2	4%
Sodium Sulfide	1313-82-2	<1%
Sodium Sulfate	7757-82-6	Not determined
Sodium Carbonate	497-19-8	<1%
Naphtha (C3+)	Not applicable	0 - 5%

This product may contain hydrogen sulfide (H_2S).

All components of this product are listed on the U.S. TSCA Inventory.

See Section E for Health and Hazard Information

See Section H for additional Environmental Information

Hazardous Materials Identification System (HMIS)

Health	Flammability	Reactivity	BASIS
3	0	1	Recommended by Exxon

EPAHO113000483

EXPOSURE LIMIT FOR TOTAL PRODUCT	BASIS
Not established for total product	
Ceiling limit of 2 mg/m3 for Sodium Hydroxide	OSHA Regulations 29 CFR 1910.1000 American Conference of Governmental Industrial Hygienists
EUSA's Occupational Exposure Limit (OEL's) of 100 ppm or 300 mg/m3 for an 8-hour workday recommended for motor gasoline should be used until a formal naphtha OEL is established.	Recommended by Exxon
The airborne benzene level shall not exceed 1 ppm for an 8 hour workday or 5 ppm for any 15 minute period.	OSHA Regulation 29 CFR 1910.1028

OSHA Regulation 29 CFR 1910.1000 and the American Conference of Governmental Industrial Hygienists (ACGIH) have adopted a Threshold Limit Value (TLV) for hydrogen sulfide (H2S) of 10 ppm (14 mg/m3) in air as a time weighted average for an 8-hour workday with a 15 ppm (21 mg/m3) STEL. OSHA Regulation 29 CFR 1910.1000 further lists a ceiling concentration of 20 ppm (28 mg/m3), and a maximum peak of 50 ppm (70 mg/m3) for a 10 minutes once per day if no other measurable exposure occurs. NIOSH-approved respiratory equipment should be used when permissible concentrations are exceeded.

C. PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
If splashed into the eyes, immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT
In case of skin contact, immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention.

INHALATION
If overcome by vapor or H2S, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen if available.

INGESTION
If ingested, DO NOT induce vomiting. If individual is conscious, give milk or water to dilute stomach contents. Keep warm and quiet. Get prompt medical attention. DO NOT attempt to give anything by mouth to an unconscious person.

D. FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM)	AUTOIGNITION TEMPERATURE
Extinguished Flame at 140° F	Not applicable

NOTE: This material contains same light hydrocarbon components that may have flash points below this temperature, however, combustion will not be sustained.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

Health	Flammability	Reactivity	BASIS
3	0	1	Recommended by the National Fire Protection Association

FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)

Estimated Values: Lower Flammable Limit: Not Applicable

Upper Flammable Limit: Not Applicable

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fire involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Eighth Edition (1984):

Use dry chemical, foam or carbon dioxide to extinguish the fire. Water may be ineffective, but water should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

NOTE: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, hydrogen sulfide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

E. HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS

Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (SIGNS AND SYMPTOMS OF EXPOSURE)
High vapor concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.
See statements regarding hydrogen sulfide (H2S).

NATURE OF HAZARD AND TOXICITY INFORMATION
Based on human experience and available toxicological data, this product is judged to be corrosive by OSHA criteria.

Product contacting the eyes will cause eye burns and permanent tissue damage.

Product contacting the skin will cause skin damage

Caution: Product may contain H2S and may release H2S gas, CAS Number 7783-06-4. H2S is a colorless, toxic and extremely flammable gas with an odor at low concentrations characteristic of rotten eggs and a sweetish odor at high concentration. Odor cannot be relied upon as a means of detection because the sense of smell rapidly becomes insensitive to H2S, and the H2S odor may be masked by the general odor of product. Because H2S may accumulate in tanks and bulk transport compartments, personnel should stand upwind, keep their faces at least two feet from compartment openings, and avoid breathing vapors when opening hatches and dome covers. (In a large number of tests, permissible concentrations in the breathing zone were not exceeded by following this procedure.)

Prolonged breathing of 50 to 100 ppm of H2S may produce eye and respiratory tract irritation headache, nervousness and nausea, and only a few breaths of high concentrations (e.g. 700 to 1000 ppm) may lead to unconsciousness and could be fatal. To avoid possible inhalation toxicity, the American Conference of Governmental Industrial Hygienists (ACGIH) has adopted a Threshold Limit Value for H2S of 10 ppm in air as a Time Weighted Average (TWA) for an 8-hour workday OSHA and 15 minute Short Term Exposure Limit (STEL) NIOSH-approved respiratory equipment should be used when permissible concentrations are exceeded.

Naphtha may contain benzene, CAS No. 71-43-2, as a natural constituent.
Benzene can cause anemia and other blood diseases including leukemia (cancer of the blood-forming system) after prolonged or repeated exposures at high concentrations (e.g. 50-500 ppm). It has also caused fetal defects in tests on laboratory animals.

OSHA Regulation 29 CFR 1910.1028 establishes an action level for benzene of 0.5 ppm as an 8-hour time weighted average, and permissible exposure limits of 1 ppm as an 8-hour time weighted average and a short-term exposure limit of 5 ppm as averaged over any 15 minute period. For industries exempted from 29 CFR 1910.1028, the OSHA 8-hour Time Weighted Average-Permissible Exposure Limit (TWA-PEL) is 10 ppm with a ceiling limit of 25 ppm.

Contains light hydrocarbon components. Lifetime studies by the American Petroleum Institute have shown that kidney damage and kidney cancer can occur in male rats after prolonged inhalation exposures at elevated concentrations of total gasoline. Kidneys of mice and female rats were unaffected. The U.S. EPA Risk Assessment Forum has concluded that male rat kidney tumor results are not relevant for humans. Total gasoline exposure also produced liver tumors in female mice only. The implication of these data for humans has not been determined. Certain components, such as normal hexane, may also affect the nervous system at high concentrations (e.g., 1000-1500 ppm).

EPAHO113000486

WST-013

This product may contain n-hexane (normal - hexane) as a natural constituent and represents a distinct hazard of producing peripheral polyneuropathy, a progressive disorder of the nervous system, which with sufficient high exposure has the potential of becoming irreversible. This disorder has been observed in individuals exposed repeatedly to high vapor concentrations (1000-1500 ppm) of n-hexane over a period of several months. Exposure to this product should be controlled to keep the maximum level below 100 ppm, which will result in n-hexane exposure of 50 ppm or less. The OSHA 8-hour Time Weighted Average-Permissible Exposure Limit (TWA-PEL) is 50 ppm for n-hexane.

Lifetime skin painting studies conducted by the American Petroleum Institute, Exxon and others have shown that untreated naphthas and distillates in the same boiling range as this product usually produced skin tumors and/or skin cancer in laboratory mice. The degree of carcinogenic response was weak to moderate with a relatively long latent period. The implications of these results for humans have not been determined.

Limited studies on oils that are very active carcinogens have shown that washing the animals' skin with soap and water between applications greatly reduces tumor formation.

Potential risks to humans can be minimized by observing good work practices and personal hygiene procedures generally recommended for petroleum products. See Section I for recommended protection and precautions.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE
None recognized

F. PHYSICAL DATA

THIS PRODUCT IS A VARIABLE MIXTURE
THE FOLLOWING DATA ARE APPROXIMATE OR TYPICAL VALUES AND SHOULD NOT BE USED FOR PRECISE DESIGN PURPOSES

BOILING POINT
Approximately 225° F

VAPOR PRESSURE
Approximately 75 mmHg @ 68° F

SPECIFIC GRAVITY (15.6 C/15.6 C)
1.2

VAPOR DENSITY (AIR = 1)
Not determined

MOLECULAR WEIGHT
Complex mixture, components vary

PERCENT VOLATILE BY VOLUME
Not determined

pH

9.8 - 13.5

EVAPORATION RATE @ ATM AND 25°C (77°F) (n-BUTYL ACETATE = 1)
Not determined

POUR, CONGEALING OR MELTING POINT
Not determined

SOLUBILITY IN WATER
100%

VISCOSITY
2 @ 86° F

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with acids (sodium sulfide under acidic conditions will liberate hydrogen sulfide (H_2S) gas).

EPAHO113000487

WST-013

H. ENVIRONMENTAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses, or extensive land areas. Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, flammable vapors from absorbed material.

THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL STATUES. IN ADDITION, CONSULT STATE AND LOCAL LAWS AND REGULATIONS

REPORTABLE QUANTITY (RQ), EPA REGULATION 40 CFR 302 (CERCLA Section 102)
The RQ for:
Sodium hydroxide is 1,000 pounds. This product may contain approximately 4% Sodium hydroxide.
Benzene is 10 pounds. This product may contain 0-0.2% benzene.

THRESHOLD PLANNING QUANTITY (TPQ), EPA REGULATION 40 CFR 355 (SARA Sections 301-304)
No TPQ for product or any constituent greater than 1% or 0.1% (carcinogen).

TOXIC CHEMICAL RELEASE REPORTING, EPA REGULATION 40 CFR 372 (SARA Section 313)
This product may contain:
Approximately 4% Sodium hydroxide.
Approximately 0-0.2% benzene.
Not determined % Sodium sulfate.

EPA HAZARD CLASSIFICATION CODE:

Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard	Not Applicable
XXX	XXX				

I. PROTECTION AND PRECAUTIONS

VENTILATION
Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking, flame or other ignition sources.

RESPIRATORY PROTECTION
Use supplied-air respiratory protection in confined or enclosed spaces, if needed, or when H2S exceeds permissible limits.

PROTECTIVE GLOVES
Use chemical-resistant gloves, if needed, to avoid skin contact.

EYE PROTECTION
Use splash goggles and face shield when eye and face contact may occur.

OTHER PROTECTIVE EQUIPMENT
Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in skin contact.

EPAHO113000488

WORK PRACTICES / ENGINEERING CONTROLS
Keep containers closed when not in use. Do not store near heat, sparks, flame, strong oxidants or acids. Adequate ventilation required sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. No smoking, flame or other ignition sources.

To minimize fire or explosion risk from static charge accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

In order to prevent fire or explosion hazards, use appropriate equipment.

Information on electrical equipment appropriate for use with this product may be found in the latest edition of the National Electrical Code (NFPA-70). This document is available form the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269.

PERSONAL HYGIENE
Minimize breathing vapor or mist. Avoid contact with skin. Remove contaminated clothing; launder or dry-clean before re-use. Remove contaminated shoes and thoroughly clean and dry before re-use. Cleanse skin thoroughly after contact, before breaks and meals, and at the end work period. Product is readily removed from skin by washing thoroughly with soap and water.

J. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

TRANSPORTATION INCIDENT INFORMATION
For further information relative to spills resulting form transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents (ERG).

DOT PROPER SHIPPING DESCRIPTION
Corrosive Liquid, N.O.S. (Contains Sodium Hydroxide Solution, Spent, containing Sodium Hydroxide), 8, UN1760, II, RQ (Sodium Hydroxide)

OSHA REQUIRED LABEL INFORMATION
In compliance with hazard and right-to-know requirements, the following OSHA Hazard Warnings should be found on a label, bill of lading or invoice accompanying this shipment.

DANGER !

CAUSES SEVERE SKIN AND EYE BURNS

CONTAINS HYDROGEN SULFIDE (H2S)
INHALATION OF H2S MAY BE FATAL
CONTAINS BENZENE
CANCER HAZARD

EPAHO113000489

WST-013

The information and recommendations contained herein are, to the best of Exxon's knowledge and belief, accurate and reliable as of the date issued. Exxon does not warrant or guarantee their accuracy or reliability, and Exxon shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal council should be consulted to insure proper health, safety and other necessary information is included on the container.

The Environmental Information included under Section H hereof as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) rating have been included by Exxon Company, U.S. A. in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Exxon's interpretation of the available data.

FOR ADDITIONAL INFORMATION ON HEALTH EFFECTS :
First contact your supervisor. If unavailable, call Safety Advisor or Industrial Hygiene.

Obtain detailed technical information or health effects from Exxon Company, U.S.A., Manager of Industrial Hygiene (713) 656-2443.

EPAHO113000490

NO. 2 UNIT SPENT CAUSTIC
L.O, F,U.

NO 12 UNIT SPENT CAUSTIC
L.O.FU.

NO 16 UNIT
LOFU

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 04[illegible]913 **Date:** 04/13/09
CES Sales Representative: Dan Bowman
Requested Turnaround/Completion Date: _____

Customer Name: Bigler **Quantity:** 20,000 + gals
Generator Name and Location: Pasadena, TX **Frequency:** 1 time
Hazardous Waste Codes: NA
MSDS Attached: ____ Yes X No
Ultimate Objective for Performing Analysis: Recieve and Treat @ CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Water and oil used to coat the inside of Carbon Steel Tank

Provide a Detailed Composition to the best of your knowledge: oil - 2-5% Water - Balance

Component/Approximate Percentage or PPM:

oil	2/5	90	/	
wate	95/98	90	/	
	/		/	
	/		/	

Ni - .092
Zn - 0.000
Cu - .028
Cd - 0.015
Cr .396

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: X ok
Percent Solids: ____
Percent Oil: ____
Specific Gravity: ____
Chlor-d-tect(Oil Phase): ____
pH: X 11
Phenols: CCCCC
Oil and Grease (Water Phase): CCCCC
TOC: X 1728
Distillation Test: ____
Metals: X
Flash: X >140
GC/MS: ____
Chlor-n-oil(Oil Phase): ____
Centrifuge Test: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
PHENOLS - 0
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____
Black Oil Suitability: ____
Viscosity: ____
Specific Gravity: ____
Light End Suitability: ____
Distillation Test: ____
Flash: ____
CES Fuel Suitability: ____
Hydro-scout: ____
Chlor-d-tect: ____
Color: ____
Chlor-n-oil: ____
Water by Distillation: ____
Water Extractability: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____
Specific Gravity: ____
Sulfides: ____
Percent Sodium Hydroxide: ____
Chlorides: ____
Sodium: ____
Percent Solids by Centrifuge: ____
Oil by Centrifuge: ____
TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-11 **Date:** 4/14/09
CES Sales Representative: Shannon Ward
Requested Turnaround/Completion Date: ASAP
Customer Name: Kinder Morgan **Quantity:** 1 Vacuum Box
Generator Name and Location: Kinder Morgan - Pasadena Witter Loc **Frequency:** One Time
Hazardous Waste Codes:
MSDS Attached: ☐ Yes ☒ No
H_2O - PHENOLS - 10 ppm
Ultimate Objective for Performing Analysis:
I want to see if we can take this material as a product.
MANY SOLIDS WHEN TREATED.
Provide a detailed description of the process generating the waste, material, or product:
Customer cleaned out Tank # 170-4
Provide a detailed composition to the best of your knowledge:
Fuel Oil from Tank 170-4

Component	% or PPM	Component	%or PPM
Fuel Oil	50%	Ni - 0.425	
Dirt/Rust/Scale	20%	Zn 0.084	
Water	10%	Cu 0.151	
		Cd 0.075	
		Cr - 0.000	

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability:	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☒	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List): Please filter
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☒
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

ACTIO MSDS ID: 22358

PRINT EMAIL LABEL ORIGINAL MSDS GLOSSARY

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SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

0118MAR019

Product Name:	**Marathon No. 2 High Sulfur Fuel Oil Dyed 5000 ppm Sulfur Max**
Synonyms:	High Sulfur No. 2 Fuel Oil Dyed 5000 ppm Sulfur Max; HS No. 2 Fuel Oil 5000 ppm Sulfur Max; No. 2 Fuel Oil Dyed 0.5% Sulfur Max
Chemical Family:	Petroleum Hydrocarbon
Chemical Formula:	Mixture
Manufacturer MSDS.:	0118MAR019
Manufacturer Name:	Marathon Petroleum Company, LLC
Address:	539 South Main Street Findlay OH 45840
	Emergency telephone number: 877-627-5463
Other Phone:	419-421-3070
Revision Date:	02/02/2007
HMIS classification:	Special: *See Section 8 for guidance in selection of personal protective equipment.
Product Codes:	

NFPA

2
1 1

HMIS

HEALTH	1
FIRE	2
REACTIVITY	1
PPE	

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

0118MAR019

Ingredient Name	CAS#	Ingredient Percent
Marathon No. 2 Fuel Oil Dyed (0.5% Sulfur Max)	68476-30-2	100% by Weight
EC Index Number:	1	
Other Exposure Guidelines:	ACGIH Exposure Limits: Skin - potential significant contribution to overall exposure by the cutaneous route = 100 mg/m3 TWA	
Saturated Hydrocarbons	Mixture	54-85% by Weight
EC Index Number:	1	
Aromatic Hydrocarbons	Mixture	15-45% by Weight
EC Index Number:	1	
Unsaturated Hydrocarbons	Mixture	1-6% by Weight
EC Index Number:	1	
Naphthalene	91-20-3	0.01-0.5% by Weight
OSHA PEL TWA:	Vacated PELs: 10 ppm; 50 mg/m3	
OSHA STEL/Ceiling:	Vacated PELs STEL: 15 ppm; 75 mg/m3	
EC Index Number:	1	

EPAHO113000494

Other Exposure Guidelines:	ACGIH Exposure Limits: Skin - potential significant contribution to overall exposure by the cutaneous route = 10 ppm TWA = 15 ppm STEL
Composition/Information:	No. 2 Fuel Oil is a complex mixture of paraffins, cycloparaffins, olefins and aromatic hydrocarbons having hydrocarbon chain lengths predominantly in the range of C11 through C20. Contains minor amounts of sulfur (< 0.5%). May contain a trace amount of benzene (< 0.01%). Can contain small amounts of red dye and additives (< 0.15%) which are not considered hazardous at the concentrations used.
Notes:	The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

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SECTION 3 : HAZARDS IDENTIFICATION

0118MAR019

Emergency Overview:	THIS PRODUCT IS CONSIDERED TO BE A COMBUSTIBLE LIQUID PER THE OSHA HAZARD COMMUNICATION STANDARD AND SHOULD BE KEPT AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. NEVER SIPHON THIS PRODUCT BY MOUTH. IF SWALLOWED, THIS PRODUCT MAY GET SUCKED INTO THE LUNGS (ASPIRATED) AND CAUSE LUNG DAMAGE OR EVEN DEATH. PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE DEFATTING AND DRYING OF THE SKIN WHICH MAY PRODUCE SEVERE IRRITATION OR DERMATITIS. OSHA WARNING LABEL: WARNING. COMBUSTIBLE LIQUID. ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH. PRODUCES SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. CONSUMER WARNING LABEL: A CONSUMER WARNING LABEL IS NOT APPLICABLE FOR THIS PRODUCT.
Physical State:	FUEL OIL IS A LIQUID.
Color:	RED COLORED

Applies to all ingredients:

Potential Health Effects:

Eye Contact:	Produces little or no irritation on direct contact with the eye.
Skin Contact:	Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.
Inhalation:	Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.
Ingestion:	Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.
Aggravation of Pre-Existing Conditions:	Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

Marathon No. 2 Fuel Oil Dyed (0.5% Sulfur Max) :

Carcinogenicity:	Carcinogenic Evaluation: ACGIH - Carcinogens: A3 - Confirmed animal carcinogen with unknown relevance to humans (as total hydrocarbons) Notes: The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A). IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine

EPAHO113000495

	exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.
IARC Designation:	Not Established

Naphthalene :

Carcinogenicity:	Carcinogenic Evaluation: Notes: The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene could be a possible human carcinogen.
OSHA Designation:	OSHA - Select: Present
NTP Designation:	Reasonably Anticipated To Be A Carcinogen Listed
IARC Designation:	Monograph 82, 2002
ACGIH Designation:	A4 - Not Classifiable as a Human Carcinogen

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SECTION 4 : FIRST AID MEASURES

0118MAR019

Eye Contact:	Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.
Skin Contact:	Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.
Inhalation:	If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.
Ingestion:	If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.
	Medical conditions aggravated by exposure: Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

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SECTION 5 : FIRE FIGHTING MEASURES

0118MAR019

Flash Point:	130-190 deg F
Upper Flammable or Explosive Limit:	In air: 5.0%
Lower Flammable or Explosive Limit:	In air: 0.7%
Auto Ignition Temperature:	637 deg F
Extinguishing Media:	For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFT/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.
Protective Equipment:	For firefighters: Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Keep run-off water out of sewers and water sources.
NFPA	
	Health: 1
	Flammability:2
	Reactivity:1
	Other:
Specific hazards:	This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

EPAHO113000496

HMIS classification:
Health: 1
Flammability: 2
Reactivity: 1
Special: *See Section 8 for guidance in selection of personal protective equipment.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES 0118MAR019

Personal Precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if substance has entered a watercourse or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

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SECTION 7 : HANDLING and STORAGE 0118MAR019

Handling:	Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.
Storage:	Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.
Hygiene Practices:	No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION 0118MAR019

Engineering Controls:	Measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.
Skin Protection Description:	Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.
Eye/Face Protection:	No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.
Protective Clothing/Body Protection:	Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.
Respiratory Protection:	Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator protection factor criteria cited in ANSI Z88.2. Self-contained breathing apparatus should be used for fire fighting.
Hygiene measures:	No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES 0118MAR019

Physical State/Appearance:	Liquid
Color:	Red
	Slight Hydrocarbon

Odor:	
Physical State:	(Solid/Liquid/Gas): Liquid
pH:	Neutral
Decomposition Temperature:	Not applicable.
Vapor Pressure:	1-10 mm Hg @ 100 deg F
Vapor Density:	4-5
Boiling Point:	(5-95%): 400-640 deg F
Melting Point:	No disponible.
Solubility:	Negligible
	Solubility in other solvents: No data available.
Specific Gravity:	C.A. 0.8
Density:	6.76 lbs/gal
	Bulk density: No data available.
Evaporation Point:	No data available.
Volatile Organic Compound Content:	10%
Viscosity:	1.9-3.4 @ 40 deg C
Molecular Weight:	180
Coefficient of Water/Oil Distribution:	Partition coefficient (n-octanol/water): No data available.
	Substance type (Pure/Mixture): Mixture

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SECTION 10 : STABILITY and REACTIVITY

0118MAR019

Chemical Stability:	The material is stable at 70 deg F, 760 mm pressure.
Conditions to Avoid:	Excessive heat, sources of ignition and open flames.
Incompatibilities with Other Materials:	Materials to avoid: Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.

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SECTION 11 : TOXICOLOGICAL INFORMATION

0118MAR019

Applies to all ingredients:

Chronic Effects:	Lifetime skin painting studies in animals with similar distillate fuels have produced weak to moderate carcinogenic activity following prolonged and repeated exposure. Similar middle distillates, when tested at nonirritating dose levels, did not show any significant carcinogenic activity indicating that this tumorigenic response is likely related to chronic irritation and not to dose. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Subsequent research has shown that the kidney damage develops via the formation of a alpha-2μ-globulin, a mechanism unique to the male rat. Humans do not form alpha-2μ-globulin, therefore, the kidney effects resulting from this mechanism are not relevant in humans. The exact relationship between these results and human health is not known.
Chronic Inhalation Effects:	Summary of health effect information on diesel engine exhaust: Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosene and/or

EPAHO113000498

	diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of th e blood and may cause tissue hypoxia via formation of carboxyhemoglobin.
Mutagenicity:	Some components of this product were found to be positive in a few mutagenicity tests while negative in the majority of others.

Marathon No. 2 Fuel Oil Dyed (0.5% Sulfur Max) :

Skin Effects:	Acute toxicity: Dermal: > 5 ml/kg [Rabbit]
Ingestion Effects:	Acute toxicity: Oral: 9-16 ml/kg [Rat]
Inhalation Effects:	Acute toxicity: Inhalation: > 2 mg/l for 4 hr [Dogt]

Naphthalene :

Acute Health Effects:	Summary of health effect data on distillate fuel components: This product may contain > 0.1% naphthalene. Exposure to naphthalene at 30 ppm for two years caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. Exposure to 10-60 ppm naphthalene for 2 years caused tumors in the tissue lining of the nose and respiratory tract in male and female rats. Oral administration of 133-267 mg/kg/day of naphthalene in mice for up to 90 days did not produce mortality, systemic toxicity, adversely affect organ or body weight or produce changes in blood. Repeated oral administration of naphthalene produced an anemia in dogs. Repeated intraperitoneal doses of naphthalene produced lung damage in mice. Repeated high doses of naphthalene has caused the formation of cataracts and retinotoxicity in the eyes of rats and rabbits due to accumulation of 1,2-naphthoquinone, a toxic metabolite. Effects in human eyes is uncertain and not well documented. Pregnant rats administered intraperitoneal doses of naphthalene during gestation gave birth to offspring that had delayed heart and bone development. Pregnant mice given near lethal doses of naphthalene showed no significant maternal toxicity and a reduction in the number of pups per litter, but no gross abnormalities in offspring. Suppressed spermatogenesis and progeny development have been reported in mice, rats and guinea pigs after exposure to high concentrations of naphthalene in their drinking water. Certain groups or individuals, i.e., infants, Semites, Arabs, Asians and Blacks, with a certain blood enzyme deficiency (glucose-6-phosphate dehydrogenase) are particularly susceptible to hemolytic agents and can rapidly develop hemolytic anemia and systemic poisoning from ingestion or inhalation of naphthalene.

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SECTION 12 : ECOLOGICAL INFORMATION

0118MAR019

Ecotoxicity:	Product can be toxic to aquatic life and cause fouling of the shoreline at high concentrations. The 96 hour LL50 values for an accomadated fraction (WAF) of fuel oil ranged from 3.2 to 65 mg/l in fish and 2-210 mg/l in invertebrates. EL50 values for inhibition of algal growth ranged from 1.8 to 2.9 mg/l for No. 2 fuel oil and from 10 to 78 mg/l for diesel fuel. This product does not concentrate or accumulate in the food chain. If released to soil and water, this product is expected to biodegrade under both aerobic and anaerobic conditions.

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SECTION 13 : DISPOSAL CONSIDERATIONS

0118MAR019

Waste Disposal:	It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.
RCRA Hazard Class:	This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s).

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SECTION 14 : TRANSPORT INFORMATION

0118MAR019

EPAHO113000499

DOT Shipping Information:	49 CFR 172.101: This material when transported via US commerce would be regulated by DOT Regulations.
DOT Shipping Name:	Fuel Oil, No. 2
DOT UN Number:	NA 1993
DOT Hazard Class:	3
DOT Identification Number:	NA 1993
DOT Packing Group:	III
Canadian TDG:	Packing group: III
Canadian Shipping Name:	Fuel Oil, No. 2
Canadian Hazard Class:	3
Canadian UN Number:	Identification No: NA 1993
Reportable Quantity:	DOT (lbs): Not applicable.
NAERG Number:	128
TDG (Canada):	Regulated substances: Not applicable.

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SECTION 15 : REGULATORY INFORMATION

0118MAR019

Applies to All Ingredients :

TSCA 8(b): Inventory Status:	This product and/or its components are listed on the TSCA Chemical Inventory.
SARA:	EPA Superfund Amendment & Reauthorization Act (SARA)
Section 312 Hazard Category:	SARA Section 311/312: The following EPA hazard categories apply to this product:
Acute:	Yes
Chronic:	Yes
Fire:	Yes
OSHA 29 CFR 1200:	OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

Saturated Hydrocarbons :

Section 302:	This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List: Name: Saturated Hydrocarbons
Section 302 Extremely Hazardous Substances (TPQ):	Not Applicable
Section 304:	This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements: Name: Saturated Hydrocarbons
Section 304 CERCLA RQ:	Not Applicable
Section 313 Toxic Release Form:	This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R: Name: Saturated Hydrocarbons CERCLA/SARA 313 Emission reporting: None
State:	State and Community Right-To-Know Regulations: The following component(s) of this material are identified on the regulatory lists below: Chemical Name: Saturated Hydrocarbons Louisiana Right-To-Know: Not Listed California Proposition 65: Not Listed New Jersey Right-To-Know: Not Listed. Pennsylvania Right-To-Know: Not Listed. Massachusetts Right-To Know: Not Listed. Florida substance List: Not Listed. Rhode Island Right-To-Know: Not Listed Michigan critical materials register list: Not Listed. Massachusetts Extraordinarily Hazardous Substances: Not Listed California - Regulated Carcinogens: Not Listed Pennsylvania RTK - Special Hazardous Substances: Not Listed New Jersey - Special Hazardous Substances: Not Listed

	New Jersey - Environmental Hazardous Substances List: Not Listed Illinois - Toxic Air Contaminants: Not Listed New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed
Aromatic Hydrocarbons :	
Section 302:	This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List: Name: Aromatic Hydrocarbons
Section 302 Extremely Hazardous Substances (TPQ):	Not Applicable
Section 304:	This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements: Name: Aromatic Hydrocarbons
Section 304 CERCLA RQ:	Not Applicable
Section 313 Toxic Release Form:	This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R: Name: Aromatic Hydrocarbons CERCLA/SARA 313 Emission reporting: None
State:	State and Community Right-To-Know Regulations: The following component(s) of this material are identified on the regulatory lists below: Chemical Name: Aromatic Hydrocarbons Louisiana Right-To-Know: Not Listed California Proposition 65: Not Listed New Jersey Right-To-Know: Not Listed. Pennsylvania Right-To-Know: Not Listed. Massachusetts Right-To Know: Not Listed. Florida substance List: Not Listed. Rhode Island Right-To-Know: Not Listed Michigan critical materials register list: Not Listed. Massachusetts Extraordinarily Hazardous Substances: Not Listed California - Regulated Carcinogens: Not Listed Pennsylvania RTK - Special Hazardous Substances: Not Listed New Jersey - Special Hazardous Substances: Not Listed New Jersey - Environmental Hazardous Substances List: Not Listed Illinois - Toxic Air Contaminants: Not Listed New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed
Unsaturated Hydrocarbons :	
Section 302:	This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List: Name: Unsaturated Hydrocarbons
Section 302 Extremely Hazardous Substances (TPQ):	Not Applicable
Section 304:	This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements: Name: Unsaturated Hydrocarbons
Section 304 CERCLA RQ:	Not Applicable
Section 313 Toxic Release Form:	This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R: Name: Unsaturated Hydrocarbons CERCLA/SARA 313 Emission reporting: None
State:	State and Community Right-To-Know Regulations: The following component(s) of this material are identified on the regulatory lists below: Chemical Name: Unsaturated Hydrocarbons Louisiana Right-To-Know: Not Listed California Proposition 65: Not Listed New Jersey Right-To-Know: Not Listed. Pennsylvania Right-To-Know: Not Listed. Massachusetts Right-To Know: Not Listed. Florida substance List: Not Listed. Rhode Island Right-To-Know: Not Listed Michigan critical materials register list: Not Listed. Massachusetts Extraordinarily Hazardous Substances: Not Listed

EPAHO113000501

	California - Regulated Carcinogens: Not Listed Pennsylvania RTK - Special Hazardous Substances: Not Listed New Jersey - Special Hazardous Substances: Not Listed New Jersey - Environmental Hazardous Substances List: Not Listed Illinois - Toxic Air Contaminants: Not Listed New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed
Naphthalene :	
Section 302:	This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List: Name: Naphthalene
Section 302 Extremely Hazardous Substances (TPQ):	Not Applicable
Section 304:	This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements: Name: Naphthalene CERCLA/SARA - Hazardous Substances and their Reportable Quantities: = 0.454 kg final RQ = 1 lb final RQ = 100 lb final RQ = 45.4 kg final RQ
Section 313 Toxic Release Form:	This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R: Name: Naphthalene CERCLA/SARA 313 Emission reporting: = 0.1% de minimis concentration
State:	State and Community Right-To-Know Regulations: The following component(s) of this material are identified on the regulatory lists below: Chemical Name: Naphthalene Louisiana Right-To-Know: Not Listed California Proposition 65: Listed New Jersey Right-To-Know: Listed Pennsylvania Right-To-Know: Listed Massachusetts Right-To Know: Listed Florida substance List: Not Listed. Rhode Island Right-To-Know: Listed Michigan critical materials register list: Not Listed. Massachusetts Extraordinarily Hazardous Substances: Not Listed California - Regulated Carcinogens: Not Listed Pennsylvania RTK - Special Hazardous Substances: Not Listed New Jersey - Special Hazardous Substances: Not Listed New Jersey - Environmental Hazardous Substances List: Listed Illinois - Toxic Air Contaminants: Listed New York - Reporting of Releases Part 597 - List of Hazardous Substances: Listed
Canada WHMIS:	Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt. Name: Naphthalene Canada - WHMIS: Classifications of Substances: B4, D2A Canada - WHMIS: Ingredient Disclosure: 1%

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SECTION 16 : ADDITIONAL INFORMATION

0118MAR019

HMIS:	
Health Hazard:	1
Fire Hazard:	2
Reactivity:	1
NFPA:	
Health:	1
Fire Hazard:	2
Reactivity:	1
MSDS Revision Date:	02/02/2007

EPAHO113000502

MSDS Author: Prepared by: Craig M. Parker Manager, Toxicology and Product Safety

Disclaimer:

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LLC (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Additional Information: No data available.

HMIS classification:
Special: *See Section 8 for guidance in selection of personal protective equipment.

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KINDER MORGAN
KM Liquids Terminals LLC

FACSIMILE COVER SHEET

Date: 4/14/09

To: Shannon

Company: CES

Fax No.: 713-748-8CCF

Number of pages (including coversheet): 11

From:

Rick Slaugh 713-920-8497
Christina Harris 713-920-8447
Cara Clover 713-920-8490
Rich Steinberg 713-920-8491
Lance Wiley 713-920-8436
Ember Michel 713-920-8479
Kenneth Froude 713-920-8434
Haley Buchanan 713-920-8460

Message

MSDS 170-4

NOTE: This facsimile and any documents attached here to are confidential and intended solely for the use of the individual or entity to which it is addressed. If you have received this facsimile in error, please notify the sender immediately.

530 N. Witter Road ~ Pasadena, Texas 77506 ◆ Phone: 713-450-0400 ◆ Fax: 713-472-7660

G:\Departments\Environmental\Documents\Pasadena EHS Fax Coversheet.doc

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-08 Date: 4/8/09
CES Sales Representative: Dan Bowman
Requested Turnaround/Completion Date: ASAP

Customer Name: Bigler Quantity: 840,000 Gals
Generator Name and Location: Pasadena, TX Frequency: Every Day
Hazardous Waste Codes: NA
MSDS Attached: ____ Yes ____ No
Ultimate Objective for Performing Analysis: Treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cooling tower water from Carbon Steel Cooling tower

Provide a Detailed Composition to the best of your knowledge:
Water with Iron / Rust

Component/Approximate Percentage or PPM:

/	97-100 %	Water
/	1/3 %	Iron
/	/	
/	/	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: X Percent Solids: ____ Percent Oil: ____
Specific Gravity: X Chlor-d-tect(Oil Phase): ____ pH: ____
Phenols: CCCCC Oil and Grease (Water Phase): CCCCC TOC: ____
Distillation Test: ____ Metals: X Flash: ____
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Hydro-scout: ____
Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____
Water by Distillation: ____ Water Extractability: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

135g WET
7mL OIL
95mL H_2O
57.3820
23.1460
60.4399

SOLIDS
3% OIL
40% H_2O

3.0529
5.764 = 53.1% ASH

~10 mL LIQUID COMES OUT BY CENTRIFUGE OF 50 mL SO : ~20 % LIQUIDS

TOC - 29.5

CHLOR-D-TECT ON FILTERED OIL

OIL - 700 ppm

PHENOLS - 40 ppm

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-04 **Date:** 4-3-09

CES Sales Representative: Dana Carter

Requested Turnaround/Completion Date: 48 hours

Customer Name: TT Barge Mile 237 **Quantity:** 2-3 vacuum boxes

Generator Name and Location: TT Barge Mile 237 **Frequency:** per year

Hazardous Waste Codes: D018

MSDS Attached: ☐ Yes ☒ No

Ultimate Objective for Performing Analysis:
see if there is a possibility to extract oils, etc and process liquid phase at CES , expecting to chare $0.35-50/lb ASH IS BRICK RED LIKE FeO_2

Provide a detailed description of the process generating the waste, material, or product:
removal of sludge from hazardous wastewater holding tank at barge cleaning facility

Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
benzene	5000-10000 ppm	Ni .349	
water	10-35%	Zn .074	
dirt/scale/sand	60-80%	Cu .118	
		Cd .059	
		Cr .026	

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☒
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☒

Other Internal Analysis (List): btu on bottoms, percent water
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☒	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

CES Environmental Services, Inc.

TOTES OR TRAILER -

CES SAMPLE EVALUATION FORM

Sample ID#: 0409-06 **Date:** 4-7-09

CES Sales Representative: Dana Carter

Requested Turnaround/Completion Date: Wednesday AM

Customer Name: Champion Technologies **Quantity:** 146,779 pounds ~ 70 - 250 GAL TOTES

Generator Name and Location: Champion Technologies Fresno **Frequency:** one time

Hazardous Waste Codes: None

MSDS Attached: ☒ Yes ☐ No

pH - 2.02 H2O SOLUBLE

Ultimate Objective for Performing Analysis:

disposal at CES either via wastewater treat or liquids box - this material is non haz but has a very low pH - i must quote pick up in totes or by truck

Provide a detailed description of the process generating the waste, material, or product:

off spec/out of date material

Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Uniset-LT D177	100%		
Phosphoric acid	5-10%		
Pentasodium EDTMP	5-10%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☒
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

Schlumberger

MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 1 *Revision date:* 13 November 2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: **D177**

Product name: **UNISET-LT D177**

Company identification:

Schlumberger Technology Corporation
110 Schlumberger Drive
Sugar Land, Texas 77478, USA
Telephone: 1-281-285-7873

Emergency telephone number: **USA: 1-281-595-3518**

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

Main physical hazards: None known.

Main health hazards: May cause eye irritation. May cause skin irritation. May be mildly irritating if swallowed.

Precautions: Wear suitable protective equipment. Tightly fitting safety goggles.

HMIS classification: Health: **2** Flammability: **0** Physical hazard: **0**

Form: Liquid **Color:** Light Green **Odor:** None

Principle routes of exposure:
Inhalation. Skin contact. Eye contact.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components classified as hazardous:

Component	CAS-No	Weight % - Range
Phosphoric acid	7664-38-2	5 - 10
Pentasodium EDTMP	7651-99-2	5 - 10

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with water for 30 minutes while holding eyelids open. Call a physician immediately.

Skin contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Seek medical attention if irritation occurs.

Ingestion: DO NOT induce vomiting. Give 2 glasses of milk (preferred) or water and seek medical attention at once.

Inhalation: Move to fresh air.

EPAHO113000509

5. FIRE-FIGHTING MEASURES

Flash point: > 212 °F
Autoignition temperature: Not applicable.
Flammability limits in air:
Lower: Not applicable
Upper: Not applicable
Oxidizing properties: None known.

Suitable extinguishing media:
Use extinguishing media appropriate for surrounding material

Extinguishing media which must not be used for safety reasons:
None known

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:
No information available.

Special protective equipment for firefighters:
Use self-contained breathing apparatus in closed areas. Wear protective fire fighting clothing and avoid breathing vapors.

NFPA rating:
Health: 2
Flammability: 0
Instability: 0
Special: None

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards: None known.
Personal precautions: Avoid contact with skin and eyes. Do not get on skin or clothing. Wash thoroughly after handling.
Methods for cleaning up: Dam up. Neutralize with lime milk or soda and flush with plenty of water.
Environmental precautions: Keep out of waterways. Prevent further leakage or spillage.

7. HANDLING AND STORAGE

Handling:
Precautions: Wear suitable protective equipment. Tightly fitting safety goggles.
Safe handling advice: Avoid contact with skin and eyes.
Technical measures/ storage conditions: No special storage conditions required.
Packaging requirements: High density polyethylene (HDPE) drum or can.
Incompatible products: None known.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Ensure adequate ventilation
Hygiene measures: Avoid contact with skin, eyes and clothing
Respiratory protection: None normally needed. If dust or mist is generated use NIOSH approved respirator with dust and mist protection (3M 8210).

EPAHO113000510

Eye protection: Tightly fitting safety goggles.
Hand protection: Impervious gloves made of:. PVC.
Skin and body protection: Chemical resistant apron.

Occupational Exposure Limits

	ACGIH - TLVs			OSHA - PELs		
Component	**TWA / Ceiling**	**STEL**	**Skin**	**TWA / C**	**STEL**	**Final PELs - Skin**
Phosphoric acid	1 mg/m³ TWA	3 mg/m³		1 mg/m³ TWA		

Nuisance dust:
ACGIH: inhalable particulate TLV-TWA=10 mg/m³; respirable particulate TLV-TWA= 3 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical characterization: Aqueous solution of organic and inorganic compounds.
Form: Liquid
Color: Light Green
Odor: None
Odor threshold: Not applicable.
pH: 2.1
Boiling point/range: ~100°C / 212 °F
Flash point: > 212 °F
Flammability limits in air:
Lower: Not applicable
Upper: Not applicable
Bulk density: Not applicable.
Melting point/range: < 0 °C / 32 °F
Decomposition temperature: No data available.
Solubility:
Water solubility: Soluble.
Fat solubility: No information available.
Partition coefficient (n-octanol/water): Not applicable.
Relative density: 1.1
Vapor pressure: 2.3 kPa (@ 20°C)
Vapor density: Same as water.
Viscosity: 5.6 mPa.s (@ 25 °C)
Evaporation rate: No data available.
% Volatile: ~ 70

10. STABILITY AND REACTIVITY

Stability:
Stable under recommended storage conditions

Conditions to avoid:
None known.

Incompatibility with other substances:
Bases.

Hazardous decomposition products:
Phosphorus oxides. When heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

EPAHO113000511

Hazardous polymerization:
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

Acute Health Hazard

Eye contact: Irritant. May cause pain, redness, discomfort.
Skin contact: Irritant; may cause pain, redness, dermatitis.
Ingestion: May be mildly irritating.
Inhalation: No effect expected. Prolonged or repeated exposure may cause mild irritation.
Sensitization - lung: Not known to cause allergic reaction.
Sensitization - skin: Not known to cause allergic reaction.

Chronic Health Hazard

Carcinogenic effects: Not listed by IARC, USA NTP, or USA OSHA.
Mutagenic effects: Not known to cause heritable genetic damage.
Teratogenic effects: Not known to cause birth defects or have a deleterious effect on a developing fetus.
Reproductive toxicity: Not known to adversely affect reproductive functions and organs.
Target organ effects: Kidney.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Phosphoric acid	skin, eyes, respiratory system	= 1530 mg/kg (Oral LD50; Rat) = 2730 mg/kg (Dermal LD50; Rabbit) > 850 mg/m^3 (Inhalation LC50; Rat) 1 h

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

COMPONENT INFORMATION

Phosphoric acid
Freshwater Fish Species Data 3 - 3.5 mg/L (LC50; Gambusia affinis)
Water Flea Data = 4.6 mg/L (EC50; Daphnia magna)

Pentasodium EDTMP
Bioaccumulation: Does not bioaccumulate log Pow = <-1.5
Persistence / degradability: Not biodegradable.

13. DISPOSAL CONSIDERATIONS

EPAHO113000512

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-03 **Date:** 4/2/03
CES Sales Representative: Jay
Requested Turnaround/Completion Date: Friday AM (4/3)
Customer Name: Preston Env **Quantity:** 7 loads
Generator Name and Location: Scot Technologies **Frequency:** one time
Hazardous Waste Codes: No
MSDS Attached: ____ Yes X No - profile attached
Ultimate Objective for Performing Analysis: profile approval & pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: oil in tank will be washed

Provide a Detailed Composition to the best of your knowledge: they will add water via pressure washer & det. and wash the tank

Component/Approximate Percentage or PPM:

oil	40-20%		
water	60-80%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: X Oily - Low % solids **Percent Solids:** ____ **Percent Oil:** ____
Specific Gravity: ____ **Chlor-d-tect(Oil Phase):** X/1600 **pH:** ____
Phenols: ____ **Oil and Grease (Water Phase):** ____ **TOC:** 749 ppm
Distillation Test: ____ **Metals:** ____ **Flash:** X >140
GC/MS: ____ **Chlor-n-oil(Oil Phase):** ____ **Centrifuge Test:** ____
Other Internal Analysis (List): please add water and run treatability on water
Off-Site Lab Analysis (List): (to see if any coolant comes out in water phase
Note: Must have an approved P.O. for any External Lab Analysis. 4:1 H_2O:oil EXTRACTION

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ **Black Oil Suitability:** ____ **Viscosity:** ____
Specific Gravity: ____ **Light End Suitability:** ____ **Distillation Test:** ____
Flash: ____ **CES Fuel Suitability:** ____ **Chlor-d-tect:** ____
Color: ____ **Base Oil Suitability:** ____ **BTU:** ____
Hydro-scout: ____ **Water by Distillation:** ____ **Chlor-n-oil:** ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ **Specific Gravity:** ____ **Sulfides:** ____
Percent Sodium Hydroxide: ____ **Chlorides:** ____ **Sodium:** ____
Percent Solids by Centrifuge: ____ **Oil by Centrifuge:** ____ **TOC:** ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

4904 Griggs Road **Houston, TX 77021**
Phone: (713) 676-1460 **Fax: (713) 676-1676**
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 **ISWR No: 30900**

Sample 0409-03

SECTION 1: Generator Information

Company:	SCOT Industries		
Address:	1501 FM 1489 South		
City, State, Zip:	Brookshire, Texas 77423		
Contact:	Lee Richardson	**Title:**	Ops Mgr
Phone No:	281-391-4340	**Fax No:**	281-934-4931
24/hr Phone:	same		
U.S. EPA I.D. No:	None		
State I.D.	CESQG	**SIC Code:**	

SECTION 2: Billing Information – ☐ Same as Above

Company:	Preston Environmental Consultants, LLC.		
Address:	PO Box 697		
City, State, Zip:	Denham Springs, LA. 70727		
Contact:	Robby Mersiovsky	**Title:**	Managing Partner
Phone No:	713-882-7740	**Fax No:**	832-344-5452

SECTION 3: General Description of the Waste

Name of Waste: Oily water/ mill coolant & solids
Detailed Description of Process Generating Waste: water, oil, and mill coolant from a pipe boring sump

Physical State: ☒ **Liquid** ☐ **Sludge** ☐ **Powder**
☒ **Solid** ☐ **Filter Cake** ☒ **Combination**

Color: grey/black **Odor:** none

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ **Yes** ☒ **No**

Does this material contain any para substituted phenolic compounds? ☐ **Yes** ☒ **No**

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ **Yes** ☒ **No**
Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834	2835	2836	2841	2842	2843
2844	2851	2861	2865	2869	2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511											

Layers: ☐ **Single-phase** ☒ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** X **Truck** ☐ **Other (explain)**
Container Size: _____ _____ 4000 gal

Frequency: ☐ **Weekly** ☐ **Monthly** **Quarterly** ☐ **Yearly** X **One Time**
Number of Units (containers): _____ **Other:** _____ 2000 gal.

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☒ No

If "Yes", Is it: ☐ D001 Ignitable ☐ D002 Corrosive ☐ D003 Reactive

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply) _____

Texas Waste Code Number:

Proper US DOT Shipping Name: Non Regulated Liquid

Class: 1 **UN/NA:** _____ **PG:** _____ **RQ:** _____

Flash Point >200	**pH** 7	**Reactive Sulfides** 0mg/l	**Reactive Cyanides** 0mg/l	**Solids** 15%
Oil&Grease 0mg/l	**TOC** _____mg/l	**Zinc** _____mg/l	**Copper** _____mg/l	**Nickel** _____mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The waste consists of the following materials	Concentration Ranges are acceptable	Units or %
Sludge/Shavings	15%	
Oil/Mill Coolant	25%	
Water	60%	

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.
none

300 / D160UT

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.
sample

SECTION 7: Incompatibilities

Please list all incompatibilities (if any):
None known

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals: x
TCLP Volatiles: x
TCLP Semi-Volatiles: x
Reactivity: x
Corrosivity: x
Ignitability: x

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: James L Richardson **Date:** 04/02/09

Printed Name/Title: JAMES L. RICHARDSON
MAINTENANCE MANAGER

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Compliance Officer: _____	
Date: _____ Approved Rejected	
Approval Number: _____	

SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☐ YES ☒ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☐ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

CES Environmental Services, Inc.

PROCESS FACILITY INFORMATION (CES USE ONLY!!)

1. **Base Pricing (including freight):**

2. **Contamination Limits (maximum limit before surcharges apply):**

3. **Surcharge Pricing:**

4. **Special Testing Requirements:**

5. **Treatment and Handling Protocol:**

6. **Treated Wastewater Discharge Subcategory:**

☐ Subcategory A ☐ Subcategory B ☐ Subcategory C

CES Environmental Services, Inc.

PROCESS FACILITY INFORMATION (CES USE ONLY!!)

7. **Tests for Product Recovered/Recycled (if applicable):**

8. **Management for Product Recovered/Recycled (if applicable);**

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-02 Date: 4/2/09

CES Sales Representative: Dan Bowman

Requested Turnaround/Completion Date: 4/3/09

Customer Name: Sartomer Quantity: 2 loads/wk

Generator Name and Location: _____ Frequency: —

Hazardous Waste Codes: _____

MSDS Attached: _____ Yes X No

Ultimate Objective for Performing Analysis: treat water at CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: wastewater generated from resin process

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

/		/		Ni - .108	Cr - 0.000
/		/		Zn - .103	
/		/		Cu .180	
/		/		Cd .082	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓ ok Percent Solids: 0 Percent Oil: if flashes

Specific Gravity: _____ Chlor-d-tect(Oil Phase): _____ pH: ✓ 9

Phenols: CCCCC ~42 ppm Oil and Grease (Water Phase): CCCCC TOC: ✓ 2638

Distillation Test: _____ Metals: ✓ Flash: ✓ >140

GC/MS: _____ Chlor-n-oil(Oil Phase): _____ Centrifuge Test: _____

Other Internal Analysis (List): ✓ water treatability

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ Black Oil Suitability: _____ Viscosity: _____

Specific Gravity: _____ Light End Suitability: _____ Distillation Test: _____

Flash: _____ CES Fuel Suitability: _____ Hydro-scout: _____

Chlor-d-tect: _____ Color: _____ Chlor-n-oil: _____

Water by Distillation: _____ Water Extractability: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ Specific Gravity: _____ Sulfides: _____

Percent Sodium Hydroxide: _____ Chlorides: _____ Sodium: _____

Percent Solids by Centrifuge: _____ Oil by Centrifuge: _____ TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0409-01 Date: 4/1/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround/Completion Date: ASAP

Customer Name: TECHNISAND Quantity: 1 TRAILER

Generator Name and Location: ALMEDA RD. Frequency: 3-6 MONTHS

Hazardous Waste Codes: _____

MSDS Attached: _____ Yes X No

Ultimate Objective for Performing Analysis: SEND TO NEW PARK

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: ACID & CAUSTIC WATER MIX

Provide a Detailed Composition to the best of your knowledge: CAUSTIC, ACID, WATER

Component/Approximate Percentage or PPM:

/	/
/	/
/	/
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____	Percent Solids: _____	Percent Oil: X
Specific Gravity: _____	Chlor-d-tect(Oil Phase): _____	pH: X
Phenols: CCCCC	Oil and Grease (Water Phase): CCCCC	TOC: X
Distillation Test: _____	Metals: _____	Flash: X
GC/MS: _____	Chlor-n-oil(Oil Phase): _____	Centrifuge Test: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____	Black Oil Suitability: _____	Viscosity: _____
Specific Gravity: _____	Light End Suitability: _____	Distillation Test: _____
Flash: _____	CES Fuel Suitability: _____	Hydro-scout: _____
Chlor-d-tect: _____	Color: _____	Chlor-n-oil: _____
Water by Distillation: _____	Water Extractability: _____	

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____	Specific Gravity: _____	Sulfides: _____
Percent Sodium Hydroxide: _____	Chlorides: _____	Sodium: _____
Percent Solids by Centrifuge: _____	Oil by Centrifuge: _____	TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

COMPLETED EVALS
JAN - MARCH, 2009

EPAHO11300523

LAB T-48
CE
8/4/09

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-55 **Date:** 3-30-09
CES Sales Representative: Dana C
Requested Turnaround/Completion Date: ASAP
Customer Name: DMV Stainless **Quantity:** 5,000 gallons
Generator Name and Location: DMV Stainless **Frequency:** monthly
Hazardous Waste Codes: D002,, D007
MSDS Attached: ☐ Yes ☒ No 5800 ppm Cr. NEAT.
Ultimate Objective for Performing Analysis:
wastewater treat at CES TREATED -
Provide a detailed description of the process generating the waste, material, or product: Ni - 65
stainless steel pipe manufacturing Zn - .23
Provide a detailed composition to the best of your knowledge: Cu 9.4
Cd - .2
Cr - 15

Component	% or PPM	Component	%or PPM
Water	85-90%	Chromium	5,000-10,000 ppm
Nitric Acid	10-13%	Zinc	3000-5000 ppm
Hydroflouric Acid	1-2%	Nickel	2000-3000 ppm
Iron	1-2%		

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☒
Distillation Test:	☐	Metals:	☒	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-54 **Date:** 3-27-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Trimac **Quantity:** 5-10 drums
Generator Name and Location: Pasadena **Frequency:** quarterly
Hazardous Waste Codes: D002
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis:
possilbe use as product at CES or PACES
Provide a detailed description of the process generating the waste, material, or product:
removal of heel prior to cleaning RCRA empty tank trailers
Provide a detailed composition to the best of your knowledge: D- 1.279
38% D= 1.189

Component	% or PPM	Component	%or PPM
HCL	100%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☒	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-52 **Date:** 3-24-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Trimac Beaumont **Quantity:** 5000 gallons
Generator Name and Location: Beaumont **Frequency:** one time
Hazardous Waste Codes: D002
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis: D-1.33 54% SEE BACK
possible use at PACES
Provide a detailed description of the process generating the waste, material, or product:
removal of heel from dedicated trailers hauling nitric acid to Dupont
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Nitric Acid	45-55%		
Water	45-55%		

Internal analysis to be performed on WW/sludge and oily water/sludge					
WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List): possible use at PACES?????
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0309-51 **Date:** 3/23/09

CES Sales Representative: Joy

Requested Turnaround / Completion Date: ASAP

Customer Name: Intergulf

Generator Name and Location: Hunting Petrotube

Ultimate Objective for Performing Analysis: WW treat/protize

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Cu plating line - hazy WW. D002 only

Hoad/month PURPLE TREATED H_2O

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

/	/
/	/
/	/
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**___	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH** 6
Phenols 0	**Oil and Grease (water phase)**___	**TOC** 8863
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

*****Note: Must have an approved P.O. for any external lab analysis*****

Ni - 4.638 x 200 = 928

Zn - 0.153

Cu 3.013 x $\frac{100}{.2}$ - 1500

Cd - .079

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-50 **Date:** 3-23-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date: ASAP Please!!!!
Customer Name: Rineco **Quantity:** 5000 gallons/month
Generator Name and Location: Channel Chemical - Gulfport MS **Frequency:** monthly
Hazardous Waste Codes: D002, D001
MSDS Attached: ☐ Yes ☒ No

Ni 1.430 Cd - .374 - Spec 15.2
Zn - 0.612 Cr .0000
Cu .290

Ultimate Objective for Performing Analysis:
wastewater treatability

Provide a detailed description of the process generating the waste, material, or product:
removal of water layer from production process

Provide a detailed composition to the best of your knowledge:
See profile

Component	% or PPM	Component	%or PPM
Water	75-90%	Aromatic Naphtha	0-2%
HCL(.1% solution)	1-2%		
Potassium Chloride	2-5%		
Formaldehyde	0-2%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☒	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒
Phenols:	☐ 2 ppm	Oil and Grease (Water Phase):	☐	TOC:	☒ 7844
Distillation Test:	☐	Metals:	☒	Flash:	☒
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: Channel Chemical
Address: 14373 SEAWAY ROAD
City: Gulfport **State:** MS **Zip:** 39505
Contact: Larry Rosetti **Title:**
Phone Number: 228-864-6199 **Fax Number:** 228-868-2319
24/hr Phone Number: 228-864-6199
US EPA ID No: MSD122687064
State ID No: **SIC Code:** 2899

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: MD-2736 Process Water - Low pH
Detailed Description of Process Generating Waste:

removal of water layer from production process

Physical State: ☑ **Liquid** ☐ **Sludge** ☐ **Powder**
☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: varies **Odor:** mild

Specific Gravity (water=1): **Density:** lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No
Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☑ **Single-phase** ☐ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** ☑ **Truck** ☐ **Other (explain)**

Frequency: ☐ **Weekly** ☑ **Monthly** ☐ **Yearly** ☐ **One-Time**
Quantity: 5000 gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☑ Yes ☐ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☑ D001 (Ignitable) ☑ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: OUTS105H

Proper US DOT Shipping Name: Waste Flammable Liquids, Corrosive, N.O.S. (Hydrochoric Acid/Potassium Choride)

Class: 3 UN/NA: UN2924 PG : II RQ: D001/D002 @ 100 lbs

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
	3.8 mg/l	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Water	75-90	%
Hydrochloric Acid (.1% solution)	1-2	%
Potassium Chloride	2-5	%
Formaldehyde	0-2	%
Aromatic Naphtha	0-2	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

***Metals Subcategory*: Subpart A**

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

***Oils Subcategory*: Subpart B**

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

***Organics Subcategory*: Subpart C**

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☑ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☑ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☐ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 3/13/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309.49 Date: 3-2009
CES Sales Representative: Brauchman
Requested Turnaround/Completion Date: ASAP Submit 3-23-09

Customer Name: Javalina Refinery Quantity: 260651
Generator Name and Location: Corpus Christi Frequency: monthly
Hazardous Waste Codes: D001, D018
MSDS Attached: ✓ Yes ___ No → analysis yes
Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: condensation from flare knock-out - Bottom phase

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:			
water	/	98-100	Ni / .436
organic (BTEX-short chain HC)	/	0-1	Zn / .124
oil	/	0-1	Cu / .076
	/		Cd / .067
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓	Percent Solids: ✓	Percent Oil: ___
Specific Gravity: ✓	Chlor-d-tect(Oil Phase): ___	pH: ✓ 8.0
Phenols: 5	Oil and Grease (Water Phase): ___	TOC: ✓ 122.2
Distillation Test: ___	Metals: ✓	Flash: ✓
GC/MS: ___	Chlor-n-oil(Oil Phase): ___	Centrifuge Test: ✓

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ___	Black Oil Suitability: ___	Viscosity: ___
Specific Gravity: ___	Light End Suitability: ___	Distillation Test: ___
Flash: ___	CES Fuel Suitability: ___	Hydro-scout: ___
Chlor-d-tect: ___	Color: ___	Chlor-n-oil: ___
Water by Distillation: ___	Water Extractability: ___	BTU: ___

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ___	Specific Gravity: ___	Sulfides: ___
Percent Sodium Hydroxide: ___	Chlorides: ___	Sodium: ___
Percent Solids by Centrifuge: ___	Oil by Centrifuge: ___	TOC: ___

Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-48 Date: 3-20-09
CES Sales Representative: Gary Brauchman SUB 3-23-09
Requested Turnaround/Completion Date: ASAP

Customer Name: Javalina Refinery Quantity: 1306615/yr
Generator Name and Location: Corpus Christi Frequency: 1/yr.
Hazardous Waste Codes: D001, D018
MSDS Attached: X Yes No / Analysis yes.
Ultimate Objective for Performing Analysis: WW Treat

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
condensation from Plant knock-out - Top phase

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

98-100	water	/	
0-1	organic (BTEX - Short chain HC	/	
0-2	Solvents	/	
/		/	

SLUDGY ORGANICS ON BTM
HYDROCARBON ON TOP
28% Solids

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: L	Percent Solids:	Percent Oil:
Specific Gravity:	Chlor-d-tect(Oil Phase):	pH: L
Phenols: CCCCC	Oil and Grease (Water Phase): CCCCC	TOC: L
Distillation Test:	Metals: L	Flash: L
GC/MS:	Chlor-n-oil(Oil Phase):	Centrifuge Test:

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

WHEN ACIDIFIED - LOSS OF GASSES RELEASED - CO_2 ? + H_2S -

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash:	Black Oil Suitability:	Viscosity:
Specific Gravity:	Light End Suitability:	Distillation Test:
Flash:	CES Fuel Suitability:	Hydro-scout:
Chlor-d-tect:	Color:	Chlor-n-oil:
Water by Distillation:	Water Extractability:	

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

66 5
3

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide:	Specific Gravity:	Sulfides:
Percent Sodium Hydroxide:	Chlorides:	Sodium:
Percent Solids by Centrifuge:	Oil by Centrifuge:	TOC:

Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0209-44 Date: 3-19-20-09

CES Sales Representative: Gary B.

Requested Turnaround/Completion Date: _____

Customer Name: ~~Environment~~ Evergreen Quantity: ~~100~~ 200K

Generator Name and Location: Valero - Houston Frequency: Annually

Hazardous Waste Codes: K050

MSDS Attached: ____ Yes ✓ No

Ultimate Objective for Performing Analysis: W/W Treatment Cost & Capability.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Desalting process water CENTRATE

Provide a Detailed Composition to the best of your knowledge: Ni .118 Zn ~~.080~~ .084

Component/Approximate Percentage or PPM:

water	98%	Cu	~~.084~~ .042
solid	0-2%	Cd	.047
organics	0-2%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓ OL Percent Solids: ✓ TR Percent Oil: ____

Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ✓ 9

Phenols: ✓ 100 Oil and Grease (Water Phase): ✓ O TOC: ✓ 1969

Distillation Test: ____ Metals: ✓ Flash: ____

GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____

Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____

Flash: ____ CES Fuel Suitability: ____ Hydro-scout: ____

Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____

Water by Distillation: ____ Water Extractability: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____

Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____

Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-45 Date: 3-~~19~~20-09

CES Sales Representative: Gary B.

Requested Turnaround/Completion Date: _____

Customer Name: ~~Environment~~ Evergreen Quantity: ~~100~~ 200K

Generator Name and Location: Valero - Houston Frequency: Annually

Hazardous Waste Codes: K050

MSDS Attached: _____ Yes ✓ No

Ultimate Objective for Performing Analysis: W/W Treatment Cost & Capability.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Dewatern process water PV-117

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:			
Water	98%	Ni .153	
Solid	0-2%	Zn .080	
organics	0-2%	Cu ~~.080~~ .061	
		Cd .040	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓ OK Percent Solids: ✓ TR Percent Oil: _____

Specific Gravity: _____ Chlor-d-tect(Oil Phase): _____ pH: ✓ 7

Phenols: ✓ 10 Oil and Grease (Water Phase): ✓ TOC: ✓ 1484

Distillation Test: _____ Metals: ✓ Flash: _____

GC/MS: _____ Chlor-n-oil(Oil Phase): _____ Centrifuge Test: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ Black Oil Suitability: _____ Viscosity: _____

Specific Gravity: _____ Light End Suitability: _____ Distillation Test: _____

Flash: _____ CES Fuel Suitability: _____ Hydro-scout: _____

Chlor-d-tect: _____ Color: _____ Chlor-n-oil: _____

Water by Distillation: _____ Water Extractability: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ Specific Gravity: _____ Sulfides: _____

Percent Sodium Hydroxide: _____ Chlorides: _____ Sodium: _____

Percent Solids by Centrifuge: _____ Oil by Centrifuge: _____ TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

* Please mix the two samples to make this sample

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-43 **Date:** 3-20-9

CES Sales Representative: Gary B.

Requested Turnaround/Completion Date: _____

Customer Name: Dehush Environmental **Quantity:** 75K gal

Generator Name and Location: Fluor-Franklin, TX **Frequency:** once

Hazardous Waste Codes: D007

MSDS Attached: _____ Yes ✓ No

Ultimate Objective for Performing Analysis: w/w treatability.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Chemical cleaning - ~~Rinsing~~ mixture of

Provide a Detailed Composition to the best of your knowledge: Lab # 0309-47 & 0309-46

Component/Approximate Percentage or PPM:

Chrome	/ 50ppm	Iron	/ ≤ 2%
Citric Acid	/ 3-4%	Water	/ 95-99%
Ammonia	/ .2-1		/
Salt	/ ≤ 5%		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓	**Percent Solids:** ✓	**Percent Oil:** _____
Specific Gravity: _____	**Chlor-d-tect(Oil Phase):** _____	**pH:** ✓ 10
Phenols: _____	**Oil and Grease (Water Phase):** _____	**TOC:** ✓ 1046
Distillation Test: _____	**Metals:** ✓	**Flash:** _____
GC/MS: _____	**Chlor-n-oil(Oil Phase):** _____	**Centrifuge Test:** _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis. NOT ACCEPTABLE - GIVES OFF NH_3

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____	**Black Oil Suitability:** _____	**Viscosity:** _____
Specific Gravity: _____	**Light End Suitability:** _____	**Distillation Test:** _____
Flash: _____	**CES Fuel Suitability:** _____	**Hydro-scout:** _____
Chlor-d-tect: _____	**Color:** _____	**Chlor-n-oil:** _____
Water by Distillation: _____	**Water Extractability:** _____	

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis. RUN FP

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____	**Specific Gravity:** _____ Ni - 2,264	**Sulfides:** Zn - 4,249
Percent Sodium Hydroxide: _____	**Chlorides:** _____ Zn - 3,910	**Sodium:** Cu - 1,303
Percent Solids by Centrifuge: _____	**Oil by Centrifuge:** _____	**TOC:** _____

Other Internal Lab Analysis (List): Cu 1,208 Cd - .139

Off-Site Lab Analysis (List): Cd - .227

Note: Must have an approved P.O. for any External Lab Analysis. Ni - 6582 Cr >>

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

3-20-9

Sample ID #: 0309-46 **Date:** ~~75K gal~~

CES Sales Representative: Gary B.

Requested Turnaround/Completion Date: _____

Customer Name: Debusk Environmental **Quantity:** 75K gal

Generator Name and Location: Flour-Franklin, TX **Frequency:** once

Hazardous Waste Codes: D007

MSDS Attached: ____ **Yes** ✓ **No**

Ultimate Objective for Performing Analysis: w/w treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Chemical cleaning concentrate

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

Ammonia	1.4%	water	95-99%
Citric Acid	8%	Chrome	80ppm
Salt	1%		
Iron	.5%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓ **Percent Solids:** ✓ **Percent Oil:** ____
Specific Gravity: ____ **Chlor-d-tect(Oil Phase):** ____ **pH:** ✓
Phenols: ____ **Oil and Grease (Water Phase):** ____ **TOC:** ✓
Distillation Test: ____ **Metals:** ✓ **Flash:** ____
GC/MS: ____ **Chlor-n-oil(Oil Phase):** ____ **Centrifuge Test:** ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ **Black Oil Suitability:** ____ **Viscosity:** ____
Specific Gravity: ____ **Light End Suitability:** ____ **Distillation Test:** ____
Flash: ____ **CES Fuel Suitability:** ____ **Hydro-scout:** ____
Chlor-d-tect: ____ **Color:** ____ **Chlor-n-oil:** ____
Water by Distillation: ____ **Water Extractability:** ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ **Specific Gravity:** ____ **Sulfides:** ____
Percent Sodium Hydroxide: ____ **Chlorides:** ____ **Sodium:** ____
Percent Solids by Centrifuge: ____ **Oil by Centrifuge:** ____ **TOC:** ____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

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CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-47 **Date:** 3-20-9
CES Sales Representative: Gary B
Requested Turnaround/Completion Date: _____
Customer Name: Dehusk Environmental **Quantity:** 75kgal
Generator Name and Location: FLUOR-Franklin, TX **Frequency:** once
Hazardous Waste Codes: D007
MSDS Attached: ____ Yes ✓ No
Ultimate Objective for Performing Analysis: WW treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Chemical cleaning

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

Ammonia	0-0.2%	Iron	2.2%
Chrome	17ppm	water	99-100%
Citric Acid	1-3%		
Salt	<.5%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ✓	**Percent Solids:** ✓	**Percent Oil:** ____
Specific Gravity: ____	**Chlor-d-tect(Oil Phase):** ____	**pH:** ✓
Phenols: ____	**Oil and Grease (Water Phase):** ____	**TOC:** ✓
Distillation Test: ____	**Metals:** ✓	**Flash:** ____
GC/MS: ____	**Chlor-n-oil(Oil Phase):** ____	**Centrifuge Test:** ____

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	**Black Oil Suitability:** ____	**Viscosity:** ____
Specific Gravity: ____	**Light End Suitability:** ____	**Distillation Test:** ____
Flash: ____	**CES Fuel Suitability:** ____	**Hydro-scout:** ____
Chlor-d-tect: ____	**Color:** ____	**Chlor-n-oil:** ____
Water by Distillation: ____	**Water Extractability:** ____	

Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	**Specific Gravity:** ____	**Sulfides:** ____
Percent Sodium Hydroxide: ____	**Chlorides:** ____	**Sodium:** ____
Percent Solids by Centrifuge: ____	**Oil by Centrifuge:** ____	**TOC:** ____

Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-42 **Date:** 3/18/09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date: 48 hrs
Customer Name: GATX Hearne **Quantity:** 1000 gal
Generator Name and Location: GATX hearne, TX **Frequency:** one time
Hazardous Waste Codes: product
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis:
to see if sulfuric acid can be used in CES w/w treatment
Provide a detailed description of the process generating the waste, material, or product:
railcar heels
Provide a detailed composition to the best of your knowledge:
sulfuric acid, minimal metals, <1% solids

Component	% or PPM	Component	%or PPM
sulfuric acid	99-100%		
solids	0-1%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-40 Date: 3-18-09
CES Sales Representative: Brauchman.
Requested Turnaround/Completion Date: ASAP
Customer Name: TexMorph Quantity: 40,000/mo
Generator Name and Location: Galena Park Frequency: mo
Hazardous Waste Codes: None
MSDS Attached: ____ Yes ____ No
Ultimate Objective for Performing Analysis: Fuel Suitability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Bottom Cut from Distillation of Biofuels.

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

Methanol	10-20	/	
Light Ends	40-60	/	
Ethyl Acetate	40-60	/	
	/	/	

FP -> 140°F
H2O - 2478 ppm
Ash - .07%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ____
Phenols: CCCCC Oil and Grease (Water Phase): CCCCC TOC: ____
Distillation Test: ____ Metals: ____ Flash: ____
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CRUCIBLE TARE 57.2900
+ SX 60.4055
+ ASH 57.2923

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ✓ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ✓ API 30 Light End Suitability: ✓ OK Distillation Test: ____ .0023
Flash: ✓ >140 CES Fuel Suitability: ✓ Hydro-scout: ____ 3.1155
Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____
Water by Distillation: ✓ Water Extractability: ✓ 2%
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Return unused sample to Kim

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-39 Date: 3-18-09
CES Sales Representative: Brauchman
Requested Turnaround/Completion Date: ASAP
Customer Name: ENV Disp Sol/PSC@Ohmstede Quantity: 1 Load
Generator Name and Location: Laporte Frequency: week
Hazardous Waste Codes: K050
MSDS Attached: ____ Yes ~~No~~ ENV. Disp Sol/PSC @ OHMSTEDE
Ultimate Objective for Performing Analysis: WW

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Bundle Cleaner

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

Water	/ 97-99	Ni	0.000
Trace organics	/ 1-3	Zn	0.008
Scale/Dirt	/ 1-3	Cu	0.000
/	/	Cd	0.000
		Cr	

TOC = 929.5

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:
Wastewater Treatability: OK Percent Solids: ✓ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ✓ 7
Phenols: CCCCC -0 Oil and Grease (Water Phase): CCCCC TOC: ✓ 929.5
Distillation Test: ____ Metals: ✓ ~~Flash:~~ ✓
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Hydro-scout: ____
Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____
Water by Distillation: ____ Water Extractability: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

7.2 To

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-30 Date: 3-13-09
CES Sales Representative: GB
Requested Turnaround/Completion Date: ASAP
Customer Name: Hexion - Dibolt Quantity: 10,000 GAL
Generator Name and Location: Dibolt Frequency: WW weekly
Hazardous Waste Codes: None
MSDS Attached: ____ Yes ✓ No
Ultimate Objective for Performing Analysis: WW

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Reactor vessel cleaning
Sample 7.2% Formaldehyde usually <1.0 PC

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

Formaldehyde	0-6 (usually <1.0%)		Note,
water	98-99%		sample also
Phenol	<100ppm		sent to A&B
			For TCLP(11) metals

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge: TPH, Flash-

Wastewater Treatability: ✓ Percent Solids: ____ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ✓
Phenols: ✓ Oil and Grease (Water Phase): ____ TOC: ✓
Distillation Test: ____ Metals: ____ Flash: [illegible]
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): TOC - 34,350
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis. PHENOLS - 0

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: PH: 5

Ash: ____ Ni - .134 Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Zn .176 Light End Suitability: ____ Distillation Test: ____
Flash: ____ Cu .090 CES Fuel Suitability: ____ Chlor-d-tect: ____
Color: ____ Cd .053 Base Oil Suitability: ____ BTU: ____
Hydro-scout: ____ Cr Water by Distillation: ____ Chlor-n-oil: ____
Other Internal Analysis (List): NICE EASY TREAT - GOOD FLOC
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-38 **Date:** 03/18/2009
CES Sales Representative: Joy Baker
Requested Turnaround/Completion Date: ASAP
Customer Name: Sierra Chemical **Quantity:** 22,000 gal
Generator Name and Location: Quality Assured plating **Frequency:** yearly
Hazardous Waste Codes: outs103h D002
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis:
Is this something we can utilize or recycle
Provide a detailed description of the process generating the waste, material, or product:
Spent Nitric acid used to strip nickel from steel
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Nitric acid	<25%	Nickel Sulfate	15%
Water	<60%	Solids	<2%

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List): recyclability
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

☑ CES Environmental Services - Houston Facility	☐ CES Environmental Services - Port Arthur Facility
4904 Griggs Road, Houston, TX 77021	2420 S. Gulfway Dr., Port Arthur, TX 77641
Phone (713) 676-1460 Fax: (713) 676-1676	Phone (713) 676-1460 Fax: (713) 676-1460
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900	U.S. EPA ID Number: TXR000079307 ISWR Number: 88585
TCEQ Industrial Solid Waste Permit Number: 30948	

SECTION 1: Generator Information

Company: Quality Assured Plating, LLC
Address: 230 Holloway Blvd.
City: Ville Platte **State:** LA **Zip:** 70586
Contact: L. Pinson / C. Bickham **Title:** Env. Mgr. / Plating Mgr.
Phone Number: 985 345 6352 **Fax Number:** 205 982 0608
24/hr Phone Number: 985 969 7678
US EPA ID No: LAR000049973
State ID No: D0022 **SIC Code:**

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Sierra Chemical Corp.
Address: 4524 Southlake Parkway, Suite 34, PMP 101
City: Hoover **State:** AL **Zip:** 35244
Contact: M. Pinson **Title:** V.P. AR-AP
Phone Number: 205 982 7799 **Fax Number:** 205 982-0608

SECTION 3: General Description of the Waste

Name of Waste: Nitric Acid Solution
Detailed Description of Process Generating Waste:

Spent nitric acid solution used to strip nickel from steel

Physical State: ☑ **Liquid** ☐ **Sludge** ☐ **Powder** ☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: Green **Odor:** mild

Specific Gravity (water=1): <1.5 **Density:** <10 lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☑ **Single-phase** ☐ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** ☑ **Truck** ☐ **Other (explain)**

Frequency: ☐ **Weekly** ☐ **Monthly** ☑ **Yearly** ☐ **One-Time**
Quantity: 22,000 gals

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☑ Yes ☐ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☑ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Texas State Waste Code Number: outs-103H

Proper US DOT Shipping Name: Waste corrosive liquid, Basic, Inorganic, n.o.s.,

Class: 8 **UN/NA:** UN3263 **PG:** II **RQ:** _____

Flash Point		pH		Reactive Sulfides		Reactive Cyanides		Solids	
N/A		<1		N/A	mg/l	N/A	mg/l	<2	%
Oil & Grease		**TOC**		**Zinc**		**Copper**		**Nickel**	
N/A	mg/l	N/A	mg/l	N/A	mg/l	N/A	mg/l	6000	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Nitric Acid (30%)	<25%	
Nickel Sulfate	15%	
Water	<60%	
Solids	<2%	

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

gloves and googles

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. Sample provided

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

strong caustics/bases

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals:
TCLP Volatiles:
TCLP Semi-Volatiles:
Reactivity:
Corrosivity:
Ignitability:

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☑ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory*: *Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☑ Metals Subcategory
- ☐ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 3/4/2009

Printed Name/Title: L. Pinson

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

EPAHO113000549

CES Environmental Services, Inc.

LDR Notifications/Certifications

1. Generator Information		2. Receiving Facility Information	
Name:	Quality Assured Plating, LLC	Name:	CES Environmental Services, Inc.
Address:	230 Holloway Blvd.	Address:	4904 Griggs Road
	Ville Platte, LA 70586		Houston, TX 77021
EPA ID No.:	LAR000049973	EPA ID No.:	TXD008950461
Manifest No.:			

3. Waste Description at Point of Generation

Line Item	Waste Description	Hazardous Waste Codes	LDR Subcategory	WW / NWW	Underlying Hazardous Constituents [268.2(i)]
1	Nitric Acid Solution	D002		WW	
2					
3					
4					
5					

4. Waste Disposition

Line Item	Subtitle C Exclusion Subsequent to Point of Generation (if applicable)	Current Disposition of Waste	268.45, Table 1 Technology used to treat debris (if applicable)	Date Shipped
1				
2				
3				
4				
5				

5. Was the waste hazardous at the point of generation but subsequently became excluded from the definition of hazardous waste or exempt from Subtitle C regulation (including characterstic wastes managed in wastewater treatment systems discharging under the CWA)?
☐ Yes ☑ No (If yes, this constituents the 268.7(a)(7) one-time notification.)

6. Waste the waste characterstic at the point of generation, treated onsite to remove the characterstic, and treatment residues then shipped to a Subtitle D land disposal facility? ☐ Yes ☑ No (if yes, complete Certification 1 or 2.)

7. Was the waste "debris" that was hazardous at the point of generation but subsequently became excluded from the definition of hazardous waste under 261.3(f)(1) by treating it using an extraction or destruction technology in 268.45, Table 1? ☐ Yes ☐ No (if yes, complete Certification 3.)

8. Was the waste "debris" that was hazardous at the point of generation but subsequently became excluded from the definition of hazardous waste under 261.3(f)(2) by receiving a "no-longer-contains" determinatin from EPA or the authorized state?
☐ Yes ☑ No (if yes, this constituents the 268.7(d)(1) one-time notification.)

9. Is the waste residue from treating K061, K062 and/or F006 wastes in high-temperature metals recovery (HTMR) units that 1) meets the generic exclusion levels in 261.3(c)(2)(ii)(C), 2) does not exhibit any characterstics, and 3) is shipped to a Subtitle D land disposal facility?
☐ Yes ☑ No (if yes, complete Certification 4.)

10. ☐	Waste that has been treated to remove a characterstic and meets underlying hazardous constituents standards. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characterstics and that underlying hazardous constituents, as defined in 268.2(i) have been treated on-site to meet the 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.	Applies to items: Reference: 268.7(b)(4)(v) and 268.9(d)
11. ☐	Waste that has been treated to remove a characterstic but does not meet underlying hazardous constituents standards. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49 to remove the hazardous characterstic. This decharacterized waste contains underlying hazardous constituents that require further treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.	Applies to items: Reference: 268.7(b)(4)(v) and 268.9(d)
12. ☐	Debris that has been treated to meet the alternative treatment standards. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.	Applies to items: Reference: 268.7(b)(4)(v) and 268.9(d)
13. ☐	HTMR residue from treating K061, K062 and/or F006 wastes. I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characterstic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.	Applies to items: Reference: 268.7(b)(4)(v) and 268.9(d)

Authorized Signature: _____ **Date:** 3/4/2009

Printed Name / Title: L. Pinson

EPAHO113000550

CES Environmental Services, Inc.

UNDERLYING HAZARDOUS CONSTITUENTS (UHC)

Generator	Quality Assured Plating, LLC	**EPA ID Number**	LAR000049973
Mailing Address	230 Holloway Blvd.	**Manifest Number**	
City, State, Zip	Ville Platte, LA 70586	**CES Profile Number**	

EPA Waste Codes

D002									

If your waste, at the point of generation, exceeds the limits of the following constituents, then please represent this fact to CES Environmental Services, Inc. by checking the applicable box listed below.

Does this waste contain one or more of the constituents listed on pages 1, 2, 3 or 4? ☑ YES ☐ NO

If "Yes", check applicable constituents and then sign and date the form. If "No", then sign and date the form.

	Description	CAS No. [1]	Wastewater mg/l [2]	Non-Wastewater mg/kg
✓	***I. Organic Constituents***			
☐	2-Acetylaminofluorene	53-96-3	0.059	140
☐	4-Aminobiphenyl	92-67-1	0.13	NA
☐	o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
☐	Acenaphthene	83-32-9	0.059	3.4
☐	Acenaphthylene	208-96-8	0.059	3.4
☐	Acetone	67-64-1	0.28	160
☐	Acetonitrile	75-05-8	5.6	38
☐	Acetophenone	96-86-2	0.01	9.7
☐	Acrolein	107-02-8	0.29	NA
☐	Acrylamide	79-06-1	19	23
☐	Acrylonitrile	107-13-1	0.24	84
☐	Aldicarb sulfone [6]	1646-88-4	0.056	0.28
☐	Aldrin	309-00-2	0.021	0.066
☐	alpha-BHC	319-84-6	0.00014	0.066
☐	Aniline	62-53-3	0.81	14
☐	Anthracene	120-12-7	0.059	3.4
☐	Aramite	140-57-8	0.36	NA
☐	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
☐	4-Bromophenyl phenyl ether	101-55-3	0.055	15
☐	Barban [6]	101-27-9	0.056	1.4
☐	Bendiocarb [6]	22781-23-3	0.056	1.4
☐	Benomyl [6]	17804-35-2	0.056	1.4
☐	Benz(a)anthracene	56-55-3	0.059	3.4
☐	Benzal chloride	98-87-3	0.055	6
☐	Benzene	71-43-2	0.14	10
☐	Benzo(a)pyrene	50-32-8	0.061	3.4
☐	Benzo(b)fluoranthene	205-99-2	0.11	6.8
☐	Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
☐	Benzo(k)fluoranthene	207-08-9	0.11	6.8
☐	beta-BHC	319-85-7	0.00014	0.066
☐	bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
✓				
☐	bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
☐	bis-(2-Chloroethoxy)methane	111-91-1	0.036	7.2
☐	bis-(2-Chloroethyl)ether	111-44-4	0.033	6
☐	Bromodichloromethane	75-27-4	0.35	15
☐	Bromoform (Tribromomethane)	75-25-2	0.63	15
☐	Bromomethane/Methyl bromide	74-83-9	0.11	15
☐	Butyl benzyl phthalate	85-68-7	0.017	28
☐	Butylate [6]	2008-41-5	0.042	1.4
☐	2-chloro-1,3-butadiene	126-99-8	0.057	0.28
☐	2-Chloroethyl vinyl ether	110-75-8	0.062	NA
☐	2-Chloronaphthalene	91-58-7	0.055	5.6
☐	2-Chlorophenol	95-57-8	0.044	5.7
☐	3-Chloropropylene	107-05-1	0.036	30
☐	Carbaryl [6]	63-25-2	0.006	0.14
☐	Carbenzadim [6]	10605-21-7	0.056	1.4
☐	Carbofuran [6]	1563-66-2	0.006	0.14
☐	Carbofuran phenol [6]	1563-38-8	0.056	1.4
☐	Carbon disulfide	75-15-0	3.8	4.8mg/l
☐	Carbon tetrachloride	56-23-5	0.057	6
☐	Carbosulfan [6]	55285-14-8	0.028	1.4
☐	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
☐	Chlorobenzene	108-90-7	0.057	6
☐	Chlorobenzilate	510-15-6	0.1	NA
☐	Chlorodibromomethane	124-48-1	0.057	15
☐	Chloroethane	75-00-3	0.27	6
☐	Chloroform	67-66-3	0.046	6
☐	Chloromethane (Methyl chloride)	74-87-3	0.19	30
☐	Chrysene	218-01-9	0.059	3.4
☐	m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
☐	m-Cumenyl methylcarbamate [6]	64-00-6	0.056	1.4

EPAHO113000551

✓	I. Organic Constituents (continued)			
☐	cis-1,3-Dichloropropylene	10061-01-5	0.036	18
☐	Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
☐	1,1-Dichloroethane	75-34-3	0.059	6
☐	1,1-Dichloroethylene	75-35-4	0.025	6
☐	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
☐	1,2-Dichloroethane	107-06-2	0.21	6
☐	trans-1,2-Dichloroethylene	156-60-5	0.054	30
☐	1,2-Dichloropropane	78-87-5	0.85	18
☐	1,2-Diphenylhydrazine	122-66-7	0.087	NA
☐	trans-1,3-Dichloropropylene	10061-02-6	0.036	18
☐	1,4-Dinitrobenzene	100-25-4	0.32	2.3
☐	1,4-Dioxane	123-91-1	12	170
☐	2,4-Dichlorophenol	120-83-2	0.044	14
☐	2,4-Dichlorophenoxyacetic acid/2,4-D	94-75-7	0.72	10
☐	2,4-Dinitrophenol	51-28-5	0.12	160
☐	2,4-Dinitrotoluene	121-14-2	0.32	140
☐	2,6-Dichlorophenol	87-65-0	0.044	14
☐	2,6-Dinitrotoluene	606-20-2	0.55	28
☐	2-4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	0.72	10
☐	2-4-Dimethyl phenol	105-67-9	0.036	14
☐	2,4-Dimethylaniline (2,4-xylidine)	95-68-1	0.010	0.66
☐	4,6-Dinitro-o-cresol	534-52-1	0.28	160
☐	delta-BHC	319-86-8	0.023	0.066
☐	di-n-butyl phthalate	84-74-2	0.057	28
☐	Di-n-octyl phthalate	117-84-0	0.017	28
☐	Di-n-propylnitrosamine	621-64-7	0.4	14
☐	Dibenz(a,e)pyrene	192-65-4	0.061	NA
☐	Dibenz(a,h)anthracene	53-70-3	0.055	8.2
☐	Dibromomethane	74-95-3	0.11	15
☐	Dichlorodifluoromethane	75-71-8	0.23	7.2
☐	Dieldrin	60-57-1	0.017	0.13
☐	Diethyl phthalate	84-66-2	0.2	28
☐	Dimethyl phthalate	131-11-3	0.047	28
☐	Diphenylamine	122-39-4	0.92	13
☐	Diphenylnitrosamine	86-30-6	0.92	13
☐	Disulfoton	298-04-4	0.017	6.2
☐	Dithiocarbamates (total) [6]	137-30-4	0.028	28
☐	Endosulfan I	959-98-8	0.023	0.066
☐	Endosulfan II	33213-65-9	0.029	0.13
☐	Endosulfan sulfate	1031-07-8	0.029	0.13
☐	Endrin	72-20-8	0.0028	0.13
☐	Endrin aldehyde	7421-93-4	0.025	0.13
☐	EPTC [6]	759-94-4	0.042	1.4
☐	Ethyl acetate	141-78-6	0.34	33
☐	Ethyl benzene	100-41-4	0.057	10
☐	Ethyl cyanide/propanenitrile	107-12-0	0.24	360
☐	Ethyl ether	60-29-7	0.12	160
☐	Ethyl methacrylate	97-63-2	0.14	160
☐	Ethyl Oxide	75-21-8	0.12	NA
☐	Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
☐	Famphur	52-85-7	0.017	15
☐	Fluoranthene	206-44-0	0.068	3.4

✓				
☐	Fluorene	86-73-7	0.059	3.4
☐	Formetanate hydrochloride [6]	23422-53-9	0.056	1.4
☐	gamma-BHC	58-89-9	0.0017	0.066
☐	Heptachlor	76-44-8	0.0012	0.066
☐	Heptachlor epoxide	1024-57-3	0.016	0.066
☐	Hexachlorobenzene	118-74-1	0.055	10
☐	Hexachlorobutadiene	87-68-3	0.055	5.6
☐	Hexachlorocyclopentadiene	77-47-4	0.057	2.4
☐	Hexachloroethane	67-72-1	0.055	30
☐	Hexachloropropylene	1888-71-7	0.035	30
☐	HxCDDs (All Hexachlorodibenzo-p-dioxins)	N/A	0.000063	0.001
☐	HxCDFs (All Hexachlorodibenzofurans)	N/A	0.000063	0.001
☐	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025
☐	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025
☐	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025
☐	Ideno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
☐	Iodomethane	74-88-4	0.19	65
☐	Isobutyl alcohol	78-83-1	5.6	170
☐	Isodrin	465-73-6	0.021	0.066
☐	Isosafrole	120-58-1	0.081	2.6
☐	Kepone	143-50-0	0.0011	0.13
☐	3-Methylcholanthrene	56-49-5	0.0055	15
☐	4,4-Methylene bis (2-chloroaniline)	101-14-4	0.5	30
☐	m-Dichlorobenzene	541-73-1	0.036	6
☐	Methacrylonitrile	126-98-7	0.24	84
☐	Methanol	67-56-1	5.6	0.75 mg/l TCLP
☐	Methiocarb [6]	2032-65-7	0.056	1.4
☐	Methomyl [6]	16752-77-5	0.028	0.14
☐	Methoxychlor	72-43-5	0.25	0.18
☐	Methapyrilene	91-80-5	0.081	1.5
☐	Methyl ethyl ketone	78-93-3	0.28	36
☐	Methyl isobutyl ketone	108-10-1	0.14	33
☐	Methyl methacrylate	80-62-6	0.14	160
☐	Methyl methansulfonate	66-27-3	0.018	NA
☐	Methyl parathion	298-00-0	0.014	4.6
☐	Methylene chloride	75-09-2	0.089	30
☐	Metolcarb [6]	1129-41-5	0.056	1.4
☐	Mexacarbate [6]	315-18-4	0.056	1.4
☐	Molinate [6]	2212-67-1	0.042	1.4
☐	2-Naphthylamine	91-59-8	0.52	NA
☐	5-Nitro-o-toluidine	99-55-8	0.32	28
☐	n-Butyl alcohol	71-36-3	5.6	2.6
☐	N-Nitroso-di-n-butylamine	924-16-3	0.4	17
☐	N-Nitrosodiethylamine	55-18-5	0.4	28
☐	N-Nitrosodimethylamine	62-75-9	0.4	2.3
☐	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3
☐	N-Nitrosomorpholine	59-89-2	0.4	2.3
☐	N-Nitrosopiperidine	100-75-4	0.013	35
☐	N-Nitrosopyrrolidine	930-55-2	0.013	35
☐	Naphthalene	91-20-3	0.059	5.6
☐	Nitrobenzene	98-95-3	0.068	14
☐	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005

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✓	I. Organic Constituents (continued)			
☐	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063	0.005
☐	o,p-DDD	53-19-0	0.023	0.087
☐	o,p-DDE	3424-82-6	0.031	0.087
☐	o,p-DDT	789-02-6	0.0039	0.087
☐	o-Cresol	95-48-7	0.11	5.6
☐	o-Dichlorobenzene	95-50-1	0.088	6
☐	o-Nitroaniline	88-74-4	0.27	14
☐	o-Nitrophenol	88-75-5	0.028	13
☐	Oxamyl [6]	23135-22-0	0.056	0.28
☐	1,3-Phenylenediamine	108-45-2	0.010	0.66
☐	p-Cresidine	120-71-8	0.010	0.66
☐	p,p-DDD	72-54-8	0.023	0.087
☐	p,p-DDE	72-55-9	0.031	0.087
☐	p,p-DDT	50-29-3	0.0039	0.087
☐	p-Chloro-m-cresol	59-50-7	0.018	14
☐	p-Chloroaniline	106-47-8	0.46	16
☐	p-Cresol	106-44-5	0.77	5.6
	(difficult to distinguish from m-cresol)			
☐	p-Dichlorobenzene	106-46-7	0.09	6
☐	p-Dimethylaminoazobenzene	60-11-7	0.13	NA
☐	p-Nitroaniline	100-01-6	0.028	28
☐	p-Nitrophenol	100-02-7	0.12	29
☐	Parathion	56-38-2	0.014	4.6
☐	Pebulate [6]	1114-71-2	0.042	1.4
☐	PeCDDs (All Pentachlorodibenzo-p-dioxins)	N/A	0.000063	0.001
☐	PeCDFs (All Pentachlorodiebenzofurans)	N/A	0.000035	0.001
☐	Pentachlorobenzene	608-93-5	0.055	10
☐	Pentachloroethane	76-01-7	0.055	6
☐	Pentachloronitrobenzene	82-68-8	0.055	4.8
☐	Pentachlorophenol	87-86-5	0.089	7.4
☐	Phenacetin	62-44-2	0.081	16
☐	Phenanthrene	85-01-8	0.059	5.6
☐	Phenol	108-95-2	0.039	6.2
☐	Phorate	298-02-2	0.021	4.6
☐	Phthalic acid	100-21-0	0.055	28
☐	Phthalic anhydride	85-44-9	0.055	28
☐	Physostigmine [6]	57-47-6	0.056	1.4
☐	Physostigmine salicylate [6]	57-64-7	0.056	1.4
☐	Promecarb [6]	2631-37-0	0.056	1.4
☐	Pronamide	23950-58-5	0.093	1.5
☐	Propham [6]	122-42-9	0.056	1.4
☐	Propoxur [6]	114-26-1	0.056	1.4
☐	Prosulfocarb [6]	52888-80-9	0.042	1.4
☐	Pyrene	129-00-0	0.067	8.2
☐	Pyridine	110-86-1	0.014	16
☐	Safrole	94-59-7	0.081	22
☐	Silvex (2,4,5-TP)	93-72-1	0.72	7.9
☐	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6
☐	1,1,1-Trichloroethane	71-55-6	0.054	6
☐	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6
☐	1,1,2-Trichloro-2,2,2-trifluoroethane	76-13-1	0.057	30
☐	1,1,2-Trichloroethane	79-00-5	0.054	6
☐	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
☐	1,2,4-Trichlorobenzene	120-82-1	0.055	19
☐	1,2,3-Trichloropropane	96-18-4	0.85	30
☐	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4
☐	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	93-76-5	0.72	7.9
☐	2,4,5-Trichlorophenol	95-95-4	0.18	7.4
☐	2,4,6-Trichlorophenol	88-06-2	0.035	7.4
☐	TCDDs (All Tetrachlorodibenzo-p-dioxins)	N/A	0.000063	0.001
☐	TCDFs (All Tetrachlorodibenzofurans)	N/A	0.000063	0.001
☐	Tetrachloroethylene	127-18-4	0.056	6
☐	Thiodicarb [6]	59669-26-0	0.019	1.4
☐	Thiophanate-methyl [6]	23564-05-8	0.056	1.4
☐				
☐	Toluene	108-88-3	0.08	10
☐	Total PCBs	1336-36-3	0.1	10
☐	(sum of all PCB isomers, or all Aroclors)			
☐	Toxaphene	8001-35-2	0.0095	2.6
☐	Triallate [6]	2303-17-8	0.042	1.4
☐	Trichloroethylene	79-01-6	0.054	6
☐	Trichloromonofluoromethane	75-69-4	0.02	30
☐	Triethylamine [6]	101-44-8	0.081	1.5
☐	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.1
☐	Vernolate [6]	1929-77-7	0.042	1.4
☐	Vinyl chloride	75-01-4	0.27	6
☐	Xylenes-mixed isomers	1330-20-7	0.32	30
☐	(sum of o-,m-,and p-xylene concentrations)			

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☐	ntimony	7440-36-0	1.9 *	1.15 mg/l TCLP
☐	Arsenic	7440-38-2	1.4 *	5.0 mg/l TCLP
☐	Barium	7440-39-3	1.2 *	21.0 mg/l TCLP
☐	Beryllium	7440-41-7	0.82 *	1.22 mg/l TCLP
☐	Cadmium	7440-43-9	0.69 *	0.11 mg/l TCLP
☐	Chromium (Total)	7440-47-3	2.77 *	0.60 mg/l TCLP
☐	Cyanides (Amenable) [4]	57-12-5	0.86	30
☐	Cyanides (Total) [4]	57-12-5	1.2	590
☐	Fluoride [5]	16984-48-8	35	NA
☐	Lead	7439-92-1	0.69 *	0.75 mg/l TCLP
☐	Mercury - All others	7439-97-6	0.15 *	0.025 mg/l TCLP
☐	Mercury - Retort nonwastewater	7439-97-6	NA *	0.20 mg/l TCLP
☑	Nickel	7440-02-0	3.98 *	11.0 mg/l TCLP
☐	Selenium	7782-49-2	0.82 *	5.7 mg/l TCLP
☐	Silver	7440-22-4	0.43 *	0.14 mg/l TCLP
☐	Sulfide	18496-25-8	14	NA
☐	Thallium	7440-28-0	1.4 *	0.2 mg/l TCLP
☐	Vanadium [4]	7440-62-2	4.3 *	1.6 mg/l TCLP
☐	Zinc [5]	7440-66-6	2.61 *	4.3 mg/l TCLP

I certify that the above is true and correct to the best of my knowledge.

L. Pinson	Env. Mgr.
Authorized Name (Print)	**Title**
	3/4/2009
Authorized Signature	**Date**

EPAHO113000554

CES Environmental Services, Inc.

CES ENVIRONMENTAL SERVICES USA Inc. – UHC FORM

UNDERLYING HAZARDOUS CONSTITUENTS

Date: 3/4/2009

Generator: Quality Assured Plating
Address: 230 Holloway Blvd.
Ville Platte, LA 70586

Profile No. _____

The waste stream represented by the above **Profile Number** is below all of the concentration limits as indicated on table 268.48 (attached), with the exception of the D002 characteristic code and the Sulfide (D003 characteristic code, sulfide) which is circled.

Certifying Representative:

a. L. Pinson
Print Name

b. _____
Signature

c. Sierra Chemical Corp.
Company

d. Env. Mgr.
Title

All of a, b, c, d must be completed.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-37 Date: 3-16-09
CES Sales Representative: Brauchman
Requested Turnaround/Completion Date: _____
Customer Name: Chemetall (SQM) Quantity: 4-6 Drms
Generator Name and Location: Pasadena Frequency: QTR
Hazardous Waste Codes: None
MSDS Attached: ____ Yes ~~No~~
Ultimate Objective for Performing Analysis: Oil Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Mineral Oil - production of Lithium products

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

Mineral Oil	80-100	FP - <80°F
Toluene	0-1 %	5% Solids
Water	0-5	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____ Percent Solids: ✓ Percent Oil: ✓
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ~~✓~~ 400 pH: ✓ (Water)
Phenols: ____ Oil and Grease (Water Phase): ____ TOC: ____
Distillation Test: ____ Metals: ____ Flash: ✓
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ✓
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Chlor-d-tect: ____
Color: ____ Base Oil Suitability: ____ BTU: ____
Hydro-scout: ____ Water by Distillation: ____ Chlor-n-oil: ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-36 Date: 3-16-09

CES Sales Representative: Brauchmann

Requested Turnaround/Completion Date: ASAP

Customer Name: Chemetall (SOAM) Quantity: 4-6 Drms

Generator Name and Location: Pasadena Frequency: QTR

Hazardous Waste Codes: None

MSDS Attached: ____ Yes ____ No

Ultimate Objective for Performing Analysis: Oil Recovery

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Lube oil / Equipment oil changes

Provide a Detailed Composition to the best of your knowledge: ____

Component/Approximate Percentage or PPM:

Gear Lube	80-100	35% H_2O phase - pH-6	
motor oil	0-20		H_2O phase
water	0-5		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ✓

Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ____

Phenols: ____ Oil and Grease (Water Phase): ____ TOC: ____

Distillation Test: ____ Metals: ____ Flash: ____

GC/MS: ____ Chlor-n-oil(Oil Phase): 2000 ✓ Centrifuge Test: ✓

Other Internal Analysis (List): ____

Off-Site Lab Analysis (List): ____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____

Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____

Flash: ____ CES Fuel Suitability: ____ Chlor-d-tect: ____

Color: ____ Base Oil Suitability: ____ BTU: ____

Hydro-scout: ____ Water by Distillation: ____ Chlor-n-oil: ____

Other Internal Analysis (List): ____

Off-Site Lab Analysis (List): ____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____

Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____

Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____

Other Internal Lab Analysis (List): ____

Off-Site Lab Analysis (List): ____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-34 Date: 3-13-09
CES Sales Representative: GB
Requested Turnaround/Completion Date: ASAP
Customer Name: Brad Quantity: 40 ms
Generator Name and Location: 14 Frequency: OTR.
Hazardous Waste Codes: NA
MSDS Attached: ____ Yes ~~No~~
Ultimate Objective for Performing Analysis: Base Oil

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Mineral Oil line Flush.

Provide a Detailed Composition to the best of your knowledge: S-.826
Cold Flow

Component/Approximate Percentage or PPM:
Mineral Oil / 100%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:
Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ____
Phenols: ____ Oil and Grease (Water Phase): ____ TOC: ~
Distillation Test: ____ Metals: ____ Flash: ~
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Chlor-d-tect: ____
Color: ____ Base Oil Suitability: ____ BTU: ____
Hydro-scout: ____ Water by Distillation: ____ Chlor-n-oil: ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-33 **Date:** 03/13/2009
CES Sales Representative: Joy / Al
Requested Turnaround/Completion Date: ASAP
Customer Name: Jefferson County Drainage district 7 **Quantity:** 100,000 gallons +
Generator Name and Location: same as above **Frequency:** one time
Hazardous Waste Codes: none known
MSDS Attached: ☒ Yes ☐ No
Ultimate Objective for Performing Analysis:
wastewater treatability
Provide a detailed description of the process generating the waste, material, or product:
water from a fire that has foam fire extingushing media
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
water	98 %	Ni - 0.000	
foam	2%	Zn .194	
		Cu 0.0200	
		Cd 0.00	
		Cr - 0.000	

Internal analysis to be performed on WW/sludge and oily water/sludge							
WW Treatability	☒		Percent Solids:	☒	TR	Percent Oil:	☐
Specific Gravity:	☐		Chlor-d-tect(Oil Phase):	☐		pH:	☒ 6
Phenols:	☒	0	Oil and Grease (Water Phase):	☐		TOC:	☐ 1027 - NEXT
Distillation Test:	☐		Metals:	☐		Flash:	☐
GC/MS:	☐		Chlor-n-oil (Oil Phase):	☐		Centrifuge Test:	☐

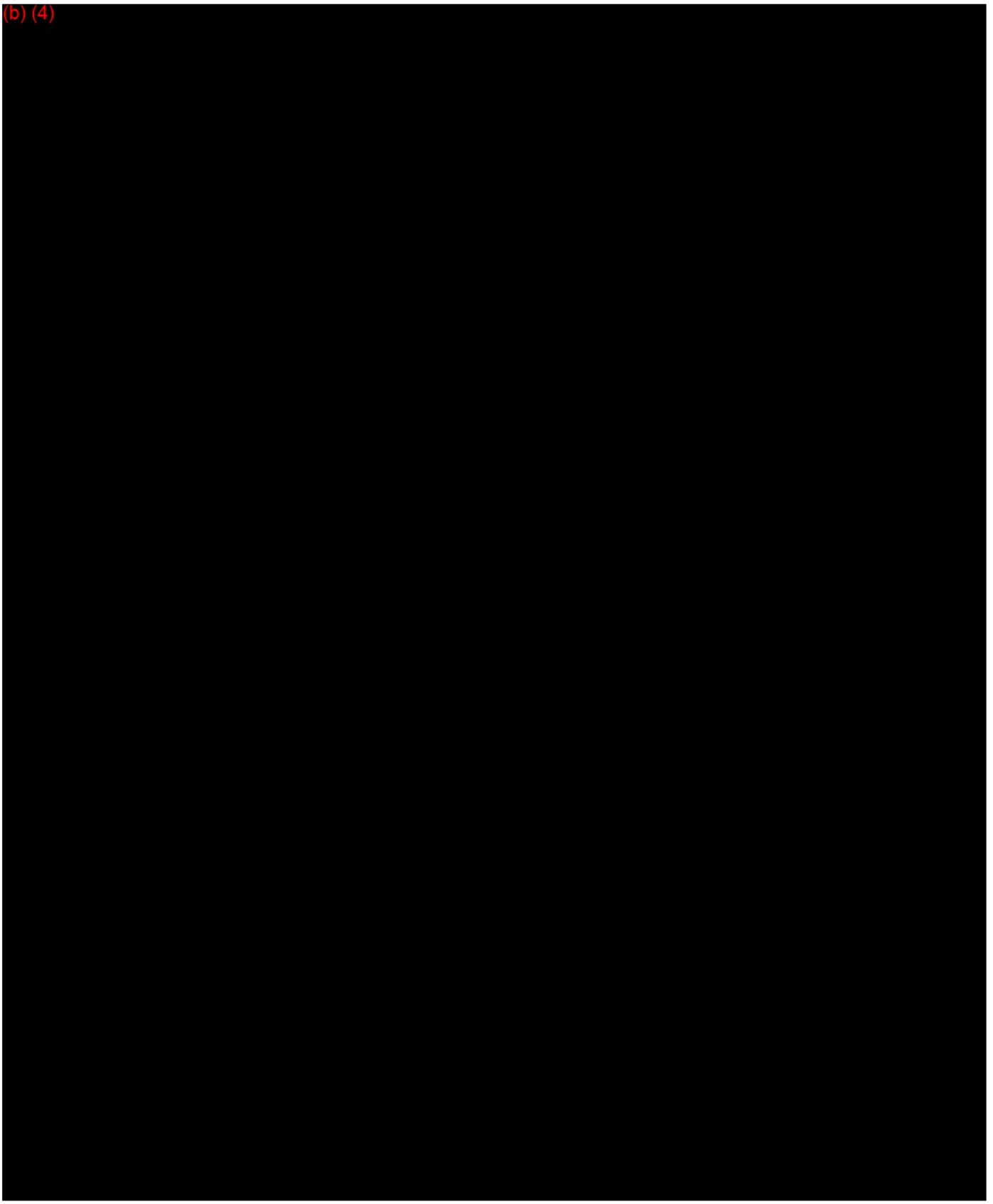
Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

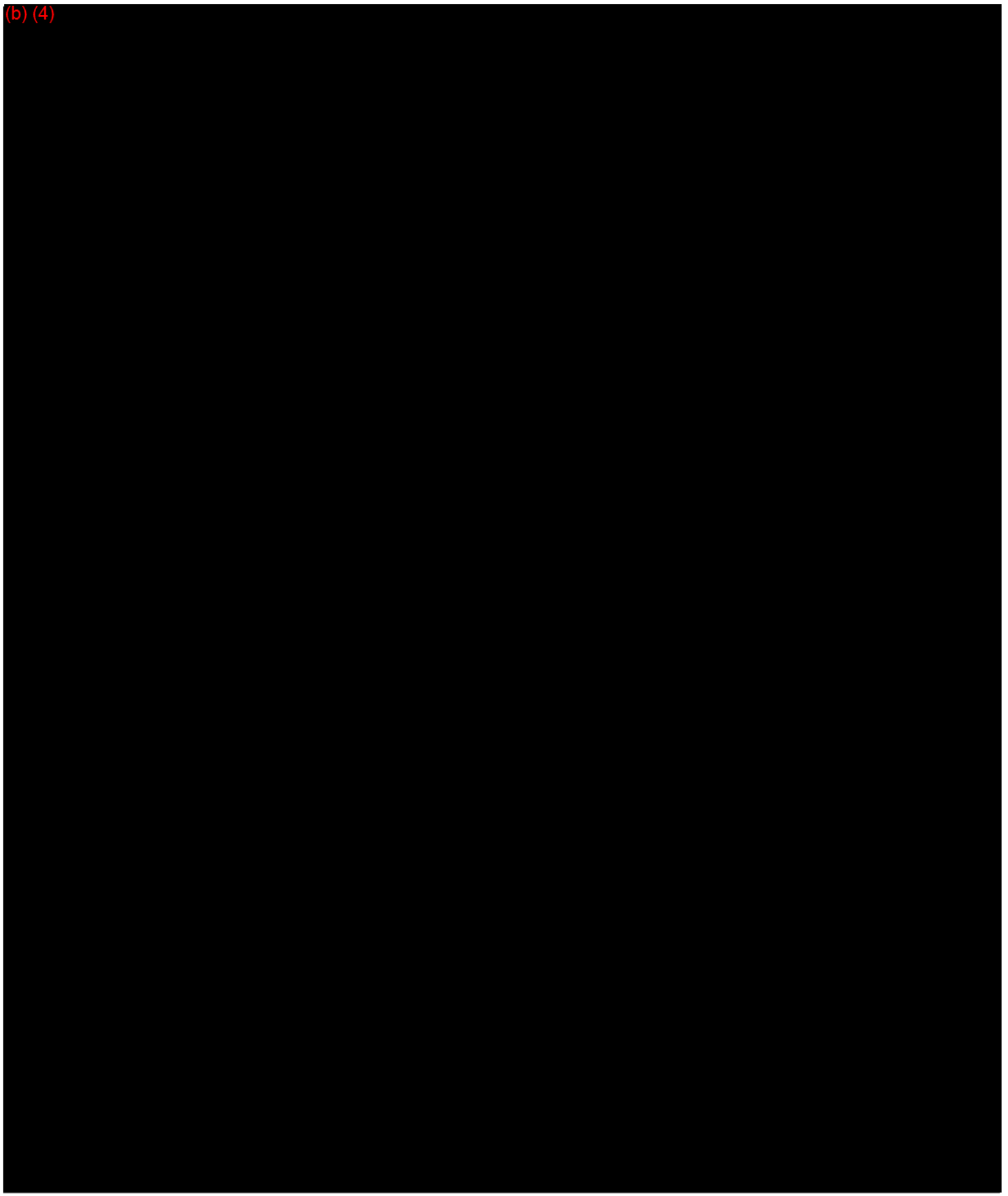
Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):


(b) (4)

(b) (4)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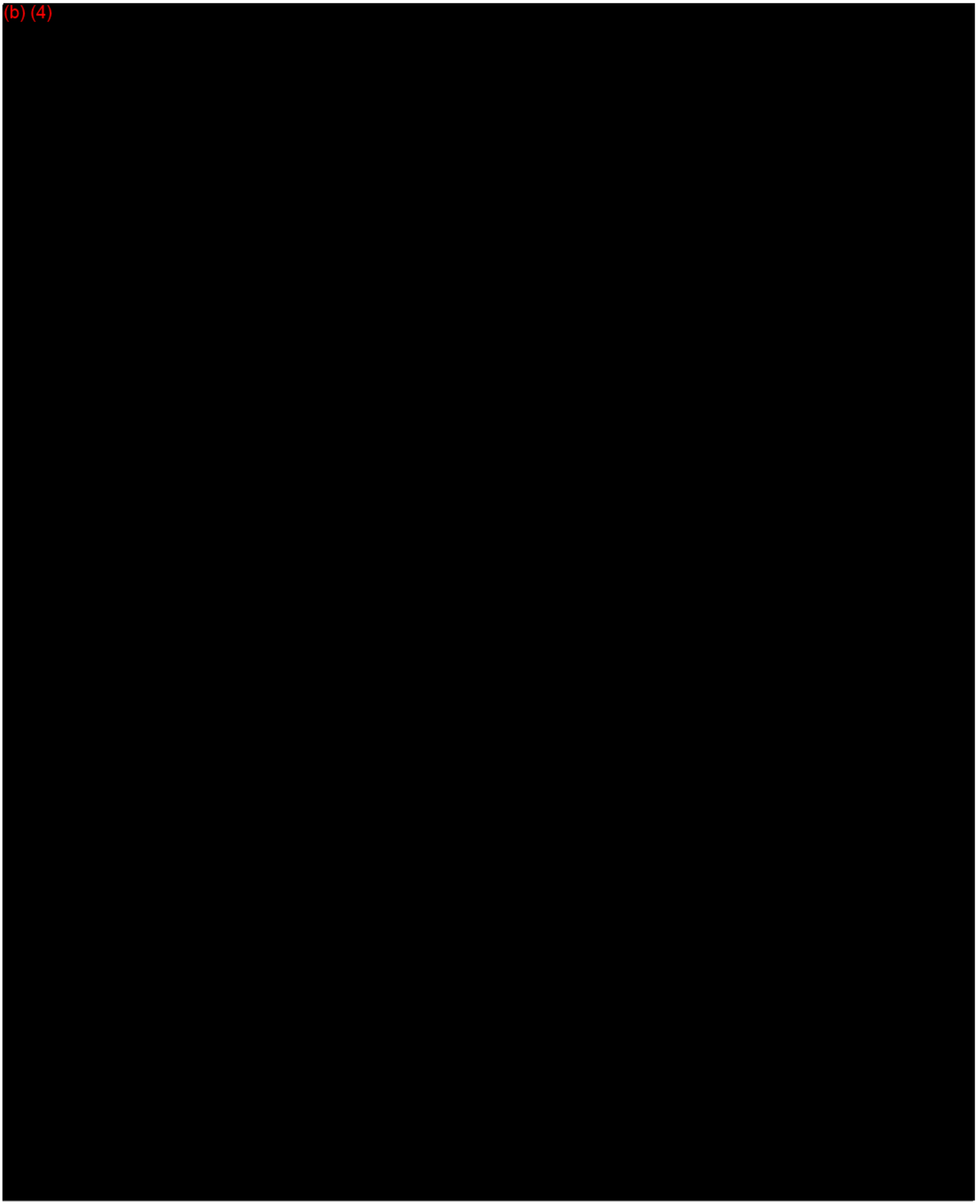
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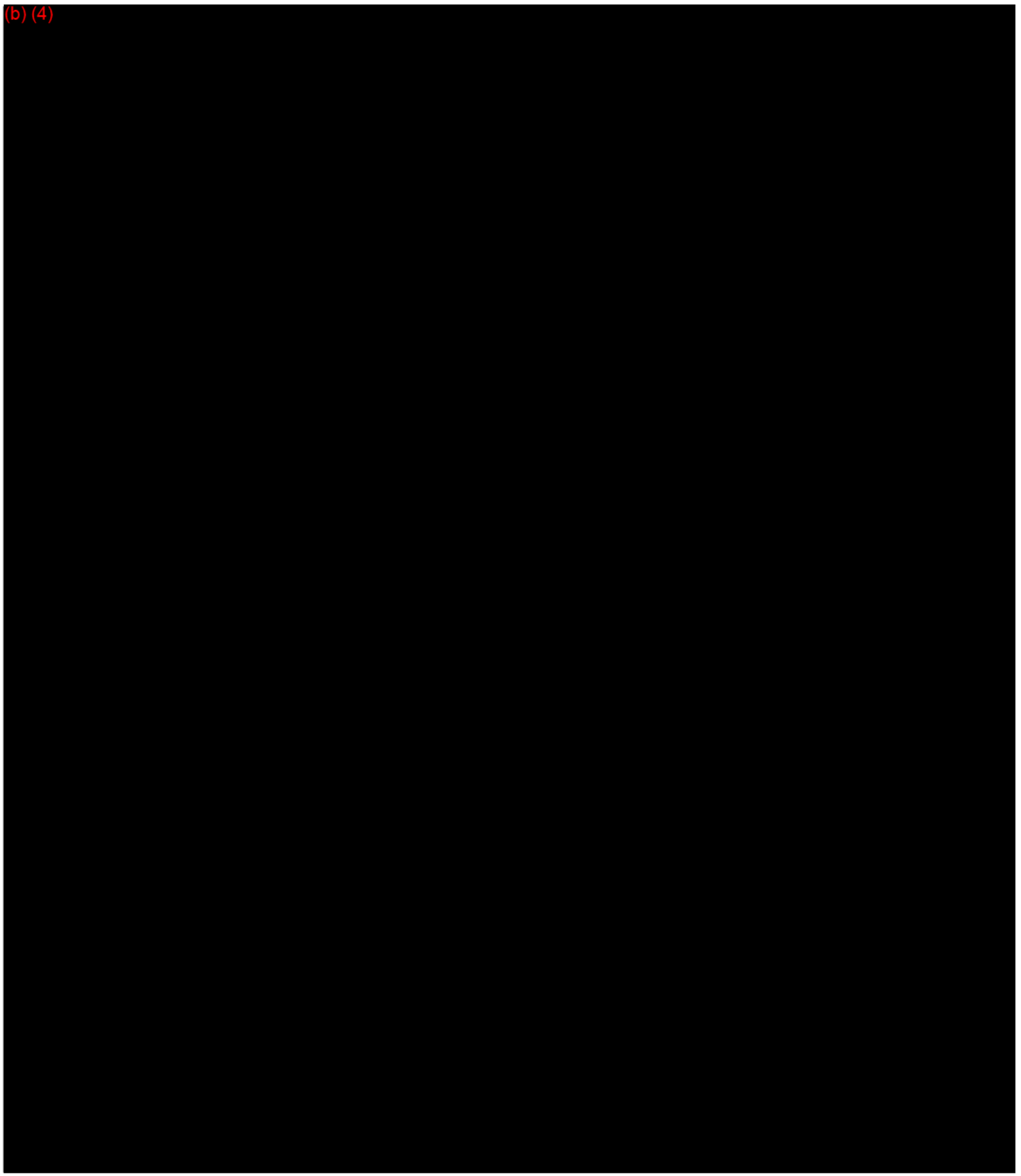
(b) (4)

(b) (4)

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Clear water

CRUCIBLE - 57.2838
CRUCIBLE + SX - 60.7435
+ ASH 57.3109

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-37 Date: 3-13-9
CES Sales Representative: Gary B.
Requested Turnaround/Completion Date:

.0271
34597
.78%
ASH

Customer Name: Martin Transport Quantity: 5K gal
Generator Name and Location: Isiel Jacinto Port Frequency:
Hazardous Waste Codes:
MSDS Attached: ____ Yes ✓ No
Ultimate Objective for Performing Analysis: Product Purchase

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Oil mixed into diesel tank

Provide a Detailed Composition to the best of your knowledge: Oil 60% Diesel 40%

Component/Approximate Percentage or PPM:

/		/	D. 0.880
/		/	
/		/	
/		/	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____	Percent Solids: ____	Percent Oil: ____
Specific Gravity: ____	Chlor-d-tect(Oil Phase): ____	pH: ____
Phenols: ____	Oil and Grease (Water Phase): ____	TOC: ____
Distillation Test: ____	Metals: ____	Flash: ____
GC/MS: ____	Chlor-n-oil(Oil Phase): ____	Centrifuge Test: ____

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	Black Oil Suitability: ✓	Viscosity: ____
Specific Gravity: ✓	Light End Suitability: ✓	Distillation Test: ____
Flash: ____	CES Fuel Suitability: ____	Hydro-scout: ✓
Chlor-d-tect: ____	Color: ____	Chlor-n-oil: ____
Water by Distillation: ____ (Solvents)	Water Extractability: ____	

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	Specific Gravity: ____	Sulfides: ____
Percent Sodium Hydroxide: ____	Chlorides: ____	Sodium: ____
Percent Solids by Centrifuge: ____	Oil by Centrifuge: ____	TOC: ____

Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CRUCIBLE - 61.5471
+S 64.9099
+NH 61.5529

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0359-31 Date: 3-13-9
CES Sales Representative: Gary B.
Requested Turnaround/Completion Date:

.0058
3.3628
.017 %
ASH

Customer Name: Martin Transport Quantity: 5K gal
Generator Name and Location: Isla Isacinto Port Frequency:
Hazardous Waste Codes:
MSDS Attached: ____ Yes ✓ No
Ultimate Objective for Performing Analysis: Product Purchase

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Oil mixed into diesel tank
Provide a Detailed Composition to the best of your knowledge: Oil 60% Diesel 40%

Component/Approximate Percentage or PPM:

/		/	D- 0.870
/		/	FP > 140
/		/	
/		/	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____	Percent Solids: ____	Percent Oil: ____
Specific Gravity: ____	Chlor-d-tect(Oil Phase): ____	pH: ____
Phenols: ____	Oil and Grease (Water Phase): ____	TOC: ____
Distillation Test: ____	Metals: ____	Flash: ____
GC/MS: ____	Chlor-n-oil(Oil Phase): ____	Centrifuge Test: ____

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	Black Oil Suitability: ✓	Viscosity: ____
Specific Gravity: ✓	Light End Suitability: ✓	Distillation Test: ____
Flash: ____	CES Fuel Suitability: ____	Hydro-scout: ✓
Chlor-d-tect: ____	Color: ____	Chlor-n-oil: ____
Water by Distillation: ____	Water Extractability: ____	

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	Specific Gravity: ____	Sulfides: ____
Percent Sodium Hydroxide: ____	Chlorides: ____	Sodium: ____
Percent Solids by Centrifuge: ____	Oil by Centrifuge: ____	TOC: ____

Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-27 Date: 3-12-09

CES Sales Representative: Branchmeier

Requested Turnaround/Completion Date: ASAP

Customer Name: Environmental Disposal Solutions/Valero Quantity: 10,000

Generator Name and Location: Valero - Houston Frequency: 1x year.

Hazardous Waste Codes: 15050

MSDS Attached: ____ Yes ✓ No

Ultimate Objective for Performing Analysis: Waste water. SAMPLE AT LEAST 60% SLUDGE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: DIESEL- 2 ppm
cleaning Heat Exchanger Bundles

Provide a Detailed Composition to the best of your knowledge: pH- 7

Component/Approximate Percentage or PPM:

Water	90-95		FLASH PT- HAP LAYER 140F
crude oil	2-10		
Dirt/solid	0-2		CONTAINS H_2S. RELEASED WHEN TREATED

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge: SLUDGE

Wastewater Treatability: ✓	Percent Solids: ✓	Percent Oil: ✓
Specific Gravity: ✓	Chlor-d-tect(Oil Phase): ✓	pH: ✓ 7
Phenols: ✓	Oil and Grease (Water Phase): ____	TOC: ✓
Distillation Test: ____	Metals: ✓	Flash: ✓
GC/MS: ____	Chlor-n-oil(Oil Phase): ____	Centrifuge Test: ✓

Other Internal Analysis (List): ____

Off-Site Lab Analysis (List): TOC- 3506

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Ni .281	Black Oil Suitability: ____	Viscosity: ____
Specific Gravity: ____ Zn .065	Light End Suitability: ____	Distillation Test: ____
Flash: ____	CES Fuel Suitability: ____	Chlor-d-tect: ____
Color: ____ Cu .023	Base Oil Suitability: ____	BTU: ____
Hydro-scout: ____ Cd .116	Water by Distillation: ____	Chlor-n-oil: ____

Other Internal Analysis (List): Cr

Off-Site Lab Analysis (List): ____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	Specific Gravity: ____	Sulfides: ____
Percent Sodium Hydroxide: ____	Chlorides: ____	Sodium: ____
Percent Solids by Centrifuge: ____	Oil by Centrifuge: ____	TOC: ____

Other Internal Lab Analysis (List): ____

Off-Site Lab Analysis (List): ____

Note: Must have an approved P.O. for any External Lab Analysis.

SEP. ORGANIC PHASE & WATER PHASE [TOC]

WW [TREATABILITY]

PRACTICALITY OF RECOVERING ORGANIC PHASE ?

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-24 **Date:** 3/11/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround/Completion Date: ASAP

Customer Name: TRELLEBORG (PCI) **Quantity:** 1L

Generator Name and Location: TRELLEBORG RANKIN RD. **Frequency:** RARE

Hazardous Waste Codes:

MSDS Attached: ____ Yes X No

Ultimate Objective for Performing Analysis: RECEIVE / TREAT

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
CHEMICAL WASTE DRAIN (SPILLED CHEM PRODUCTS - MEK, TOLUENE, ACETONE)

Provide a Detailed Composition to the best of your knowledge: 99% Liq. / 1% SOLIDS

Component/Approximate Percentage or PPM:

Ni - .529	FLASH Pt - > 140°F
Zn 4.472	
Cu .137	THEWLS = $\frac{4 \times 25 + 50}{10} = 500$
Cd .060	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: CP **Percent Solids:** ____ **Percent Oil:** ____

Specific Gravity: ____ **Chlor-d-tect(Oil Phase):** ____ **pH:** 11

Phenols: ____ **Oil and Grease (Water Phase):** ____ **TOC:** 11,960

Distillation Test: ____ **Metals:** ____ **Flash:** ____

GC/MS: ____ **Chlor-n-oil(Oil Phase):** ____ **Centrifuge Test:** ____

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ **Black Oil Suitability:** ____ **Viscosity:** ____

Specific Gravity: ____ **Light End Suitability:** ____ **Distillation Test:** ____

Flash: ____ **CES Fuel Suitability:** ____ **Chlor-d-tect:** ____

Color: ____ **Base Oil Suitability:** ____ **BTU:** ____

Hydro-scout: ____ **Water by Distillation:** ____ **Chlor-n-oil:** ____

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ **Specific Gravity:** ____ **Sulfides:** ____

Percent Sodium Hydroxide: ____ **Chlorides:** ____ **Sodium:** ____

Percent Solids by Centrifuge: ____ **Oil by Centrifuge:** ____ **TOC:** ____

Other Internal Lab Analysis (List):

Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-21 **Date:** 3-11-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date: Thursday 3-12-09
Customer Name: Praxair TX City **Quantity:** approx 800 gallons
Generator Name and Location: Texas City Sterling Chemical Plant **Frequency:** one time
Hazardous Waste Codes: NA
MSDS Attached: ☒ Yes ☐ No
Ultimate Objective for Performing Analysis:
glycol recycling 16%
Provide a detailed description of the process generating the waste, material, or product:
removal of glycol from machines prior to dismantling
Provide a detailed composition to the best of your knowledge:
see msds

Component	% or PPM	Component	%or PPM
Ethylene Glycol			
Water			

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☐	Percent Solids:	☐	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☐
Phenols:	☐	Oil and Grease (Water Phase):	☐	TOC:	☐
Distillation Test:	☐	Metals:	☐	Flash:	☐
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List): Suitability for glycol recycling, test % glycol, etc
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.
THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this MSDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: ETHYLENE GLYCOL, INDUSTRIAL GRADE
COMPANY IDENTITY: SOLVENTS & CHEMICALS,INC.
COMPANY ADDRESS: 4704 SHANK ROAD
COMPANY CITY: PEARLAND, TX 77588-0490
COMPANY PHONE: 1-281-485-5377
CHEMTREC PHONE: 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CONTAINS: 99-100% ETHYLENE GLYCOL (107-21-1)[203-473-3]
Number in parentheses is CAS #, number in brackets is European EC #.

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SECTION 3. HAZARDS IDENTIFICATION

RISK STATEMENTS:

R28	Very toxic if swallowed.
R39	Danger of very serious irreversible effects.
R36/37/38	Irritating to eyes, respiratory system and skin.

SAFETY STATEMENTS:

S12	Do not keep container sealed.
S13	Keep away from food, drink and animal feeding stuffs
S45	In case of accident, or if you feel unwell, seek medical advice immediately. (Show the label where possible).

SECTION 4. FIRST AID MEASURES

EYE CONTACT:
For eyes, flush with plenty of water for 15 minutes & get medical attention.

SKIN CONTACT:
In case of contact with skin immediately remove contaminated clothing.
Wash thoroughly with soap & water. Wash contaminated clothing before reuse.

INHALATION:
After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration.

SWALLOWING:
If swallowed, get immediate medical advice. Inducing vomiting may cause aspiration into the lungs.

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SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
NFPA Class B extinguishers(Carbon Dioxide or foam)for Class IIIB liquid fires.

SPECIAL FIRE FIGHTING PROCEDURES
Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
(Helmet with face shield,bunker coats, gloves & rubber boots).
Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES
SLIGHTLY COMBUSTIBLE!
Keep container tightly closed.
Isolate from oxidizers, heat, & open flame.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

CONTAINMENT TECHNIQUES
Keep unprotected personnel away. Stop spill at source. Dike area & contain.

CLEAN-UP PROCEDURES:
Clean up remainder with absorbent materials. Mop up & dispose of.

SECTION 7. HANDLING AND STORAGE

HANDLING

Isolate from oxidizers, heat, & open flame. Use only with adequate ventilation.
Avoid or repeated breathing of vapor or spray mist.
Do not get in eyes, on skin or clothing.
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, braze, or weld. Continue all label precautions!

STORAGE

Store large amounts in structures made for OSHA Class IIIB liquids
Keep container tightly closed & upright when not in use to prevent leakage.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

RESPIRATORY EXPOSURE CONTROLS

A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z86.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

VENTILATION

LOCAL EXHAUST	: Necessary
MECHANICAL (GENERAL)	: Acceptable
SPECIAL	: None
OTHER	: None

PERSONAL PROTECTIONS:

Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers.
Wash at end of each workshift & before eating, smoking or using the toilet.
Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL DATA

APPEARANCE :			Liquid,Water-White
ODOR :			Slight
BOILING RANGE :			195 197 198 C / 383 387 389 F
AUTO IGNITION TEMPERATURE :			412 C / 775 F (Lowest Component)
LOWER FLAMMABLE LIMIT IN AIR (% by vol):			3.2
FLASH POINT (TEST METHOD):			118 C / 245 F (TCC)
FLAMMABILITY CLASSIFICATION:			Class IIIB
GRAVITY @ 68/68 F / 20/20 C :			
SPECIFIC GRAVITY (Water=1) :			1.120
POUNDS/GALLON :			9.330
VOC'S (>0.44 Lbs/Sq In) :	0.0 Vol. % /	0.0 g/L /	0.000 Lbs/Gal
TOTAL VOC'S (TVOC) :	0.0 Vol. % /	0.0 g/L /	0.000 Lbs/Gal
NONEXEMPT VOC'S (CVOC) :	0.0 Vol. % /	0.0 g/L /	0.000 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS) :	100.0 Wt. % /	1120.0 g/L /	9.329 Lbs/Gal
VAPOR PRESSURE (mm of Hg)@20 C			0.1
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)			0.0
VAPOR DENSITY (air=1) :			Not Applicable
WATER ABSORPTION :			Complete
REFRACTIVE INDEX :			1.432

SECTION 10. STABILITY & REACTIVITY

STABILITY
Stable under normal conditions.

CONDITIONS TO AVOID
Isolate from oxidizers, heat, & open flame.

MATERIALS TO AVOID
Isolate from strong oxidizers such as permanganates, chromates & peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon Monoxide, Carbon Dioxide from burning.

HAZARDOUS POLYMERIZATION
Will not occur.

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SECTION 11. TOXICOLOGICAL INFORMATION

MATERIAL	CAS #	TWA (OSHA)	TLV (ACGIH)	HAP
Ethylene Glycol	107-21-1	50 ppm	100 mg/m3 A4	Yes

Each component showing `Yes' under "HAP" is an EPA Hazardous Air Pollutant.

EG-IND SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

MATERIAL	CAS #	CEILING	STEL (OSHA/ACGIH)
Ethylene Glycol	107-21-1	None known	100 mg/cu m

ACUTE HAZARDS

EYE & SKIN CONTACT:
Primary irritation to skin, defatting, dermatitis.
Absorption thru skin increases exposure.
Primary irritation to eyes, redness, tearing, blurred vision.
Liquid can cause eye irritation. Wash thoroughly after handling.

INHALATION:
Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.

SWALLOWING:
Harmful or fatal if swallowed. Ethylene Glycol causes severe damage to the kidneys. Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

SUBCHRONIC HAZARDS/CONDITIONS AGGREVATED

CONDITIONS AGGREVATED
Persons with severe skin, liver or kidney problems should avoid use.

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
This product has no carcinogens listed by IARC,NTP,NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.
Absorption thru skin may be harmful. Studies with laboratory animals indicate this product can cause damage to fetus.
Ethylene Glycol causes severe damage to the kidneys.

SECTION 12. ECOLOGICAL INFORMATION

MAMMALIAN INFORMATION:

MATERIAL	CAS #	LOWEST KNOWN LETHAL DOSE DATA
		LOWEST KNOWN LD50 (ORAL)
Ethylene Glycol	107-21-1	5840.0 mg/kg(Rats)
		LOWEST KNOWN LD50 (SKIN)
Ethylene Glycol	107-21-1	9530.0 mg/kg (Rabbits)

AQUATIC ANIMAL INFORMATION:
The most sensitive known aquatic group to any component of this product is:
Goldfish 5000 ppm or mg/L.
Keep out of sewers and natural water supplies.

MOBILITY
This material is a liquid.

DEGRADABILITY
This product is completely biodegradable.

ACCUMULATION
This product does not accumulate or biomagnify in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws.
If questions exist, contact the appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: None. (When weight of product in container is >=RQ):
BULK: Environmenally hazardous substances,liquid,n.o.s.
(Ethylene Glycol),9,UN3082,PG-III
IATA / ICAO: None. (When weight of product in container is >=RQ):
BULK: Environmenally hazardous substances,liquid,n.o.s.
(Ethylene Glycol),9,UN3082,PG-III
IMO / IMDG: None. (When weight of product in container is >=RQ):
BULK: Environmenally hazardous substances,liquid,n.o.s.
(Ethylene Glycol),9,UN3082,PG-III
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 171

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SECTION 15. REGULATORY INFORMATION

EPA REGULATION:
SARA SECTION 311/312 HAZARDS: Acute Health, Chronic Health

All components of this product are on the TSCA list.
SARA Title III Section 313 Supplier Notification
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

EG-IND SECTION 15. REGULATORY INFORMATION (CONTINUED)

SARA TITLE III INGREDIENTS	CAS#	WT. % (REG. SECTION)	RQ(LBS)
*Ethylene Glycol	107-21-1	100 (313)	5000

> 5000 LB / 2272 KG OF THIS PRODUCT IN 1 CONTAINER EXCEEDS THE "RQ" OF ETHYLENE GLYCOL.
Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively.
Failure to report may result in substantial civil and criminal penalties.
State & local regulations may be more restrictive than federal regulations.

STATE REGULATIONS:
THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN CALIFORNIA AQMD RULE 443.1 & SIMILAR REGULATIONS

INTERNATIONAL REGULATIONS
The components of this product are listed on the chemical inventories of the following countries:
Australia, Canada, Europe (EINECS), Japan, Korea, United Kingdom.

SECTION 16. OTHER INFORMATION

HAZARD RATINGS:
HEALTH (NFPA): 1, HEALTH (HMIS): 3, FLAMMABILITY: 1, REACTIVITY: 0
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

EMPLOYEE TRAINING
Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications.
All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.
Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein.
This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.
Unless updated, this Material Safety Data Sheet is valid until 03/18/2008.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-20 **Date:** 3-11-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date: by EOB Thursday if possilbe.
Customer Name: TT Barge **Quantity:** 3 vac trucks
Generator Name and Location: Mile 237 - Port Allen, TX **Frequency:** 3 loads/week
Hazardous Waste Codes: D001, D018 HEAT & ACIDIFY.
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis:
wastewater treatment at CES
Provide a detailed description of the process generating the waste, material, or product:
cleaning of barges last containing benzene related materails
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
Water			Ni - .011
			Zn .010
			Cu - 0.000
			Cd - .028
			Cr -

Internal analysis to be performed on WW/sludge and oily water/sludge							
WW Treatability:	☒		Percent Solids:	☐	Percent Oil:	☐	
Specific Gravity:	☐		Chlor-d-tect(Oil Phase):	☐	pH:	☒	- 6
Phenols:	☒	5	Oil and Grease (Water Phase):	☐	TOC:	☒	11,490
Distillation Test:	☐		Metals:	☒	Flash:	☒	
GC/MS:	☐		Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐	

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:					
Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic					
%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-16 **Date:** 3-9-09
CES Sales Representative: Dana C
Requested Turnaround/Completion Date: Tues
Customer Name: South Coast Terminals **Quantity:** 8-10 drums
Generator Name and Location: East Ave S **Frequency:** Yearly
Hazardous Waste Codes: Possible D002
MSDS Attached: X Yes ~~X~~ No
Ultimate Objective for Performing Analysis: test pH to see if it will go non haz

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: product line flushes

Provide a Detailed Composition to the best of your knowledge: VERBAL REPORT.

Component/Approximate Percentage or PPM:

Ore Prep / 100%			

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability:	**Percent Solids:**	**Percent Oil:**
Specific Gravity:	**Chlor-d-tect(Oil Phase):**	**pH:** X 13
Phenols:	**Oil and Grease (Water Phase):**	**TOC:**
Distillation Test:	**Metals:**	**Flash:**
GC/MS:	**Chlor-n-oil(Oil Phase):**	**Centrifuge Test:**

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash:	**Black Oil Suitability:**	**Viscosity:**
Specific Gravity:	**Light End Suitability:**	**Distillation Test:**
Flash:	**CES Fuel Suitability:**	**Chlor-d-tect:**
Color:	**Base Oil Suitability:**	**BTU:**
Hydro-scout:	**Water by Distillation:**	**Chlor-n-oil:**

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide:	**Specific Gravity:**	**Sulfides:**
Percent Sodium Hydroxide:	**Chlorides:**	**Sodium:**
Percent Solids by Centrifuge:	**Oil by Centrifuge:**	**TOC:**

Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CYTEC

Technology ahead of its time™

MSDS: 0015815
Date: 11/18/2004

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**OrePrep® OX-282**
Synonyms:	None
Chemical Family:	Mixture of aliphatic glycols and sodium hydroxide
Molecular Formula:	Mixture
Molecular Weight:	Mixture

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA
For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

® indicates trademark registered in the U.S. Outside the U.S., mark may be registered, pending or a trademark. Mark is or may be used under license.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

Component / CAS No.	% (w/w)	OSHA (PEL):	ACGIH (TLV)	Carcinogen
Sodium hydroxide 1310-73-2	0 - 2	2 mg/m^3	2 mg/m^3 (ceiling)	-

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR:

Color:	light to dark brown
Appearance:	liquid
Odor:	polyglycol

STATEMENTS OF HAZARD:
DANGER! CAUSES BURNS OF EYES AND SKIN

POTENTIAL HEALTH EFFECTS

EFFECTS OF EXPOSURE:
The acute oral (rat) LD50 and dermal (rabbit) LD50 values are estimated to be 2,500 mg/kg and 2,000 mg/kg, respectively. Direct contact with this material may cause severe eye and skin irritation. Refer to Section 11 for toxicology information on the regulated components of this product.

4. FIRST AID MEASURES

Ingestion:
If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Skin Contact:
Remove contaminated clothing and shoes without delay. Wear impermeable gloves. Wash immediately with plenty of water. Pay particular attention to skin crevices, nail folds, etc. Do not reuse contaminated clothing without laundering. Do not reuse contaminated leatherware. Obtain medical attention.

Eye Contact:
Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Inhalation:
Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

---

5. FIRE-FIGHTING MEASURES

Extinguishing Media:
Use water spray or fog, carbon dioxide or dry chemical.

Protective Equipment:
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

Special Hazards:
Keep containers cool by spraying with water if exposed to fire.

---

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8, wear a two piece PVC suit with hood or PVC overalls with hood.

Methods For Cleaning Up:
Cover spills with some inert absorbent. Sweep up into containers for disposal. Flush spill area with water.

---

7. HANDLING AND STORAGE

HANDLING
Precautionary Measures: Do not get in eyes, on skin or on clothing. Wash thoroughly after handling.

Special Handling Statements: None

STORAGE
None

Storage Temperature: Room temperature
Reason: Integrity.

---

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:
Utilize a closed system process where feasible. Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:
Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

Eye Protection:
Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:
Prevent contamination of skin or clothing when removing protective equipment. Wear impermeable gloves and suitable protective clothing.

Additional Advice:
Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water.

---

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	light to dark brown
Appearance:	liquid
Odor:	polyglycol
Boiling Point:	>187.2 °C 369 °F
Melting Point:	Not applicable
Vapor Pressure:	<0.1mm Hg
Specific Gravity:	>1
Vapor Density:	Not available
Percent Volatile (% by wt.):	Not available
pH:	~12(10% aqueous solution)
Saturation In Air (% By Vol.):	Not available
Evaporation Rate:	Not available
Solubility In Water:	Miscible
Volatile Organic Content:	Not available
Flash Point:	>93.3 °C 200 °F
Flammable Limits (% By Vol):	Not available
Autoignition Temperature:	Not available
Decomposition Temperature:	Not available
Partition coefficient (n-octanol/water):	Not available
Odor Threshold:	See Section 2 for exposure limits.

---

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions To Avoid:	None known
Polymerization:	Will not occur
Conditions To Avoid:	None known

Materials To Avoid:	Avoid contact with strong acids and oxidizing agents. water aluminum copper
Hazardous Decomposition Products:	aldehydes carbon monoxide

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION.
Toxicological information on the regulated components of this product is as follows:

Acute overexposure to sodium hydroxide mists or dusts causes severe respiratory irritation. A solution of sodium hydroxide can produce irreversible damage to eyes and skin.

12. ECOLOGICAL INFORMATION

This material is not classified as dangerous for the environment.
The ecological assessment for this material is based on an evaluation of its components.

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA `listed hazardous waste`or has any of the four RCRA `hazardous waste characteristics.`Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA `listed hazardous waste`; information contained in Section 15 of this MSDS is not intended to indicate if the product is a `listed hazardous waste.`RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 9 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

US DOT

Proper Shipping Name: Sodium hydroxide, solution
Hazard Class: 8
Packing Group: III
UN/ID Number: 1824
Transport Label Required: Corrosive
Hazardous Substances:

Component / CAS No.	Reportable Quantity of Product (lbs)
Sodium hydroxide	50000

Comments: Hazardous Substances/Reportable Quantities - DOT requirements specific to Hazardous Substances only apply if the quantity in one package equals or exceeds the product reportable quantity.

TRANSPORT CANADA

Proper Shipping Name: Sodium hydroxide, solution
Hazard Class: 8
Packing Group: III
UN Number: 1824
Transport Label Required: Corrosive

ICAO / IATA

Proper Shipping Name: Sodium hydroxide, solution
Hazard Class: 8
Packing Group: III
UN Number: 1824
Transport Label Required: Corrosive
Packing Instructions/Maximum Net Quantity Per Package:
Passenger Aircraft: 819; 5 L
Cargo Aircraft: 821; 60 L

IMO

Proper Shipping Name: Sodium hydroxide, solution
Hazard Class: 8
UN Number: 1824
Packing Group: III
Transport Label Required: Corrosive

---

15. REGULATORY INFORMATION

INVENTORY INFORMATION

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: This product contains components not on the Domestic Substances List.

European Union (EU): One or more components of this product are NOT included in the European Inventory of Existing Chemical Substances (EINECS). These components can be supplied in quantities of less than 100 kg/yr for research and analysis purposes.

Australia: All components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by Worksafe Australia.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are NOT included on the Japanese (ENCS) inventory.

Korea: All components of this product are NOT included on the Korean (ECL) inventory.

Philippines: All components of this product are NOT included on the Philippine (PICCS) inventory.

OTHER ENVIRONMENTAL INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

Component / CAS No.	%	TPQ(lbs)	RQ(lbs)	S313	TSCA 12B
Sodium hydroxide 1310-73-2	0 - 2	NONE	1000	No	No

PRODUCT HAZARD CLASSIFICATION UNDER SECTION 311 OF SARA

- Acute

16. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Reactivity: 0 - Materials that in themselves are normally stable, even under fire exposure conditions.

Reasons For Issue: New Product

Randy Deskin, Ph.D., DABT +1-973-357-3100

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation, and verification. Before using any product, read its label.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID: 0309-13 **Date:** 3/6/09

ES Sales Rep: Joy Baker

Requested Turnaround/Completion Date: ASAP

Customer Name: Phoenix Pollution Control **Quantity:** 25 drums

Generator Name and Location: ChemQuest, Inc. **Frequency:** Yearly

Hazardous Waste Codes: NA

MSDS Attached: X **Yes** ___ **No**

Ultimate Objective for Performing Analysis: Treatability

Provide a detailed description of the process generating the waste, material, or product:
Off-Spec product due to the color (black) SLIGHT AMMONIA ODOR

Provide a detailed composition to the best of your knowledge: FP > 140
Dissolvine NA3-36 (Off-Spec)

Component:	Approx % or PPM:	Component:	Approx % or PPM:
Water	61-63%		
Disodium Ethylenediaminetetraacetate	36-38%		

Internal Analysis to be Performed on Spent Caustic: PH - 10 TOC - 192,600

% K Hydroxide:		Specific Gravity:		Sulfides:	
% Na Hydroxide:		Chlorides:		Sodium:	
% Solids by Centrifuge:		Oil by Centrifuge:		TOC:	

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge: Ni .094 Zn 0,000 Cu .026 Cd 0,000 Cr ___

WW Treatability:	X	Percent Solids:		Percent Oil:	
Specific Gravity:		Chlor-d-tect: (Oil Phase):		pH:	
Phenols:		Oil and Grease (Water Phase):		TOC:	
Distillation Test:		Metals:		Flash:	
GC/MS:		Chlor-n-oil (Oil Phase)		Centrifuge Test:	

Other Internal Analysis (List): Odor

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: PHENOLS - 0

Ash:		Black Oil Suitability:		Viscocity:	
Specific Gravity:		Light End Suitability:		Distillation Test:	
Flash:		CES Fuel Suitability:		Hydro-scout:	
Chlor-d-tect		Color:		Chlor-n-oil:	
H2O by Distillation:		Water Extractability:			

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

CES Environmental Services, Inc.

4904 Griggs Road Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Generator Information

Company:	CHEMQUEST, INC.		
Address:	9730 BAY AREA BLVD.		
City, State, Zip:	PASADENA, TEXAS 77507		
Contact:	STEVE SAMS	**Title:**	AUTH. BROKER FOR GENERATOR
Phone No:	281-838-3400	**Fax No:**	281-424-7748
24/hr Phone:	281-838-3400		
U.S. EPA I.D. No:	N/A		
State I.D.	N/A	**SIC Code:**	N/A

SECTION 2: Billing Information – ☐ Same as Above

Company:	PHOENIX POLLUTION CONTROL & ENVIRONMENTAL SERVICES, INC.		
Address:	720 S. LYNCHBURG ROAD		
City, State, Zip:	BAYTOWN, TEXAS 77520		
Contact:	STEVE SAMS	**Title:**	AUTH. BROKER FOR GENERATOR
Phone No:	281-838-3400	**Fax No:**	281-424-7748

SECTION 3: General Description of the Waste

Name of Waste: DISSOLVINE NA3-36 (OFF-SPEC) due to color
Detailed Description of Process Generating Waste: OFF-SPEC PRODUCT DUE TO THE COLOR (BLACK)

Physical State: ☒ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: BLACK Odor: SLIGHT

Specific Gravity (water=1): 1.25-1.28 Density: ~~N/A~~ 10.4 lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☒ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☒ No

Layers: ☒ Single-phase ☐ Multi-phase

Container Type: ☐ Drum ☒ Tote ☐ Truck ☐ Other (explain)
Container Size: ____ 400 GAL. ____ ____

Frequency: ☐ Weekly ☐ Monthly ☐ Quarterly ☒ Yearly
Number of Units (containers): ~~37,000 LBS~~ 20-25 **Other:** ____
Texas State Waste Code No: N/A
Proper U.S. DOT Shipping Name: DISSOLVINE (OFF-SPEC)
Class: N/A **UN/NA:** N/A **PG:** N/A **RQ:** N/A

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Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
N/A	9.0-9.6	N/Amg/l	N/Amg/l	0%

Oil&Grease	TOC	Zinc	Copper	Nickel
N/Amg/l	N/Amg/l	N/Amg/l	N/Amg/l	N/Amg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The waste consists of the following materials	Concentration Ranges are acceptable	Units or %
WATER	61-63	%
TRISODIUM ETHYLENEDIAMINETETRAACETATE	36-38	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.
PPE

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.
MSDS

SECTION 7: Incompatibilities

Please list all incompatibilities (if any):
N/A

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals: X
TCLP Volatiles: X
TCLP Semi-Volatiles: X
Reactivity: X
Corrosivity: X
Ignitability: X

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ Date: 03/04/08

Printed Name/Title: STEVE SAMS/AUTH. BROKER FOR GENERATOR

CES USE ONLY (DO NOT WRITE IN THIS SPACE)	
Compliance Officer: _____	
Date: _____ Approved Rejected	
Approval Number: _____	

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SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☒ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☒ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

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(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☒ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

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SECTION 3. HAZARDS IDENTIFICATION (CONTINUED)

Eye contact - ACUTE
Eye contact may cause irritation.

Ingestion - ACUTE
If swallowed, this product may cause irritation of the mouth, throat, and stomach.

CARCINOGENICITY

IARC	....NO	OSHA	....NO
NTP	....NO	ACGIH	....NO

SECTION 4. FIRST AID MEASURES

Inhalation First Aid
Remove to fresh air. If breathing becomes difficult, oxygen may be given, preferably with a physician's advice. If not breathing, give artificial respiration. Get medical attention.

Skin Contact - First Aid
Remove contaminated clothing and equipment. Wash all affected areas with plenty of soap and water for at least 15 minutes. Do not attempt to neutralize with chemical agents. Wash any contaminated clothing and shoes before reuse. Obtain medical advice if irritation occurs.

Eye Contact - First Aid
Flush eyes with large quantities of running water for a minimum of 15 minutes. If the victim is wearing contact lenses, remove them. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. DO NOT let victim rub eye(s). Do not attempt to neutralize with chemical agents. Oils or ointments should not be used at this time. Get medical attention if eye irritation occurs.

Ingestion - First Aid
Give several glasses of water. If vomiting occurs, keep head below hips to reduce risk of aspiration. Give fluids again. Seek medical attention if health effects occur.

Medical conditions aggravated
There are no data available that address medical conditions that are generally recognized as being aggravated by exposure to this product.

Note to Physician
No specific antidote is known. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical conditions.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT
N/D F N/D C

FLASH METHOD
Not applicable

AUTO IGNITION TEMPERATURE
N/D F N/D C

UPPER EXPLOSION LIMIT
N/D

SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

LOWER EXPLOSION LIMIT
N/D

Extinguishing Media
This product is noncombustible. If involved in a fire, extinguishing agents suitable for surrounding materials should be used.

Fire Fighting Procedures
As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from the fire area. Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

Fire & Explosion Hazards
Not considered a fire hazard. When involved in a fire, does not contribute any unusual hazards.

Other Fire + Explosion Hazards
No other explosion hazards of this product are known.

Hazardous Products/Combustion
Oxides of carbon and nitrogen, sodium hydroxide and ammonia are produced during the decomposition of this product.

NFPA HEALTH RATING	NFPA FLAMMABILITY RATING
1	0
NFPA REACTIVITY RATING	**NFPA OTHER**
0	NA

SECTION 6. ACCIDENTAL RELEASE MEASURES

Cleanup
Stop source of spill. Dike area to prevent spill from spreading. Soak up liquid with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. CAUTION! The spill area may be slippery.

SECTION 7. HANDLING AND STORAGE

Handling
Avoid prolonged and/or repeated skin contact and eye contact when handling this product.

Storage
Keep container closed and dry. Suitable for any general chemical storage area. Isolate from strong oxidizing agents. Store in PVC, PE, stainless steel or bituminized tanks. Avoid contact with aluminum, copper, copper alloys, nickel and zinc.

MAXIMUM STORAGE TEMPERATURE
N/D F N/D C

General Comments
Containers should not be opened until ready for use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection
Use of respiratory protection generally is not required. However, if use conditions (e.g., elevated temperatures) generate vapors, aerosols, or fumes, use a NIOSH-approved organic vapor respirator with dust, mist, and fume filters to reduce potential for inhalation exposure. Where exposure potential necessitates a higher level of protection, use a NIOSH-approved, positive-pressure, pressure-demand, air-supplied respirator.

When using respirator cartridges or canisters, they must be changed frequently (following each use or at the end of the workshift) to assure breakthrough exposure does not occur.

Skin Protection
Skin contact with liquid or its aerosol should be minimized through the use of suitable protective clothing, gloves and footwear selected with regard for use condition exposure potential.

Eye Protection
Because eye contact with this product may cause irritation, chemical goggles and/or a face shield should be worn when handling this product.

Ventilation protection
Special ventilation is usually not required under normal use conditions. General plant ventilation should be adequate in most cases.

Other Protection
All food and smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking or smoking, hands and face should be thoroughly washed.

APPLICABLE EXPOSURE LIMITS
Other than any exposure limits which may be displayed in Section 8, there are no other known exposure limits applicable to this product or its components.

EXPOSURE LIMITS/REGULATORY INFORMATION (IN MG/M3)

SUBSTANCE DESCRIPTION	REG. AGCY	PEL	TLV	TWA	STEL	CEIL
Water						
	OSHA	N/D	N/D	N/D	N/D	N/D
	ACGIH	N/D	N/D	N/D	N/D	N/D
	NIOSH	N/D	N/D	N/D	N/D	N/D
	SUPPLIER	N/D	N/D	N/D	N/D	N/D
Trisodium ethylenediaminetetraacetate						
	OSHA	N/D	N/D	N/D	N/D	N/D
	ACGIH	N/D	N/D	N/D	N/D	N/D
	NIOSH	N/D	N/D	N/D	N/D	N/D
	SUPPLIER	N/D	N/D	N/D	N/D	N/D

LEGEND:

EXPOSURE LIMIT DESCRIPTIONS
CEIL Ceiling Exposure Limit

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

PEL Permissible Exposure Limit
STEL Short Term Exposure Limit
TLV Threshold Limit Value
TWA Time Weighted Average
N/D = Not Determined

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE (mm Hg)
N/D

VAPOR DENSITY (Air = 1.0)
N/D

EVAPORATION RATE
N/D

VOLATILE %
AP 64 %

BOILING POINT
N/D F N/D C

ODOR THRESHOLD (ppm)
N/D

SPECIFIC GRAVITY
- 1.25-1.28

BULK DENSITY
N/D

SOLUBILITY IN WATER
N/D Miscible

SOLUBILITY IN OTHER SOLVENTS
(not determined)

COEFFICIENT OF OIL/WATER
N/D

POUR POINT
N/D F N/D C

MELTING POINT
-4.00 F -20.00 C
Freezing point

pH FACTOR
- 9.0-9.6 (as is)

CLOUD POINT
N/D F N/D C

FLASH POINT
N/D F N/D C

FLASH METHOD
Not applicable

UPPER EXPLOSION LIMIT
N/D

LOWER EXPLOSION LIMIT
N/D

AUTO IGNITION TEMPERATURE
N/D F N/D C

Other
Not Determined

SECTION 10. STABILITY AND REACTIVITY

Stability
This product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and is not sensitive to physical impact.

Incompatibilities
This product may react with zinc, aluminum and iron releasing hydrogen.

Polymerization
Hazardous polymerization will not occur.

Decomposition
Decomposition products are carbon dioxide, carbon monoxide, nitrogen oxides, sodium hydroxide, ammonia and water vapor.

EPAHO113000594

SECTION 10. STABILITY AND REACTIVITY (CONTINUED)

Conditions to Avoid
Avoid contact with incompatible materials.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological - Inhalation
Inhalation toxicity data are not available for this product.
This product may cause respiratory tract irritation.

Inhalation Chronic Exposure
Chronic inhalation exposure effects for this product are not known.

Toxicological - Dermal
Dermal toxicity data (LD50) are not available for this product.
This product may cause skin irritation.

Skin Contact - CHRONIC
Chronic dermal exposure effects for this product are not known.
Trisodium NTA was not sensitizing to guinea pigs.

Toxicological - Eye
This product may cause eye irritation.

Toxicological - Ingestion
Ingestion toxicity data are not available for this product.
The oral LD50 in rats for EDTA is greater than 2000 mg/kg (slightly toxic to practically nontoxic).

Ingestion - CHRONIC
Chronic ingestion effects of this product are not known.

CARCINOGENICITY/MUTAGENICITY
This product was not mutagenic in the Ames Test. Trisodium EDTA was not carcinogenic to rats and mice in a 2 year diet study.

REPRODUCTIVE EFFECTS
EDTA and its sodium salts have been reported, in some studies, to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus. Studies with zinc EDTA have reported no teratogenic effect.

NEUROTOXICITY
The neurotoxic effects of this product are not known.

Other Toxicological Effects
No other toxic effects for this product are known.

Target Organs
Overexposure to this product may affect the skin, eyes and respiratory system.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
The ecological toxicity of this product is not known. However, the following is available for the aminocarboxylic acid:

Fathead minnow: LC50 (96 hr) = 59.8 mg/L (slightly toxic).

DISTRIBUTION
Other ecological information on this product is not known.

CHEMICAL FATE
This product is not expected to be readily biodegradable.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal
Material that cannot be used or chemically reprocessed and empty containers except those designed for multiple use (returnable), should be disposed of in accordance with all applicable regulations. Product containers designed for single use should be thoroughly emptied before disposal. Multiple use containers should be thoroughly emptied before returning to the shipping point. NOTE! State and local regulations may be more stringent than federal.

This product, if unused, does not meet the RCRA criteria for being identified as a hazardous waste by characteristics. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and regulations.

CONTAINER DISPOSAL
Containers should be cleaned of residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations.

SECTION 14. TRANSPORT INFORMATION

SHIPPING DESCRIPTION
This product is not regulated for shipping.

REQUIRED LABELS
Not regulated for shipping; no transport labels required.

ENVIRON. HAZARDOUS SUBSTANCE
This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

SECTION 15. REGULATORY INFORMATION

Component Water is subject to the following

Enviromental List

DSL	Domestic Substance List-Canada
TSCA	Toxic Subst. Cont. Act -listed

EPAHO113000596

SECTION 15. REGULATORY INFORMATION (CONTINUED)

Component Trisodium ethylenediaminetetraacetate is subject to the following

Enviromental List

DSL	Domestic Substance List-Canada
TSCA	Toxic Subst. Cont. Act -listed

OTHER REGULATORY INFORMATION
No other regulatory information is available on this product.

WHMIS HAZARD CLASS
D-2B

HAZARD RATING SOURCE
HMIS

HEALTH
1

REACTIVITY
0

FLAMMABILITY
0

OTHER

SECTION 16. OTHER INFORMATION

OTHER INFORMATION
DISSOLVINE is a registered trademark of Akzo Nobel Chemicals Inc.

Revisions made in Section(s) 1

CREATED BY
PRODUCT SAFETY (914)674-5000

KEY TO ABBREVIATIONS:

EQ=EQual	LT=Less Than	GT=Greater Than
AP=APproximately	TR=TRace	ND=No Data available

The information in this material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. However, no warranty is made as to the accuracy of and/or sufficiency of such information and/or suggestions as to the merchantability or fitness of the product for any particular purpose, or that any suggested use will not infringe any patent. Nothing in here shall be construed as granting or extending any license under any patent. Buyer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date of this document is more than three years old, call to make certain that this sheet is current.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-10 Date: 3-9-9

CES Sales Representative: Matt Bouman

Requested Turnaround/Completion Date: soon

Customer Name: PSC - Chemtura/Biolabs Quantity: 5-7 Drums a week

Generator Name and Location: Lake Charles, LA Frequency: _____

Hazardous Waste Codes: PRODUCT

MSDS Attached: ____ Yes ✓ No

Ultimate Objective for Performing Analysis: To use as bleach substitute. Need info on ~~[illegible]~~ % water mixed w/ bleach. When water would be mixed in.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Floorsweep from pool cleaner manufacturer.

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:

/	/
/	/
/	/
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ____

Specific Gravity: ____ N/A Chlor-d-tect(Oil Phase): ____ pH: ____

Phenols: ____ Oil and Grease (Water Phase): ____ TOC: ____

Distillation Test: ____ Metals: ____ Flash: ____

GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____ Black Oil Suitability: ____ Viscosity: ____

Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____

Flash: ____ N/A CES Fuel Suitability: ____ Hydro-scout: ____

Chlor-d-tect: ____ Color: ____ Chlor-n-oil: ____

Water by Distillation: ____ Water Extractability: ____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ Specific Gravity: ____ N/A Sulfides: ____

Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____

Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

3g : 5ml s/s

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID: 0309-04 **Date:** 3-4-09

ES Sales Rep: Dana Carter

Requested Turnaround/Completion Date: Thursday

Customer Name: Rineco **Quantity:** 1 tanker

Generator Name and Location: NuStar Terminals **Frequency:** One time

Hazardous Waste Codes: D001

MSDS Attached: X Yes ___ No

Ultimate Objective for Performing Analysis: Treatability and wastewater disposal, will need to be Heated and possible tank equalization

Provide a detailed description of the process generating the waste, material, or product:
Cleaning of tank 601 last containing 2-methoxyethanol

Provide a detailed composition to the best of your knowledge: 852 DB -9726

Component:	Approx % or PPM:	Component:	Approx % or PPM:
2-methoxyethanol	5%		
Water	95%		
Bleach	0-1%		

Internal Analysis to be Performed on Spent Caustic:

% K Hydroxide:		Specific Gravity:		Sulfides:	
% Na Hydroxide:		Chlorides:		Sodium:	
% Solids by Centrifuge:		Oil by Centrifuge:		TOC:	

FP >140
pH-6
PHENOLS - 0
TOC - 7864 5=TOC

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

WW Treatability:	X	Percent Solids:		Percent Oil:	
Specific Gravity:		Chlor-d-tect: (Oil Phase):		pH:	X
Phenols:		Oil and Grease (Water Phase):		TOC:	X
Distillation Test:		Metals:		Flash:	X
GC/MS:		Chlor-n-oil (Oil Phase)		Centrifuge Test:	

Ni 2.482 2.011
Zn 5.4
Cu - 0
Cd - .143

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash:		Black Oil Suitability:		Viscocity:	
Specific Gravity:		Light End Suitability:		Distillation Test:	
Flash:		CES Fuel Suitability:		Hydro-scout:	
Chlor-d-tect		Color:		Chlor-n-oil:	
H2O by Distillation:		Water Extractability:			

Cr 1.100

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: NuStar Terminals Partners TX L.P.
Address: Texas City Terminal #1., 201 Main Dock Road
City: Texas City **State:** TX **Zip:** 77592
Contact: Bob Hill **Title:** HSE Specialist
Phone Number: 409-948-8254 **Fax Number:** 409-948-4460
24/hr Phone Number: 281-750-1486
US EPA ID No: TXD096036561
State ID No: 31060 **SIC Code:** 5171

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: 2-ME Washwater
Detailed Description of Process Generating Waste:

tank cleaning of tank 601

Physical State: ☑ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: varies **Odor:** mild

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☑ Single-phase ☐ Multi-phase

Container Type: ☐ Drum ☐ Tote ☑ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☐ Monthly ☑ Yearly ☐ One-Time
Quantity: 5000 gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☑ Yes ☐ No
If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☑ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: 0008207H

Proper US DOT Shipping Name: Waste Ethylene Glycol Monomethyl Ether
Class: 3 **UN/NA:** UN1188 **PG:** III **RQ:** D001 @ 100lbs

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
74-140		mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
2-Methoxyethanol	5	%
Water	95	%
Bleach	0-1	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory **: *Subpart C***

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☑ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☑ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 3/4/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

Dana Carter

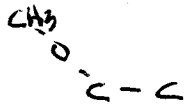
From: Douglas Highsmith [douglas.highsmith@rineco.com]
Sent: Tuesday, March 03, 2009 1:34 PM
To: Dana Carter
Subject: RE: Emailing: ETHYLENE GLYCOL MONOMETHYL ETHER.htm

Wonderful. Let's try again...

ETHYLENE GLYCOL MONOMETHYL ETHER

1. Product Identification

Synonyms: 2-methoxyethanol; methyl cellosolve®; methoxyhydroxyethane
CAS No.: 109-86-4
Molecular Weight: 76.09
Chemical Formula: CH3OC2H4OH
Product Codes:
J.T. Baker: L718
Mallinckrodt: 5003



2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
2-Methoxyethanol	109-86-4	100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY FORM EXPLOSIVE PEROXIDES IN AIR. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM, BLOOD AND BLOOD FORMING ORGANS, REPRODUCTIVE SYSTEM AND KIDNEYS. POSSIBLE BIRTH DEFECT HAZARD. MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

EPAHO113000605

Health Rating: 3 - Severe (Life)
Flammability Rating: 2 - Moderate
Reactivity Rating: 2 - Moderate
Contact Rating: 3 - Severe (Life)
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER
Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:
Inhalation of vapors may cause irritation, headache, dizziness, fatigue, nausea, vomiting, and loss of appetite. Weakness, incoordination and tremors may occur.
Ingestion:
Moderately toxic. Can cause headache, fatigue, nausea, vomiting, dizziness, and weakness. Hemorrhagic gastritis, liver damage, pancreas damage and brain edema resulting in death has occurred in human exposure of 3 g/kg. Damage to kidneys is possible from ingestion of large quantities.
Skin Contact:
May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects.
Eye Contact:
May cause irritation, redness and pain.
Chronic Exposure:
Prolonged exposure may cause injury to bone marrow, blood cells, kidney, liver and testes. A suspected human reproductive hazard and a birth defect hazard. Severe neurological disabilities has been reported from chronic industrial exposure. Symptoms have included headache, dizziness, lethargy, weakness, personality changes, apathy, unequal pupil size, and disorientation.
Aggravation of Pre-existing Conditions:
Persons with pre-existing blood or central nervous system disorders may be more susceptible to the effects of this substance.

---

4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.
Skin Contact:
Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

---

5. Fire Fighting Measures

EPAHO113000606

Fire:
Flash point: 39C (102F)
Autoignition temperature: 286C (547F)
Flammable limits in air % by volume:
lel: 1.8; uel: 14
Flammable.
Explosion:
Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with strong oxidizers may cause fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Be aware of possible peroxide formation. Avoid use of aluminum and magnesium equipment. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperatures and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.

8. Exposure Controls/Personal Protection

EPAHO113000607

Airborne Exposure Limits:
2-Methoxyethanol (EGME):
-OSHA Permissible Exposure Limit (PEL):
25 ppm (TWA) skin, Methyl Cellosolve
-ACGIH Threshold Limit Value (TLV):
0.1 ppm (TWA) skin
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:
Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure.
Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

---

9. Physical and Chemical Properties

Appearance:
Clear, colorless liquid.
Odor:
Pleasant odor.
Solubility:
Miscible in water.
Specific Gravity:
0.96 @ 20C/4C
pH:
No information found.
% Volatiles by volume @ 21C (70F):
100
Boiling Point:
124C (255F)
Melting Point:
-85.1C (-121F)
Vapor Density (Air=1):
2.62
Vapor Pressure (mm Hg):
6.2 @ 20C (68F)
Evaporation Rate (BuAc=1):
ca. 1

EPAHO113000608

10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage. Formation of explosive peroxides has been reported from auto-oxidation. Reported to dissolve aluminum from scratched or heated aluminum surfaces. Do not distill to dryness. Avoid excessive temperatures or prolonged reflux, such as in batch distillations.
Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Strong oxidizers and alkalis, strong acids, high temperatures in the presence of strong bases. Contact with excessive heat, open flame, sparks, or ignition sources.
Conditions to Avoid:
Heat, flame, ignition sources, air, incompatibles

11. Toxicological Information

Toxicological Data:
Oral rat LD50: 2370 mg/kg; inhalation rat LC50: 1500 ppm/7H; skin rabbit LD50: 1280 mg/kg.
Reproductive Toxicity:
In laboratory animals, this compound has caused both birth defects and damage to the reproductive system.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
2-Methoxyethanol (109-86-4)	No	No	None

12. Ecological Information

Environmental Fate:
When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.
Environmental Toxicity:
The LC50/96-hour values for fish are over 100 mg/l. This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this

EPAHO113000609

product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Hazard Class: 3
UN/NA: UN1188
Packing Group: III
Information reported for product/size: 4L

International (Water, I.M.O.)

Proper Shipping Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Hazard Class: 3
UN/NA: UN1188
Packing Group: III
Information reported for product/size: 4L

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\---------------------------------

Ingredient	TSCA	EC	Japan	Australia
2-Methoxyethanol (109-86-4)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\---------------------------------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
2-Methoxyethanol (109-86-4)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\---------------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
2-Methoxyethanol (109-86-4)	No	No	Yes	No

--------\Federal, State & International Regulations - Part 2\---------------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
2-Methoxyethanol (109-86-4)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: Yes (Pure / Liquid)

EPAHO113000610

WARNING:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

Australian Hazchem Code: 2[S]
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

---

16. Other Information

NFPA Ratings: Health: **2** Flammability: **2** Reactivity: **2**
Label Hazard Warning:
WARNING! FLAMMABLE LIQUID AND VAPOR. MAY FORM EXPLOSIVE PEROXIDES IN AIR. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM, BLOOD AND BLOOD FORMING ORGANS, REPRODUCTIVE SYSTEM AND KIDNEYS. POSSIBLE BIRTH DEFECT HAZARD. MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
Label Precautions:
Avoid breathing vapor or mist.
Avoid contact with eyes, skin and clothing.
Keep away from heat, sparks and flame.
Keep container closed.
Wash thoroughly after handling.
Use only with adequate ventilation.
Label First Aid:
If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases call a physician.
Product Use:
Laboratory Reagent.
Revision Information:
MSDS Section(s) changed since last revision of document include: 3, 8.
Disclaimer:
****
******

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR

EPAHO113000611

RELIANCE UPON THIS INFORMATION.
****
******

Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

Doug Highsmith
Rineco Chemical Industries

From: Dana Carter [mailto:dcarter@cesenvironmental.com]
Sent: Tuesday, March 03, 2009 1:27 PM
To: Douglas Highsmith
Subject: RE: Emailing: ETHYLENE GLYCOL MONOMETHYL ETHER.htm

Doug – the msds did not come through.

Dana Carter

Account Manager
CES Environmental Services Inc
Office: 713-676-1460
Cell: 713-748-9804
Fax: 713-676-1676

From: Douglas Highsmith [mailto:douglas.highsmith@rineco.com]
Sent: Tuesday, March 03, 2009 1:30 PM
To: Dana Carter
Subject: FW: Emailing: ETHYLENE GLYCOL MONOMETHYL ETHER.htm
Importance: High

Dana,
Please provide pricing for one tanker of 95% water and 5% of the MSDS below. I look forward to your response!

Doug Highsmith
Rineco Chemical Industries

MSDS Number: **E5300** * * * * * *Effective Date:* ***08/01/06*** * * * * * *Supercedes:* ***08/17/05***

MSDS Material Safety Data Sheet

From: **Mallinckrodt Baker, Inc.**
222 Red School Lane
Phillipsburg, NJ 08865

Mallinckrodt CHEMICALS | J.T.Baker

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

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Confidentiality Notice

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EPAHO113000613

D001

95% water

5%

CES Environmental Services, Inc.

TANK 7243
TANK 7089

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-08 Date: 3-5-09
CES Sales Representative: Brackman
Requested Turnaround/Completion Date: ASAP 6a/
Customer Name: SW. Shipyard Quantity: 19000/month
Generator Name and Location: Channelview Frequency: _____
Hazardous Waste Codes: If waste -> D002
MSDS Attached: ____ Yes ___ ~~No~~
Ultimate Objective for Performing Analysis: sulfuric acid recase @ PACES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Cleaning of Barges

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM:			
H2SO4	5-~~60~~%	7089- 1.022	~ ~~4~~ 3.5%
water	40-95%	7243 1.097	~ 14%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:
Wastewater Treatability: ____ Percent Solids: ____ Percent Oil: ____
Specific Gravity: ____ Chlor-d-tect(Oil Phase): ____ pH: ____
Phenols: ____ Oil and Grease (Water Phase): ____ TOC: ____
Distillation Test: ____ Metals: ____ Flash: ____
GC/MS: ____ Chlor-n-oil(Oil Phase): ____ Centrifuge Test: ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash: ____ Black Oil Suitability: ____ Viscosity: ____
Specific Gravity: ____ Light End Suitability: ____ Distillation Test: ____
Flash: ____ CES Fuel Suitability: ____ Chlor-d-tect: ____
Color: ____ Base Oil Suitability: ____ BTU: ____
Hydro-scout: ____ Water by Distillation: ____ Chlor-n-oil: ____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide: ____ Specific Gravity: ____ Sulfides: ____
Percent Sodium Hydroxide: ____ Chlorides: ____ Sodium: ____
Percent Solids by Centrifuge: ____ Oil by Centrifuge: ____ TOC: ____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.
Other- Titration, Sp. Gravity what ever else needed TO determine - reuse

~~Lot~~ TANK 983
TANK 504

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0309-~~0~~07 Date: 3-5-09
CES Sales Representative: Brueckman
Requested Turnaround/Completion Date: _____
Customer Name: S. W. Shipyard Quantity: 20,000 gal/month
Generator Name and Location: Channelview Frequency: _____
Hazardous Waste Codes: If waste D002, maybe D003
MSDS Attached: _____ Yes ~~No~~
Ultimate Objective for Performing Analysis: Sulfidic caustic feed.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
clean-out of barges last containing spent caustic from refineries ex

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:

NaOH	5-20	water	80.95-
Sulfide	2-3		
Sodium sulfite	0-3		
Oil	Trace		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: _____ Percent Solids: _____ Percent Oil: _____
Specific Gravity: _____ Chlor-d-tect(Oil Phase): _____ pH: _____
Phenols: _____ Oil and Grease (Water Phase): _____ TOC: _____
Distillation Test: _____ Metals: _____ Flash: _____
GC/MS: _____ Chlor-n-oil(Oil Phase): _____ Centrifuge Test: _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ Black Oil Suitability: _____ Viscosity: _____
Specific Gravity: _____ Light End Suitability: _____ Distillation Test: _____
Flash: _____ CES Fuel Suitability: _____ Chlor-d-tect: _____
Color: _____ Base Oil Suitability: _____ BTU: _____
Hydro-scout: _____ Water by Distillation: _____ Chlor-n-oil: _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ Specific Gravity: ✓ Sulfides: ✓
Percent Sodium Hydroxide: ✓ Chlorides: _____ Sodium: ✓
Percent Solids by Centrifuge: ✓ Oil by Centrifuge: _____ TOC: ✓
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID: 0309-05 **Date:** 3/4/09

CES Sales Rep: Shannon

Requested Turnaround/Completion Date: Regular Turnaround

Customer Name: Green River Biodiesel, Inc **Quantity:** 70,000-80,000gal

Generator Name and Location: Green River – Moundville, AL **Frequency:** 1 time

Hazardous Waste Codes:

MSDS Attached: X Yes ___ No

Ultimate Objective for Performing Analysis: I need to know if we can take this material as a waste or If we can use it as a product.

Provide a detailed description of the process generating the waste, material, or product:
Waste from biodiesel manufacturing

Provide a detailed composition to the best of your knowledge:
Please see MSDS

D: 0.978
FP < 80°F

Component:	Approx % or PPM:	Component:	Approx % or PPM:

Internal Analysis to be Performed on Spent Caustic:

% K Hydroxide:		Specific Gravity:		Sulfides:	
% Na Hydroxide:		Chlorides:		Sodium:	
% Solids by Centrifuge:		Oil by Centrifuge:		TOC:	

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

WW Treatability:		Percent Solids:		Percent Oil:	
Specific Gravity:		Chlor-d-tect: (Oil Phase):		pH:	
Phenols:		Oil and Grease (Water Phase):		TOC:	
Distillation Test:		Metals:		Flash:	
GC/MS:		Chlor-n-oil (Oil Phase)		Centrifuge Test:	

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash:		Black Oil Suitability:		Viscocity:	
Specific Gravity:		Light End Suitability:		Distillation Test:	
Flash:		CES Fuel Suitability:		Hydro-scout:	
Chlor-d-tect		Color:		Chlor-n-oil:	
H2O by Distillation:		Water Extractability:			

Other Internal Analysis (List):

Off-Site Lab Analysis (List):

Shannon Ward

From: Shannon Ward
Sent: Tuesday, March 03, 2009 10:08 AM
To: Kim Harmon
Cc: Matt Bowman
Subject: FW: Green River Biodiesel

Kim,

I spoke to this customer again yesterday. They are sending me a sample of the biodiesel waste, but the plant manager also mentioned that he has the following that he would like to get rid of:

400,000 gal of Methanol
It is 2-3% glycerin & water
As a side note he said they have rail access, but they do not own any cars.
He said this Methanol is very easy to distill before it becomes similar to "windshield washer grade".
If we are interested and think we might be able to move this then he would be more than happy to send us a sample.

If you have some more questions and would like to talk to him direct, I can give you his phone number.

Let me know what you think.
Below is the information I sent before telling about his location.

Thanks,

Shannon Ward
CES Environmental
Sales Representative
Office: (713) 676-1460
Cell: (281) 785-0764
Fax: (713) 748-8664
sward@cesenvironmental.com

Visit us at http://cesenvironmental.com

From: Shannon Ward
Sent: Friday, February 27, 2009 12:02 PM
To: Matt Bowman
Cc: Kim Harmon
Subject: Green River Biodiesel

Matt,

Kim just forwarded me this lead from the main phone. After speaking with them, they are going to send us a sample in the mail. They got our mailing address and they are going to send us a couple of quarts. Just so that you know the specifics....

Customer Name: Green River Biodiesel

They are trying to get rid of some waste fuel that will contain soil methyl esters, tars, and methanol. They are preparing for a "shut down" due to the bad economy and want to get this stuff out of their facility before they

EPAHO113000618

shut down. They said that they knew Gary Lenertz and this is why they called us. They are in Mound Hill, Alabama.

Contact name is Rick Wagner (205) 371-8740

Thanks for sending that one my way, Kim.

Shannon Ward
CES Environmental
Sales Representative
Office: (713) 676-1460
Cell: (281) 785-0764
Fax: (713) 748-8664
sward@cesenvironmental.com

Visit us at http://cesenvironmental.com

Target Organ Effects
Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: liver abnormalities, central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: visual impairment.

Developmental Information
Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

Cancer Information
Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects
No data

Primary Route(s) of Entry
Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

FIRST AID MEASURES

Eyes
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation
If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by

Continued on next page

hemodialysis. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

5. FIRE FIGHTING MEASURES

Flash Point
54.0 F (12.2 C) TCC

Explosive Limit
(for product) Lower 6.0 Upper 36.0 %

Autoignition Temperature
725.0 F (385.0 C)

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide.

Fire and Explosion Hazards
Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. During a fire, irritating or toxic decomposition products may be generated.

Extinguishing Media
alcohol resistant (AR) foam, carbon dioxide, dry chemical.

Fire Fighting Instructions
Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire fighters. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

NFPA Rating
Health - 1, Flammability - 3, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill
Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or

Continued on next page

other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

7. HANDLING AND STORAGE

Handling

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. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

METHYL ALCOHOL (67-56-1)
OSHA PEL 200.000 ppm - TWA
OSHA VPEL 200.000 ppm - TWA (Skin)
OSHA VPEL 250.000 ppm - STEL (Skin)
ACGIH TLV 200.000 ppm - TWA (Skin)
ACGIH TLV 250.000 ppm - STEL (Skin)

Continued on next page

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for product) 147.0 F (63.8 C) @ 760 mmHg

Vapor Pressure
(for product) 97.680 mmHg @ 68.00 F

Specific Vapor Density
1.110 @ AIR=1

Specific Gravity
.792 @ 68.00 F

Liquid Density
6.600 lbs/gal @ 68.00 F
.792 kg/l @ 20.00 C

Percent Volatiles
100.0 %

Volatile Organic Compounds (VOC)
100.000 %
795.000 g/l
6.630 lbs/gal

Evaporation Rate
2.10 (N-BUTYL ACETATE)

Appearance
CLEAR, MOBILE

State
LIQUID

Physical Form
NEAT

Color
COLORLESS

Odor
MILD ALCOHOL

pH
No data

Viscosity
.6 cps

Freezing Point
-144.0 F (-97.7 C)

Molecular Weight
32.0

Continued on next page

Solubility in Water
COMPLETE

Bulk Density
.890 lbs/ft3

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: calcium hypochlorite, hypochlorites, peroxides, sodium, strong acids, strong bases, strong oxidizing agents, zinc.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution Company, IC&S Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
METHANOL,3,UN1230,II

Container/Mode:
55 GAL DRUM/TRUCK PACKAGE

Continued on next page

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs)	Component
5000	METHANOL

Other Transportation Information
The Transport Information may vary with the container and mode of shipment.

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs)
METHYL ALCOHOL	5000

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number	%
METHANOL	67-56-1	100.00

OSHA Process Safety Management 29 CFR 1910
None listed

EPA Accidental Release Prevention 40 CFR 68
None listed

International Regulations

Inventory Status
AICS (AUSTRALIA) The intentional ingredients of this product are listed.
DSL (CANADA) The intentional ingredients of this product are listed.
ECL (SOUTH KOREA) The intentional ingredients of this product are listed.
EINECS (EUROPE) The intentional ingredients of this product are listed.
ENCS (JAPAN) The intentional ingredients of this product are listed.
IECSC (CHINA) The intentional ingredients of this product are listed.
PICCS (PHILIPPINES) The intentional ingredients of this product are listed.

State and Local Regulations

California Proposition 65
None

Continued on next page

New Jersey RTK Label Information
METHYL ALCOHOL 67-56-1

Pennsylvania RTK Label Information
METHANOL 67-56-1

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

EPAHO113000626

New Jersey RTK Label Information
METHYL ALCOHOL 67-56-1

Pennsylvania RTK Label Information
METHANOL 67-56-1

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

EPAHO113000627

Dist.

%	Pot	OA
IBP	74	64
10	77	65
20	80	65
30	88	66
40	118	66
45	175	68

_ Smoking & DEcomp.

Has a fatty acid odor - in distillate.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID#: 0309-04B Second Sample of this material **Date:** 3-12-09
CES Sales Representative: Dana Carter
Requested Turnaround/Completion Date:
Customer Name: Rineco **Quantity:** 5000 gal
Generator Name and Location: Nustar Terminals Texas City Tx **Frequency:** per year
Hazardous Waste Codes: D001
MSDS Attached: ☐ Yes ☒ No
Ultimate Objective for Performing Analysis:
wastewater treat
Provide a detailed description of the process generating the waste, material, or product:
cleaning of tank 601 - this is a second sample of this material
Provide a detailed composition to the best of your knowledge:

Component	% or PPM	Component	%or PPM
2-methloxyethanol	5%		
Water	95%		
Bleach	0-1%		

Internal analysis to be performed on WW/sludge and oily water/sludge

WW Treatability	☒	Percent Solids:	☒	Percent Oil:	☐
Specific Gravity:	☐	Chlor-d-tect(Oil Phase):	☐	pH:	☒
Phenols:	☒	Oil and Grease (Water Phase):	☐	TOC:	☒
Distillation Test:	☐	Metals:	☒	Flash:	☒
GC/MS:	☐	Chlor-n-oil (Oil Phase):	☐	Centrifuge Test:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Hydrocarbons or other Organic Chemicals:

Ash:	☐	Black Oil Suitability:	☐	Viscosity:	☐
Specific Gravity:	☐	Light End Suitability:	☐	Distillation Test:	☐
Flash:	☐	CES Fuel Suitability:	☐	Hydro-scout:	☐
Chlor-d-tect:	☐	Color:	☐	Chlor-n-oil:	☐
Water by distillation:	☐	Water Extractability:	☐		

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Internal analysis to be performed on Spent Caustic

%Potassium Hydroxide:	☐	Specific Gravity:	☐	Sulfides:	☐
% Sodium Hydroxide:	☐	Chlorides:	☐	Sodium:	☐
% Solids by Centrifuge:	☐	Oil by Centrifuge:	☐	TOC:	☐

Other Internal Analysis (List):
Off-Site Lab Analysis (List):

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: NuStar Terminals Partners TX L.P.
Address: Texas City Terminal #1., 201 Main Dock Road
City: Texas City **State:** TX **Zip:** 77592
Contact: Bob Hill **Title:** HSE Specialist
Phone Number: 409-948-8254 **Fax Number:** 409-948-4460
24/hr Phone Number: 281-750-1486
US EPA ID No: TXD096036561
State ID No: 31060 **SIC Code:** 5171

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: 2-ME Washwater
Detailed Description of Process Generating Waste:

tank cleaning of tank 601

Physical State: ☑ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: varies **Odor:** mild

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☑ Single-phase ☐ Multi-phase

Container Type: ☐ Drum ☐ Tote ☑ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☐ Monthly ☑ Yearly ☐ One-Time
Quantity: 5000 gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☑ Yes ☐ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☑ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Texas State Waste Code Number: _____

Proper US DOT Shipping Name: Waste Ethylene Glycol Monomethyl Ether

Class: 3 **UN/NA:** UN1188 **PG:** III **RQ:** D001 @ 100lbs

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
74-140		mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
2-Methoxyethanol	5	%
Water	95	%
Bleach	0-1	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____

TCLP Volatiles: _____

TCLP Semi-Volatiles: _____

Reactivity: _____

Corrosivity: _____

Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory : Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory : Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory **: *Subpart C***

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☑ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☑ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 3/4/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: _0309-02_____ **Date:** 3/2/09_____
CES Sales Representative: __Shannon Ward___
Requested Turnaround/Completion Date: Regular Turnaround

Customer Name: Omnilife USA (potential customer)_ **Quantity:** 540 gal/or 2 pallets_
Generator Name and Location: _Omnilife-Houston **Frequency:** 1 time for now, but maybe more in future
Hazardous Waste Codes: Non-hazardous
MSDS Attached: _____ **Yes** X **No**
Ultimate Objective for Performing Analysis: I need to see if this can be treated in our wastewater facility. And if not, if there is anything else we might be able to use it for before we look at outside disposal options.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: This is an off-spec, outdated drink comparable to Coca Cola. Customer needs to get rid of 2 pallets of this material. They are each in a separate bottle. There are 3,405 bottles, each containing 600mL of liquid.

Provide a Detailed Composition to the best of your knowledge: These will be unopened containers.
Component/Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: X - 100 K **Percent Solids:** _____ **Percent Oil:** _____
Specific Gravity: _____ **Chlor-d-tect(Oil Phase):** _____ **pH:** X - 3.0
Phenols: X - 0 **Oil and Grease (Water Phase):** _____ **TOC:** X - 47,860
Distillation Test: _____ **Metals:** X **Flash:** X
GC/MS: _____ **Chlor-n-oil(Oil Phase):** _____ **Centrifuge Test:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ **Black Oil Suitability:** _____ **Viscosity:** _____
Specific Gravity: _____ **Light End Suitability:** _____ **Distillation Test:** _____
Flash: _____ **CES Fuel Suitability:** _____ **Hydro-scout:** _____
Chlor-d-tect: _____ **Color:** _____ **Chlor-n-oil:** _____
Water by Distillation: _____ **Water Extractability:** _____
Other Internal Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

Ni .085
Zn .070
Cu .036
Cd .033
Cr .190

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: _____ **Specific Gravity:** _____ **Sulfides:** _____
Percent Sodium Hydroxide: _____ **Chlorides:** _____ **Sodium:** _____
Percent Solids by Centrifuge: _____ **Oil by Centrifuge:** _____ **TOC:** _____
Other Internal Lab Analysis (List): _____
Off-Site Lab Analysis (List): _____
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 03-0903 Date: 3-3-09

CES Sales Representative: Braunagel

Requested Turnaround/Completion Date: _____

Customer Name: Brenntag Quantity: 2-4 totes

Generator Name and Location: Houston Frequency: monthly

Hazardous Waste Codes: D002 if waste

MSDS Attached: _____ Yes ✓ No

Ultimate Objective for Performing Analysis: Reuse caustic in Port Arthur or CES-Wastewater

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Line flush. (8.2)

Provide a Detailed Composition to the best of your knowledge: _____

Component/Approximate Percentage or PPM: .2625g 5.4 ml

NaOH	20-40%		
water	60-80%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge: 1.1650g 24.5 (8.4)

Wastewater Treatability: _____ Percent Solids: _____ Percent Oil: _____

Specific Gravity: _____ Chlor-d-tect(Oil Phase): _____ pH: _____

Phenols: _____ Oil and Grease (Water Phase): _____ TOC: _____

Distillation Test: _____ Metals: _____ Flash: _____

GC/MS: _____ Chlor-n-oil(Oil Phase): _____ Centrifuge Test: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: _____ Black Oil Suitability: _____ Viscosity: _____

Specific Gravity: _____ Light End Suitability: _____ Distillation Test: _____

Flash: _____ CES Fuel Suitability: _____ Chlor-d-tect: _____

Color: _____ Base Oil Suitability: _____ BTU: _____

Hydro-scout: _____ Water by Distillation: _____ Chlor-n-oil: _____

Other Internal Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic: .8%

Percent Potassium Hydroxide: _____ Specific Gravity: ✓ 1.084 Sulfides: _____

Percent Sodium Hydroxide: ✓ Chlorides: _____ Sodium: _____

Percent Solids by Centrifuge: ✓ Oil by Centrifuge: _____ TOC: _____

Other Internal Lab Analysis (List): _____

Off-Site Lab Analysis (List): _____

Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID #: 0301-09 **Date:** 3/1/09
CES Sales Representative: Jay
Requested Turnaround/Completion Date: asap

Customer Name: TSI **Quantity:** 1 load/qtr
Generator Name and Location: TSI **Frequency:**
Hazardous Waste Codes: none - product
MSDS Attached: ____ Yes __X__ No
Ultimate Objective for Performing Analysis: blendability ratio.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
rail car heel from product

Provide a Detailed Composition to the best of your knowledge:

Component/Approximate Percentage or PPM:
fatty alcohol?!? profile-1437 ____/____
____/____ ____/____
____/____ ____/____
____/____ ____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____	**Percent Solids:** ____	**Percent Oil:** ____
Specific Gravity: ____	**Chlor-d-tect(Oil Phase):** ____	**pH:** ____
Phenols: ____	**Oil and Grease (Water Phase):** ____	**TOC:** ____
Distillation Test: ____	**Metals:** ____	**Flash:** ____
GC/MS: ____	**Chlor-n-oil(Oil Phase):** ____	**Centrifuge Test:** ____

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: ____	**Black Oil Suitability:** X	**Viscosity:** ____
Specific Gravity: ____	**Light End Suitability:** ____	**Distillation Test:** ____
Flash: ____	**CES Fuel Suitability:** ____	**Chlor-d-tect:** ____
Color: ____	**Base Oil Suitability:** ____	**BTU:** ____
Hydro-scout: ____	**Water by Distillation:** ____	**Chlor-n-oil:** ____

Other Internal Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____	**Specific Gravity:** ____	**Sulfides:** ____
Percent Sodium Hydroxide: ____	**Chlorides:** ____	**Sodium:** ____
Percent Solids by Centrifuge: ____	**Oil by Centrifuge:** ____	**TOC:** ____

Other Internal Lab Analysis (List):
Off-Site Lab Analysis (List):
Note: Must have an approved P.O. for any External Lab Analysis.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-~~55~~67 **Date:** 2/27/09

CES Sales Representative: Jay

Requested Turnaround / Completion Date: 5d

Customer Name: Sierra Chemical

Generator Name and Location: Electroless Nickel

Ultimate Objective for Performing Analysis: determine if can be used in PA or neutralized & waste

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Spent Caustic from plating operation at nickel plating plant. ~8400 gal. quoted price was charge $0.25/gal + trans. pending sample.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

NaOH	0-30%		
Water	80-100%		
Ni_2SO_4 (5%)	0-1%		

.1870 g

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids**___	**Percent Oil**___ 2.2 ml
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH**___
Phenols___	**Oil and Grease (water phase)**___	**TOC**___
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____ 4.7% NaOH
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity** X	**Sulfides**___
Percent Sodium Hydroxide X	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC**___

Other Internal Lab Analysis (List) anything else necessary for caustic approval in PA
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

EPAHO113000637

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-49 THROUGH 0209-53 **Date:** 2/26/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: DYNAMIC @ SCW SHIPYARD

Generator Name and Location: SCW SHIPYARDS (MONMOUTH) (M 1-10)

Ultimate Objective for Performing Analysis: RECEIVE WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
BARGE CLEANING PROCESS.

56-6077

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed ~~on Wastewater/Sludge~~ and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides X
Percent Sodium Hydroxide____	Chlorides____	Sodium____
~~Percent Solids by Centrifuge~~____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List) TITRATION IF APPLICABLE.
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

2-4 totes/manway

CES SAMPLE EVALUATION FORM

Sample ID # 0209-609 **Date:** 02-27-09

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: Monday - 3-2-09

Customer Name: UTS

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Recover caustic layer & Dispose of sludge

note: Gary will arrange for outside testing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Clean-out of Barge containing caustic & Sodium Salts

.79 67.5 mL 0.1 N HCl

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Sodium Hydroxide	1-5		
Sodium Salts	40-60		
Water	40-60		

38.6 % NaOH

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____ Sludge pH - ~11.8
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide✓	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

2-4 totes/month

CES SAMPLE EVALUATION FORM

Sample ID # 0209-68 **Date:** 2-27-09

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: Monday 3-2-09

Customer Name: UTS

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Recover oil portion & Dispose of sludge

Note: Gary will arrange for outside Testing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Clean-out of Barge containing oily caustic

Can we Recover the oil? Looking @ Trying to call this material recyclable

Provide a detailed Composition to the best of your knowledge: Gary will arrange testing for metals, vol, semivol

Component / Approximate Percentage or PPM:

Oil	2-10		
Dilute Caustic	1-5		
Scale	20-40		
Water	40-50		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids ✓	Percent Oil ✓
Specific Gravity____	Chlor-d-tect (oil phase) ✓	pH ✓
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash ✓
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-56 THROUGH 0209-64 **Date:** 2/27/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: FLOW CHEM

Generator Name and Location: FLOW CHEM (BLINKA RD.)

Ultimate Objective for Performing Analysis: RECEIVE WASTE OR SEND AS NON-HAZ

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge: BTU - 14,685 - EQUAL VOL COMP OF TOP LAYERS + 1% BLACK OIL

Component / Approximate Percentage or PPM:

_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash** X
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) B.T.U.

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Ni .167
Zn .041
Cu .005
Cd .056

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____ @ 0.00
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	6+16 - FP - <80°F

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

OLEFINS - FP < 80°F
BTU - 15,122 (comp)

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

TOC - H2O - 2040

TOTE		PHASE	POLYMER?
2	56	1 PHASE	Y
3	57	2 PHASE	~~Y~~
6	58	1 PHASE w/ SOLIDS	N
9	59	1	N
15	60	1 / SOLIDS	N
16	61	2 w/ SOLIDS	N
23	62	2 w/ SILT	Top Y Btm ~~AQUEOUS~~
20	63	2 w/ EMULSION	Top Y Btm Aqu
34	64	1	~~Y~~ NO
38	65	2 w/ ~~EMULSION~~ SILT	~~Y~~ NO

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-54 **Date:** 2/27/09

CES Sales Representative: Joy

Requested Turnaround / Completion Date: std

Customer Name: Midtex

Generator Name and Location: Midtex

Ultimate Objective for Performing Analysis: pricing / payment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
off-spec 5W/20W lube oil from oil blending and packaging facility, 1300 gal

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Base oil, 5W/20W 100%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout** X
Chlor-d-tect____	**Color** X	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) w/ heat does it clarify or remain cloudy?
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CLEARS up w/ HEAT.

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

H2O- 977 ppm

Cover- 365

CES Environmental Services, Inc.

Note:
4-6 loads/year
2000gal/load
1 X yr
Heavy solid
clean out

CES SAMPLE EVALUATION FORM

Sample ID # 0209-48 Date: 2-24-09

CES Sales Representative: Braeckmeier

Requested Turnaround / Completion Date: ASAP

Customer Name: Ashland Water Tech

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: WW treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Plant wash Down / Equip

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Water	40-60		
Dirt	40-60		

Ni .465
Zn 2.589
Cu .484
Cd .060
Cr 0.000

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

So Cumm water is milky pink

Wastewater Treatability ✓	Percent Solids water phase 4%	Percent Oil___
Specific Gravity___	Chlor-d-tect (oil phase)___	pH ✓ 7
Phenols___	Oil and Grease (water phase)___	TOC ✓ - 7895
Distillation Test___	Metals ✓	Flash ✓
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

PHENOLS- 5 ppm

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

FP · 120-125

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

~~6~~ 1-Loads

2XQTS

CES Environmental Services, Inc.

1 Load/Month

CES SAMPLE EVALUATION FORM

Sample ID # 0209-45 **Date:** 2-24-09

CES Sales Representative: Gary Brauchman

Requested Turnaround / Completion Date: A

Customer Name: Environmental Disposal Solutions (Formally: Evergreen)

Generator Name and Location: Valero - Houston

Ultimate Objective for Performing Analysis: WW Treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

organic skimming from waste water treatment - D018 < 20ppm Benzene

TRENTS OK AFTER ACID + HEAT TO RECOVER OILS

Provide a detailed Composition to the best of your knowledge:

Component	Approximate Percentage or PPM		
Oil	1-5		
Water	95-99		
Light End organics	0-1		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	Percent Solids ✓	Percent Oil ✓ ~3%
Specific Gravity ✓	Chlor-d-tect (oil phase) ✓	pH ✓ 11
Phenols ✓ - 5ppm	Oil and Grease (water phase)___	TOC ✓ - 16,490
Distillation Test___	Metals ✓	Flash ✓
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test ✓

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

FP > 140 < 145

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation ✓	Water Extractability___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Ni .679
Zn .396
Cu .043
Cd ~~.389~~ .090
Cr .389

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-44 **Date:** 2-24-09

CES Sales Representative: Dana Carter1
Requested Turnaround / Completion Date: _____

Customer Name: Southcoast wallisville
Generator Name and Location: Southcoast Wallisville
Ultimate Objective for Performing Analysis: QA
Recycle materail in black oils - shipment in drums - not regular business

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
line flushes from switching product lines

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Infineum R195/100%

_____/_____ see msds
_____/_____
_____/_____
_____/_____

_____/_____
_____/_____
_____/_____
_____/_____
_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**X	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

MATERIAL SAFETY DATA SHEET
Infineum

Product Name: Infineum R195
Revision Date: 20Jul2006

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT
Product Name: Infineum R195
Product Description: Petrolcum Product Additive
Product Code: 34162100
Intended Use: De-Waxing Aid

SOUTHCOAST
Recycle?
0209-44

COMPANY IDENTIFICATION
Supplier: INFINEUM USA L.P.
P.O. Box CN 135
Linden, NJ. 07036 USA

24 Hour Health Emergency 800-726-2015
Transportation Emergency Phone 800-424-9300
Product Technical Information 800-654-1233

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS
Thermal burn hazard - contact with hot material may cause thermal burns.

POTENTIAL HEALTH EFFECTS
Low order of toxicity. No adverse effects due to inhalation are expected.

NFPA Hazard ID:	Health:	1	Flammability:	1	Reactivity: 0
HMIS Hazard ID:	Health:	1	Flammability:	1	Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION

EPAHO113000647

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Not Applicable

SKIN CONTACT
Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT
Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION
First aid is normally not required. Seek medical attention if discomfort occurs. Seek immediate medical attention. Do not induce vomiting.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

FIRE FIGHTING
Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Carbon dioxide, Carbon monoxide, Smoke, Fume

FLAMMABILITY PROPERTIES
Flash Point [Method]: >=130C (266F)
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: >320°C (608°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at

EPAHO113000648

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(800)424-8802.

SPILL MANAGEMENT
Land Spill: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Report spills as required to appropriate authorities. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS
Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING
Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

Loading/Unloading Temperature: 45°C (113°F) - 80°C (176°F)

Transport Temperature: 45°C (113°F) - 80°C (176°F)

Static Accumulator: This material is not a static accumulator.

STORAGE
Do not store in open or unlabelled containers.
Storage Temperature: 45°C (113°F) - 60°C (140°F)
Storage Pressure: [Ambient]
Suitable Materials and Coatings: Carbon Steel; Stainless Steel
Unsuitable Containers/Packing: Compatibility with plastic materials can vary
Unsuitable Materials and Coatings: Butadiene Rubber; Natural Rubber; PVC

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ -

EPAHO113000649

ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:
No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:
No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:
If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:
If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

EPAHO113000650

ENVIRONMENTAL CONTROLS
See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION
Physical State: Solid
Form: Clear
Color: Dark Yellow
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION
Relative Density: N/D
Density (at 15 °C): 871 kg/m³ (7.27 lbs/gal, 0.87 kg/dm³)
Flash Point [Method]: >=130C (266F)
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: >320°C (608°F)
Boiling Point / Range: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: [Negligible]
Evaporation Rate (n-butyl acetate = 1): N/A
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/A
Solubility in Water: Negligible
Viscosity: | 240 cSt (240 mm2/sec) at 50C
Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION
Freezing Point: 39°C (102°F)
Melting Point: N/A
Pour Point: <= 42°C (108°F)
Hygroscopic: No
Coefficient of Thermal Expansion: 0.00082 V/VDEGC

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

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HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity: LC50 > 5 mg/l	Minimally Toxic.
Irritation: No end point data.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the ey
Ingestion	
Toxicity: LC50 > 2000 mg/kg	Minimally Toxic.
Skin	
Toxicity: LD50 > 2000 mg/kg	Minimally Toxic.
Irritation: No end point data.	Mildly irritating to skin with prolonged exposure.
Eye	
Irritation: No end point data.	May cause mild, short-lasting discomfort to eyes.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	2 = NTP SUS	3 = IARC 1
4 = IARC 2A	5 = IARC 2B	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

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PERSISTENCE AND DEGRADABILITY
Biodegradation:
A component -- Expected to be inherently biodegradable

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS
Dissolve in hydrocarbon solvent and burn in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

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

Empty Container Warning PRECAUTIONARY LABEL TEXT: Empty containers may retain residue and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT) : Not Regulated for Land Transport

LAND (TDG) : Not Regulated for Land Transport

SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA) : Not Regulated for Air Transport

EPAHO113000653

Product Name: Infineum R195
Revision Date: 20Jul2006

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The Following Ingredients are Cited on the Lists Below:
Chemical Name CAS Number List Citations SOLVENT DEWAXED HEAVY PARAFFINIC DISTILLATE
64742-65-0 13, 18

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	2 = ACGIH A1	3 = ACGIH A2
4 = OSHA Z	5 = TSCA 4	6 = TSCA 5a2
7 = TSCA 5e	8 = TSCA 6	9 = TSCA 12b
10 = CA P65 CARC	11 = CA P65 REPRO	12 = CA RTK
13 = IL RTK	14 = LA RTK	15 = MI 293
16 = MN RTK	17 = NJ RTK	18 = PA RTK
19 = RI RTK		

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Revision Changes:
Section 04: First Aid Ingestion was modified.
Section 04: First Aid Inhalation was modified.
Section 09: Density kg/m3(lbs/gal) was modified.
Section 11: Oral Lethality Test Data was modified.
Section 06: Accidental Release - Spill Management - Water was modified.

EPAHO113000654

Product Name: Infineum R195
Revision Date: 20Jul2006

Section 09: Flash Point C(F) was modified.
Section 09: Viscosity was modified.
Section 11: Chronic Tox - Component - U.S. Infineum - Header was added.
Section 11: Chronic Tox - Component - Header was deleted.

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Internal Use Only

MHC: 0, 0, 0, 0, 2, 1

DGN: 6005437 (1008802) (NA Core)

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CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-40 **Date:** 2/23/09

CES Sales Representative: DAN SULLIVAN

Requested Turnaround / Completion Date: ASAP

Customer Name: BJ SERVICES

Generator Name and Location: ALOINE WESTFIELD

Ultimate Objective for Performing Analysis: RECEIVE WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

PH - 10
FORMS LIKE SOAP WHEN STIRRED

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids X	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH X
Phenols____ – 1ppm	Oil and Grease (water phase)___	TOC X – 2454
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni 1.126
Zn .066
Cu - .092

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cd - .065
Cr - 0.003

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

METALS, pH, TOC, % solids

EPAHQ113000657

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-37 (a) (b) (c) **Date:** 02/20/2009

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: Today

Customer Name: Kinder Morgan
Generator Name and Location: Kinder Morgan – Cumene Tank Bottoms
Ultimate Objective for Performing Analysis: I need to know if the water portion of this material can be treated in our wastewater treatment facility….and how easily it can be treated. I worked on this sample yesterday on other testing. But now the customer is interested in us treating the water portion and then sending off the solids to a landfill. Can you give me pricing information on treating the water portion only?

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Tank bottoms from a tank containing Cumene. Sample will also contain rust/scale, solids, and water.
Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Cumene/ ___/___
Rust / ___
Water/ ___/___
Solids/___ ___/___

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids** X	**Percent Oil**
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH**
Phenols___	**Oil and Grease (water phase)**	**TOC**
Distillation Test___	**Metals**___	**Flash X**
GC/MS Chlor -n-oil (oil phase)___	**Centrifuge Test**	

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)___
Off-site Lab Analysis (List)___
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	**Specific Gravity**___	**Sulfides**___
Percent Sodium Hydroxide___	**Chlorides**___	**Sodium**___
Percent Solids by Centrifuge___	**Oil by Centrifuge**	**TOC**___

Other Internal Lab Analysis (List)___
Off-site Lab Analysis (List)___
*****Note: Must have an approved P.O. for any external lab analysis*****

0209-37

Water Treatment

Sulfuric Acid ↓ PH

Lime ↑

Phenols - 1

PH - 7

Total Organic Carbons

Cr - .215

Cd - .08

Cu - .08

Zn - .205

Ni - .505

TOC 104

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-37a **Date:** 02/20/2009

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: Regular turnaround

Customer Name: Kinder Morgan
Generator Name and Location: Kinder Morgan – Cumene Tank Bottoms
Ultimate Objective for Performing Analysis: I want to know if this material can be brought in as a product. I need to know if there are any recycleable hydrocarbons in this.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: Tank bottoms from a tank containing Cumene. Sample will also contain rust/scale, solids, and water.
Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Cumene/_____/_____
Rust /_____
Water/_____/_____
Solids/_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids** X	**Percent Oil**
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**
Phenols_____	**Oil and Grease (water phase)**X	**TOC**
Distillation Test_____	**Metals**_____	**Flash X**
GC/MS_____ **Chlor-n-oil (oil phase)**_____	**Centrifuge Test** X	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

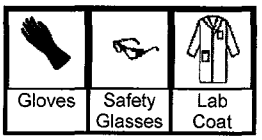
Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Kinder Morgan MSDS Vault

Current Location: **All Kinder Morgan -> Liquids Terminals ->**

Personal Protective Pictograms



GHS Pictograms

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION 07503

Product Name:	**Cumene**
Synonyms:	Isopropylbenzene; Benzene, (1-methylethyl)-; 2-Phenylpropane; (1-Methylethyl)benzene; CITGO® Material Code: 07503
CAS Number:	98-82-8
Chemical Family:	Product: Petroleum hydrocarbon solvent
Manufacturer MSDS.:	07503
Manufacturer Name:	Citgo Petroleum Corporation
Address:	P.O. Box 4689 Houston, TX 77210
Business Phone:	Technical Contact: (800) 248-4684
CHEMTREC Numbers:	
For emergencies in the US, call CHEMTREC: 800-424-9300	
Health Phone:	Emergency: (832) 486-4700
Revision Date:	10/30/2008 Version Number: 10.1
Trade Names:	Cumene
Physical Form:	Transparent, Liquid.
Color:	Colorless.
Odor:	Aromatic.

NFPA

	3	
1		1

HMIS

HEALTH	2
FIRE	3
REACTIVITY	1
PPE	

Emergency Overview:
WARNING:
Flammable liquid; vapor may cause flash fire.
Harmful or fatal if swallowed - can enter lungs and cause damage.
Can cause eye, skin or respiratory tract irritation.
Overexposure can cause central nervous system (CNS) depression and/or other target organ effects.
Harmful to aquatic organisms.

Hazard Rankings:
* = Chronic Health Hazard

Protective Equipment:
Minimum Recommended
See Section 8 for Details

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Product Codes: 07503

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS 07503

Ingredient Name	CAS#	Ingredient Percent
Cumene	98-82-8	Concentration: > 99%

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SECTION 3 : HAZARDS IDENTIFICATION 07503

Emergency Overview: Also see Emergency Overview and Hazard Ratings on the Section 1 of this MSDS.

Cumene :

Route of Exposure: Major Route(s) of Entry: Skin contact. Inhalation.

Potential Health Effects:

Eye Contact: Signs and Symptoms of Acute Exposure: This material can cause eye irritation with tearing, redness, or a stinging or burning feeling. Further, it can cause swelling of the eyes with blurred vision. Effects may become more serious with repeated or prolonged contact.

Skin Contact: Signs and Symptoms of Acute Exposure: May cause mild skin irritation with redness and/or an itching or burning feeling. Effects may become more serious with repeated or prolonged contact.
It is likely that some components of this material are able to pass into the body through the skin and may cause similar effects as from breathing or swallowing it.

Inhalation: Signs and Symptoms of Acute Exposure: Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness.

Ingestion: Signs and Symptoms of Acute Exposure: Swallowing this material may be harmful. Swallowing this material may cause stomach or intestinal upset with pain, nausea, and/or diarrhea. This material can get into the lungs during swallowing or vomiting. Small amounts in the lungs can cause lung damage, possibly leading to chronic lung dysfunction or death. Swallowing this material may cause effects similar to those described in the inhalation section (see "inhalation" above).

Chronic Health Effects: Summary: Secondary effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.
See Toxicological Information (Section 11)

Carcinogenicity: This product is not known to contain any components at concentrations

Target Organs: May cause damage to the following organs: kidneys, liver, mucous membranes, spleen, upper respiratory tract, skin, adrenal, central nervous system (CNS), eye, lens or cornea

Aggravation of Pre-Existing Conditions: Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Central Nervous System (CNS)

OSHA Hazard Classification is indicated by an "Yes" in the box adjacent to the hazard title. If no "Yes" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification:
Irritant: Yes
OSHA Physical Hazard Classification:
Flammable: Yes

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SECTION 4 : FIRST AID MEASURES 07503

Eye Contact:	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water for at least 15 minutes while occasionally lifting and lowering eyelids. Do not use eye ointment unless directed to by a physician. Seek medical attention if excessive tearing, irritation, or pain persists.
Skin Contact:	Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Inhalation:	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
Ingestion:	Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.
Note to Physicians:	INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required. This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided. INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.
Other First Aid:	Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

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SECTION 5 : FIRE FIGHTING MEASURES 07503

Flash Point:	36 deg C (96 deg F).
Flash Point Method:	Closed cup: (Pensky-Martens.)
Upper Flammable or Explosive Limit:	AP 6.5 %
Lower Flammable or Explosive Limit:	AP 0.9 %
Auto Ignition Temperature:	424 deg C (795 deg F)
Flammability Class:	NFPA: NFPA Class-IC flammable liquid.
Extinguishing Media:	SMALL FIRE: Use dry chemicals, carbon dioxide, foam, water fog, or inert gas (nitrogen). LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.
Hazardous Combustion Byproducts:	Carbon dioxide, carbon monoxide, smoke, fumes, and/or unburned hydrocarbons.
Fire Fighting Instructions:	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways.
Special Properties:	Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not

properly cooled, it can rupture in the heat of a fire.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES 07503

Spill Cleanup Measures:

Flammable Liquid! Release causes an immediate fire or explosion hazard. Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing foam may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Stop the leak if it can done without risk. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Prevent spilled material from entering waterways, sewers, basements, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material.

Large Spill:

For large spills, secure the area and control access. Prevent spilled material from entering sewers, storm drains, other drainage systems, and natural waterways. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations. In an urban area, cleanup spill as soon as possible; in natural environments, cleanup on advice from specialists. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbant pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all applicable local, state and federal laws and regulations.

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Section 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

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SECTION 7 : HANDLING and STORAGE 07503

Handling:

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Avoid contact with oxidizing agents. Do NOT breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do NOT take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Follow proper entry procedures, including compliance with 29 CFR 1910.146 prior to entering confined spaces such as tanks or pits. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Use appropriate respiratory protection when concentrations exceed any established occupational exposure level (See Section 8) Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Non-equilibrium conditions may increase the fire hazard associated with this product. A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always confirm that receiving container is properly grounded. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. Carefully review operations that may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigation efforts, including bonding and grounding. Always keep nozzle in contact with the container throughout the loading process.

Do NOT fill any portable container in or on a vehicle. Do NOT use compressed air for filling, discharging or other handling operations. Product container is NOT designed for elevated pressure. Do NOT pressurize, cut, weld, braze solder, drill, or grind on containers. Do NOT expose product containers to flames, sparks, heat or other potential ignition sources. Empty containers may contain material residues which can ignite with explosive force. Observe label precautions.

Storage:

Keep container tightly closed. Store in a cool, dry, well-ventilated area. Store only in approved containers. Do not store with oxidizing agents. Do not store at

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elevated temperatures or in direct sunlight. Protect containers against physical damage. Head spaces in tanks and other containers may contain a mixture of air and vapor in the flammable range. Vapor may be ignited by static discharge. Storage area must meet OSHA requirements and applicable fire codes. Additional information regarding the design and control of hazards associated with the handling and storage of flammable and combustible liquids may be found in professional and industrial documents including, but not limited to, the National Fire Protection Association (NFPA) publications NFPA 30 ("Flammable and Combustible Liquid Code"), NFPA 77 ("Recommended Practice on Static Electricity") and the American Petroleum Institute (API) Recommended Practice 2003, ("Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents").

Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION 07503

Engineering Controls:	Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electrical Code. An emergency eye wash station and safety shower should be located near the work-station.
Personal Protective Equipment Routine Handling:	Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.
Hand Protection Description:	Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
Eye/Face Protection:	Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.
Protective Clothing/Body Protection:	Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods
Respiratory Protection:	For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
Exposure Limits:	Applicable Workplace Exposure Levels
Comments:	General Comments: Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

Ingredient Guidelines

Ingredient: Cumene

Guideline Type:	ACGIH TLV-TWA
Guideline Information:	50 ppm 8 hour(s). (United States).
Guideline Type:	OSHA PEL-TWA
Guideline Information:	50 ppm 8 hour(s). (United States). Skin

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES 07503

Physical State/Appearance:	Transparent
Color:	Colorless.
Odor:	Aromatic.
Physical State:	Liquid.
pH:	Not applicable.
Vapor Pressure:	1.1 kPa (8 mm Hg) (at 20 deg C)

Vapor Density:	4.1 (Air = 1)
Flash Point:	36 deg C (96 deg F).
Flash Point Method:	Closed cup: (Pensky-Martens.)
Boiling Point:	152 deg C (306 deg F)
Freezing Point:	Not available.
Melting Point:	Not available.
Solubility:	In Water: Negligible solubility in cold water.
Specific Gravity:	0.86 (Water = 1)
Volatile Organic Compound Content:	862 g/l VOC (w/v)
Viscosity:	(cSt @ 40 deg C): 0.7
	Additional Properties: Paraffin, Isoparaffin and Cycloparaffin Hydrocarbons Content = < 1 Wt.% (ASTM D-1319); Aromatic Hydrocarbon Content = > 99 Wt. % (ASTM D-1319); Average Density at 60 deg F = 7.19 lbs./gal. (Calculated via ASTM D-287); Aniline Cloud Point Temperature = 52 deg F (11 deg C) (ASTM D-611); Kauri-Butanol (KB) Value = 96 (ASTM D-1133); Dry Point Temperature = 307 deg F (153 deg C) (ASTM D-86, D-850 or D-1078); Evaporation Rate = 0.5 (n-Butyl acetate = 1.0); Heat Value = 18,670 Btu. per pound
	PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

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SECTION 10 : STABILITY and REACTIVITY 07503

Chemical Stability:	Normally stable but may form peroxides when stored for prolonged time periods in contact with air.
Conditions to Avoid:	Keep away from heat, sparks and flame. Forms peroxides with prolonged storage.
Incompatibilities with Other Materials:	Strong acids, alkalies, and oxidizers.
Hazardous Polymerization:	Not expected to occur.
Hazardous Decomposition Products:	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.

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SECTION 11 : TOXICOLOGICAL INFORMATION 07503

Cumene :

Acute Health Effects:	Overexposure to cumene may cause upper respiratory tract irritation and CNS depression.
Chronic Effects:	Effects from Prolonged or Repeated Exposure: Studies in laboratory animals indicate evidence of adverse effects on the kidney, spleen and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time.
Toxicological Paragraph:	For other health-related information, refer to the Emergency Overview on Section 1 and the Hazards Identification in Section 3 of this MSDS.

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SECTION 12 : ECOLOGICAL INFORMATION 07503

Ecotoxicity:	LC50 (fish): 1-10 mg/l. This product is potentially toxic to freshwater and saltwater ecosystems.
Environmental Fate:	This product will normally float on water. Components will evaporate rapidly. Aquatic toxicity values are expected to be in the range of 1 - 10 mg/l based upon data from components and similar products. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The log Kow value for this product is 3.66.

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SECTION 13 : DISPOSAL CONSIDERATIONS 07503

Waste Disposal:	Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for

spent materials and residues at the time of disposition.

If discarded, Cumene is regulated by US EPA as a listed hazardous waste (U055). Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

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SECTION 14 : TRANSPORT INFORMATION 07503

Transportation Information:	The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.
DOT Shipping Information:	US DOT Status: A U.S. Department of Transportation (DOT) regulated material. Reportable Quantity: RQ 5000 lbs. [Based upon maximum Cumene concentration of 100% and an RQ of 5000 lbs.] Placard(s): FLAMMABLE LIQUID 3
DOT Shipping Name:	Isopropylbenzene (Cumene)
DOT UN Number:	UN 1918
DOT Hazard Class:	3
DOT Packing Group:	III
NAERG Number:	128
MARPolIIIStatus:	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

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SECTION 15 : REGULATORY INFORMATION 07503

Cumene :

TSCA 8(b): Inventory Status:	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
Section 302:	SARA 302 Emergency Planning and Notification: The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 355. No components were identified.
Section 304:	SARA 304 Emergency Planning and Notification: The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4. No components were identified. CERCLA: The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Chemical Name: Cumene CAS No.: 98-82-8 RQ = 5000 lbs. (2268 kg) Concentration: > 99%
Section 312 Hazard Category:	SARA 311/312 Hazard Identification: The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:
Acute:	Yes
Chronic:	Yes
Fire:	Yes
Section 313 Toxic Release Form:	SARA 313 Toxic Chemical Notification and Release Reporting: This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: Chemical Name: Cumene CAS No.: 98-82-8 Concentration: > 99%

Section 116.4 part 117: Clean Water Act	(CWA): This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
OSHA 29 CFR 1200:	This MSDS is prepared in accordance with 29 CFR 1910.1200.
State:	California Proposition 65: This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Benzene: < 0.005% New Jersey Right-to-Know Label: For New Jersey R-T-K labeling requirements, refer to components listed in Section 2.
Regulatory Paragraph:	Additional Regulatory Remarks: Federal Hazardous Substances Act, related statutes, and Consumer Product Safety Commission regulations, as defined by 16 CFR 1500.14(b)(3) and 1500.83(a)(13): This product contains "Petroleum Distillates" which may require special labeling if distributed in a manner intended or packaged in a form suitable for use in the household or by children. Precautionary label dialogue should display the following: DANGER: Contains Petroleum Distillates! Harmful or fatal if swallowed! Call Physician Immediately. KEEP OUT OF REACH OF CHILDREN!

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SECTION 16 : ADDITIONAL INFORMATION 07503

HMIS:	
Health Hazard:	*2 (* = Chronic Health Hazard)
Fire Hazard:	3
Reactivity:	1
NFPA:	
Health:	1
Fire Hazard:	3
Reactivity:	1
MSDS Revision Date:	10/30/2008 Version Number: 10.1

Disclaimer:

DISCLAIMER OF LIABILITY:
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Hazard Rankings:
Protective Equipment:
Minimum Recommended
See Section 8 for Details

Refer to the Section 1 for the HMIS and NFPA Hazard Ratings for this product.

ABBREVIATIONS:
AP: Approximately
EQ: Equal
> : Greater Than
< : Less Than
NA: Not Applicable
ND: No Data
NE: Not Established
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
NIOSH: National Institute of Occupational Safety and Health
OSHA: Occupational Safety and Health Administration
NPCA: National Paint and Coating Manufacturers Association
HMIS: Hazardous Materials Information System
NFPA: National Fire Protection Association
EPA: US Environmental Protection Agency

EPAHO113000668

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To Top of page

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-36 **Date:** _____

CES Sales Representative: [illegible]

Requested Turnaround / Completion Date: _____

Customer Name: Afton PA

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Lab Waste – Samples of product w/ solvents to clean containers

4 drums

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

toluene	/		/
hexane	/		/
IPA	/		/
hitec 5700 series	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability** X - OK	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**	

Other Internal Analysis (List) Black oil suitability [illegible]

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-34 **Date:** _____

CES Sales Representative: Jay

Requested Turnaround / Completion Date: _____

Customer Name: Afton PA

Generator Name and Location: _____

Ultimate Objective for Performing Analysis: _____

40,000

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

2 railcars overheated (slightly burned)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Hitec 7050 / 100%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity** X - 175 Cst.
Specific Gravity X API - 25	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout** X - 227 ppm H_2O
Chlor-d-tect____	**Color** X 7	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

12:52:00

18:24:55

1675SEL X 175

CES Environmental Services, Inc.

1:56:11 2:26:46
2:24:22 2:54:41
1691 SEL 27:55
3:49 1675 SEL
24:22

CES SAMPLE EVALUATION FORM

Sample ID #: 0209-34 **Date:** 3/30/09

CES Sales Representative: Jay

Requested Turnaround/Completion Date: ASAP 28:11

Customer Name: Afton- Port Arthur **Quantity:** 40,000 gal

Generator Name and Location: ↑ **Frequency:** 1 time

Hazardous Waste Codes: none

MSDS Attached: X **Yes** ____ **No**

Ultimate Objective for Performing Analysis: to find buyer / generate specs or blending / product outlet

Provide a Detailed Description of the Process Generating the Waste, Material, or Product: overheated additive in railcars

Provide a Detailed Composition to the best of your knowledge: above

CRUCIBLE TARE 57.2887
+ 5x 61.2967
+ASH 57.3121
.0234
4.008 = .58

Component/Approximate Percentage or PPM:

Hitec 7050	100%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/Sludge:

Wastewater Treatability: ____ **Percent Solids:** ____ **Percent Oil:** ____
Specific Gravity: ____ **Chlor-d-tect(Oil Phase):** ____ **pH:** ____
Phenols: ____ **Oil and Grease (Water Phase):** ____ **TOC:** ____
Distillation Test: ____ **Metals:** ____ **Flash:** ____
GC/MS: ____ **Chlor-n-oil(Oil Phase):** ____ **Centrifuge Test:** ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash: X - 0.58 **Black Oil Suitability:** ____ **Viscosity:** X 176 cSt @100°C
Specific Gravity: ____ **Light End Suitability:** ____ **Distillation Test:** ____
Flash: ____ **CES Fuel Suitability:** ____ **Chlor-d-tect:** ____
Color: ____ **Base Oil Suitability:** ____ **BTU:** ____
Hydro-scout: ____ **Water by Distillation:** ____ **Chlor-n-oil:** ____
Other Internal Analysis (List): ____
Off-Site Lab Analysis (List): ____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

1691 SEC x .10477 = 177.2
1675 SEL x .10477 = 175.5

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide: ____ **Specific Gravity:** ____ **Sulfides:** ____
Percent Sodium Hydroxide: ____ **Chlorides:** ____ **Sodium:** ____
Percent Solids by Centrifuge: ____ **Oil by Centrifuge:** ____ **TOC:** ____
Other Internal Lab Analysis (List): ____
Off-Site Lab Analysis (List): ____
*****Note: Must have an approved P.O. for any External Lab Analysis.*****

Material Safety Data Sheet

HiTEC 7050 Performance Additive

MSDS no. H7050

HiTEC is a trademark owned by Afton Chemical Corporation or one of its subsidiaries.

1. Product and company identification

Product use Petrochemical industry: Crankcase Additive

Date of issue/Revisions **11 February 2008**

In case of emergency - Chemical

1-800-403-0044 (US & Canada)
1-804-648-7727 (International)
32-2-507-20-64 (Europe)
81-3-5210-4890 (Japan)

Manufacturer / Supplier

Afton Chemical Corporation
500 Spring St.
Richmond, VA 23219
1-804-788-5800

Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44 1344-304141
msds@aftonchemical.com

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

2. Hazards identification

Notice to reader

Afton operates a world-wide system for hazard communication. Some hazards shown in Section 2 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Sections 3 and 15 for country specific classification information, and Section 11 for additional details.

Europe: The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Australia: NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Primary hazards and critical effects : NOTICE!

Environmental hazards : Not classified as dangerous for the environment according to EC criteria.

Hazardous Material Information System (U.S.A.)

Health	**0**
Fire hazard	**1**
Reactivity	**0**

3. Composition and information on ingredients

Note: see section 8 for occupational exposure limits and section 11 for LC50/LD50 information

Substance/Preparation : Preparation

Ingredient name	CAS no.	Conc. (% w/w)	EU Classification	WHMIS Regulated?
Mineral Oil	Mixture.	30 - 60	Not classified.	No.

4. First aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Ingestion : If affected person is fully conscious, give one glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin contact : Wash with soap and water. Get medical attention if irritation develops.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

5. Fire-fighting measures

Extinguishing media : In case of fire, use water spray (fog), foam, dry chemical, or CO2.

Fire-fighting procedures : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Hazardous decomposition products : Decomposition products may include the following materials:
carbon oxides

Flash point : Closed cup: 177°C (350.6°F) [Pensky-Martens. Minimum]
Open cup: 212°C (413.6°F) [Cleveland.]

6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5).

Environmental precautions and clean-up methods : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways.

Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure controls and personal protection

Engineering controls : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal protective equipment

Respiratory system : Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s).

Skin and body : Disposable outer garments when there is the potential for contact with the material.

Hands : Use chemical resistant, impervious gloves.

Eyes : Safety glasses with side shields. Goggles with a face shield may be necessary depending on quantity of material and conditions of use.

Occupational exposure limits

Ingredient name	OEL United States	OEL Canada	OEL Europe	OEL Australia
1) Mineral Oil	**ACGIH (United States).** TWA: 5 mg/m³ STEL: 10 mg/m³ **OSHA (United States).** TWA: 5 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	**EH40 (UK) (Europe, 2002).** TWA: 5 mg/m³ 8 hour(s).	**NOHSC (Australia, 2003).** TWA: 5 mg/m³ 8 hour(s).

9. Physical and chemical properties

Physical state and Appearance : Liquid. [Viscous liquid.]

Color : Brown. [Dark]

Odor : Mineral oil

Density : 0.909 g/cm³

Specific gravity : 0.910 at 15.6°C (target).

Viscosity : 4750 cSt @ 40°C
245 cSt @ 100°C (target).

Auto-ignition temperature

: Not determined.

Flash point : Closed cup: 177°C (350.6°F) [Pensky-Martens. Minimum]
Open cup: 212°C (413.6°F) [Cleveland.]

10. Stability and reactivity

Stability : The product is stable.

Materials to avoid : Strong oxidizing and reducing agents.

Conditions to avoid : High temperatures, sparks, and open flames.

11. Toxicological information

Routes of entry : Skin, Eyes, Ingestion, and Inhalation.

Target organs : None known.

Acute effects

Inhalation : Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Ingestion : Not determined.

Skin contact :

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

Eye contact : Non-irritating to the eyes.

Adverse effects : Not determined.

Carcinogenic effects :

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA	EU

Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Mineral Oil	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Other information : Not available.

12. Ecological information

Environmental hazards : Not classified as dangerous for the environment according to EC criteria. Based on calculation.

Environmental fate : This product contains components which may be persistent in the environment.

Germany water class : 1

13. Disposal considerations

Waste handling and disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-

IATA-DGR Class	Not regulated.	-	-	-		-
ADG Class	Not regulated.	-	-	-		-

Not available.

Notice to reader

The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

15. Regulatory information

EU regulations

Risk phrases : This product is not classified according to EU legislation.

Safety phrases : Not applicable.

Additional warning phrases :

US regulations

SARA 313 toxic chemical notification and release reporting (w/w%) : No SARA 313 chemicals are present above the reporting threshold.

SARA 311/312 Hazardous Categorization : **SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** No products were found.

RQ (Reportable quantity) : CERCLA: Hazardous substances.: No products were found.

State - California Prop. 65 : Does not contain any California Prop 65. chemicals

Canadian regulations

WHMIS (Classification) : Not a WHMIS controlled material.

International Inventory Status

United States inventory (TSCA 8b): All components are listed or exempted.

Canada inventory: All components are listed or exempted.

Europe inventory: All components are listed or exempted.

Japan inventory (ENCS): All components are listed or exempted.

Australia inventory (AICS): All components are listed or exempted.

Korea inventory (KECI): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

16. Other information

PREPARATION INFORMATION

Validated by HS&E Department (Tel: +1 804 788 5800) on 2/11/2008.

Date of printing : **2/11/2008.**

Indicates information that has changed from previously issued version.

Notice to reader

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ADDRESS CONTACT INFORMATION

In the United States and Canada:
Afton Chemical Corporation
500 Spring Street
Richmond, Virginia
USA 23219-2183
Telephone number: 804-788-5800

In Europe:
Afton Chemical Limited
Euro-Tech Centre
London Road, Bracknell, Berkshire
RG12 2UW, England
44-1344-304141

In Singapore:
111 Somerset Road
#09-05
Singapore Power Building
Singapore 238164
Telephone number: 65-6732-0822

In Japan:
Afton Chemical Japan Corporation
Sumitomo Fudousan Sanbancho Bldg. 5F
6-26 Sanbancho, Chiyoda-ku
Tokyo 102-0075 Japan
Emergency phone: 81-3-5210-4890

In Australia:
Afton Chemical Asia Pacific Company
Level 9, 20 Berry Street
North Sydney, NSW 2060
Australia
Telephone number: 02-9923-1588
Business Hours: 9:00am - 5:00pm

*** * * END OF MSDS * * ***

Mikes- call re about this! Thanks! Dana

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-34 **Date:** 1-27-09

CES Sales Representative: DC

Requested Turnaround / Completion Date: _____

Customer Name: SOUTHCOAST Terminals

Generator Name and Location: Wallisville

Ultimate Objective for Performing Analysis: what to do with this stuff

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of Trailer containing various products

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

??	/		/
	/		/
~~Supposed to be 1199~~			/
~~Profile~~	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash X	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation X	Water Extractability____	

Other Internal Analysis (List) Centrifuge whole sample, btu
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

OUTSIDE - IT STINKS!

CES SAMPLE EVALUATION FORM

Sample ID # 0209-33 **Date:** _____

CES Sales Representative: JOY

Requested Turnaround / Completion Date: _____

Customer Name: Metton America

Generator Name and Location: G.B. IS GOING TO SELL "AS IS"

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

See attached

160 drums / quarter + 2 tank trailers / qtr

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids____**	**Percent Oil____**
Specific Gravity____	**Chlor-d-tect (oil phase)____**	**pH____**
Phenols____	**Oil and Grease (water phase)___**	**TOC____**
Distillation Test____	**Metals____**	**Flash____**
GC/MS____	**Chlor-n-oil (oil phase)____**	**Centrifuge Test____**

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability____**	**Viscosity____**
Specific Gravity____	**Light End Suitability____**	**Distillation Test____**
Flash____	**CES Fuel Suitability____**	**Hydro-scout____**
Chlor-d-tect____	**Color____**	**Chlor-n-oil____**
Water by Distillation____	**Water Extractability____**	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity____**	**Sulfides____**
Percent Sodium Hydroxide____	**Chlorides____**	**Sodium____**
Percent Solids by Centrifuge____	**Oil by Centrifuge____**	**TOC____**

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-32 & 35 **Date:** _____

CES Sales Representative: Jon

Requested Turnaround / Completion Date: _____

Customer Name: Afton PA

Generator Name and Location: Afton - Port Arthur

Ultimate Objective for Performing Analysis: _____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Solids forming in bottom filter of product tank (32) and product - Lauryl methacrylate ~500 gal - 1000 gal

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Lauryl Methacrylate 99% - 100

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis D - 0.859

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) Anything we can do w/ this??

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

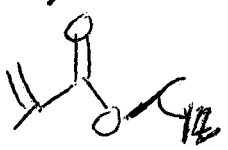
Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

METHYL METHACRYLATE



HYDROQUINONE - STABILIZED

$C_6H_6O_2$

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-31 **Date:** 2-20-09

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: _____

Customer Name: EVALCA
Generator Name and Location: V5123 (Vinyl Acetate)
Ultimate Objective for Performing Analysis: vinyl acetate recovery with water extraction
_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
production of ethylene vinyl alcohol 10 polymer MIX W/ H_2O TO

Provide a detailed Composition to the best of your knowledge: SEMI-QUANTITATE.
Component / Approximate Percentage or PPM:

water/0-10%	vinyl acetate/30-70%
Methanol/1-15%	_____/_____
acataldehyde/1-15%	_____/_____
methylacetate/15-45%	_____/_____
Acetic Acid/0-2%	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**_____
Distillation Test_____	**Metals**_____	**Flash**_____
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

HEAT / ACIDIFY. TAKE OIL TO LIGHT ENDS. WATER TREATS OK. TOC - 20,710

Sample ID # 0209-30 **Date:** 2-19-09

CES Sales Representative: Dana Carter
Requested Turnaround / Completion Date: _____

Customer Name: Rineco
Generator Name and Location: Nustar Terminals
Ultimate Objective for Performing Analysis: disposal/recycling at CES - recycle oil phase, treat water phase
_____ 1 tanker (one-time job)

pH - 7

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
tank cleaning of pure product loaded in a dirty tanker last containing isobutyl acrylate

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

see profile attached

Wash water/90%	____/____	
Fuel Oil/10%	____/____	
Isobutyl Acrylate and water residue/0.1-1%		____/____
____/____	____/____	PHENOLS - 5 ppm
____/____	____/____	SLUDGE - 4%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**_____
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**X
Distillation Test_____	**Metals**_____	**Flash**X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

N .509
Zn .087
Cu .093

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity** <4 .119
Specific Gravity_____	**Light End Suitability**X	**Distillation Test**_____
FlashX	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil** Cu .439
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

OIL MISCIBLE W/ LIGHT ENDS BUT NOT BLACK OIL

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company:	NuStar Terminals Partners TX L.P.				
Address:	Texas City Terminal #1, 201 Main Dock Road				
City:	Texas City	**State:**	TX	**Zip:**	77592
Contact:	Bob Hill		**Title:**	HSE Specialist	
Phone Number:	409-948-8254		**Fax Number:**	409-948-4460	
24/hr Phone Number:	281-750-1486				
US EPA ID No:	TXD096036561				
State ID No:	31060		**SIC Code:**	5171	

SECTION 2: Billing Information - ☐ **Same as Above**

Company:	Rineco				
Address:	PO Box 729 - Haskell				
City:	Benton	**State:**	AR	**Zip:**	72118
Contact:	Douglas Highsmith		**Title:**	Non-Fuels Chemist	
Phone Number:	800-377-4692		**Fax Number:**	501-778-8505	

SECTION 3: General Description of the Waste

Name of Waste: Wash Water/Fuel Oil/Isobutyl Acrylate Residue

Detailed Description of Process Generating Waste:

tank cleaning of pure product loaded in dirty tanker last containing Isobutyl Acrylate

Physical State: ☑ **Liquid** ☐ **Sludge** ☐ **Powder** ☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: varies **Odor:** mild

Specific Gravity (water=1): 1 **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ **Single-phase** ☑ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** ☑ **Truck** ☐ **Other (explain)**

Frequency: ☐ **Weekly** ☐ **Monthly** ☑ **Yearly** ☐ **One-Time**

Quantity: 5000 gallons

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☐ No
If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☑ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: 0006212H

Proper US DOT Shipping Name: Waste Flammable Liquid, NOS (Fuel Oil / Isobutyl Acrylate)
Class: 3 UN/NA: UN1993 PG: III RQ: D001 @ 100lbs

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
	4-10	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Wash Water	90	%
Fuel Oil	10	%
Isobutyl Acrylate and Water Residue	0.1-1	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☑ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory **: *Subpart C***

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☑ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☐ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 2/12/2009

Printed Name/Title: Douglas Highsmith

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-28 **Date:** 2-19-09

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Syntech

Generator Name and Location: Houston.

Ultimate Objective for Performing Analysis: waste water treatment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Plant wash Down water.

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

water.	99-100		
FJ -	0-1		

PH 2.2
PHENOLS 0
TOC - 15,850
SOLIDS - 1%

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	Percent Solids___	Percent Oil___
Specific Gravity___	Chlor-d-tect (oil phase)___	pH___
Phenols___	Oil and Grease (water phase)___	TOC___
Distillation Test___	Metals___	Flash___ >140°F
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List)___ Ni - .446

Off-site Lab Analysis (List)___ Zn - .087

Note: Must have an approved P.O. for any external lab analysis Cu - .142

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity Cd. .165
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil Cr. .051
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

4 Loads/wk

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-27 & 26 **Date:** 2/19/09

CES Sales Representative: Joy

Requested Turnaround / Completion Date: ASAP

Customer Name: Dana Cont

Generator Name and Location: same

Ultimate Objective for Performing Analysis: base oil??

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
ISO container (3500 gal) reported to be base oil and diesel mix

Provide a detailed Composition to the best of your knowledge: CHLOR-D-TECT- 500 ppm

Component / Approximate Percentage or PPM:

/	/
/	/
/	/
/	/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**____	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity** X
Specific Gravity X	**Light End Suitability**____	**Distillation Test**____
Flash X	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect X	**Color** X	**Chlor-n-oil** ✓
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List) Base oil suitability

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

BTM
#27
FP 3/40
#26
API-32
H_2O - 1317 ppm
Color - 4.5

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____

Off-site Lab Analysis (List)____

*****Note: Must have an approved P.O. for any external lab analysis*****

K MW = 39

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-24 **Date:** 2/13/09

CES Sales Representative: Jay

Requested Turnaround / Completion Date: ASAP

Customer Name: EMA

Generator Name and Location: Baton Rouge, LA

Ultimate Objective for Performing Analysis: Caustic acceptance

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

4 loads/month

KOH from scrubber operations (sulfide capture)

Analysis results COA, & MSDS attached

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

KOH	30-50%	Arsenic !	221 ppm
K_2SO_4	0-1%	(D004)	
Potassium Sulfide	0-10%		
Potassium Carbonate	0-1%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids**___	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH**___
Phenols___	**Oil and Grease (water phase)**___	**TOC**___
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide X	**Specific Gravity** X	**Sulfides** X
Percent Sodium Hydroxide___	**Chlorides** X	**Sodium** X
Percent Solids by Centrifuge___	**Oil by Centrifuge**___	**TOC** X

Other Internal Lab Analysis (List) caustic acceptability

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Please provide input if high Arsenic would create problems/non-acceptance in paper mills, Pt Arthur?

4 loads / mo

KOH - Baton Rouge, LA

30-50% ??

MATERIAL SAFETY DATA SHEET

EMA

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1) CHEMICAL PRODUCT

Spent Potassium Hydroxide

Formula: KOH + K2S + H20 01930802
Chem.Family: Inorganic bases
Chem. Name & synonyms:
Caustic Potash Liquid 45; Potassium Hydroxide: **SARA Information**
Caustic Potash Liquor; Potash Lye Hazards: Acute

2) COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Caustic Potash, Potassium Hydroxide (CAS 1310-58-3)
Max % W/W: 45.0
SARA applies: 312...Y 313.. N 372. .N
As Potassium Hydroxide: TWA/TLV 2 mg/m (ceiling) OSHA/ACGIH

Ingredient Potassium Carbonate (CAS 584-08-7)
Max % W/W 2.0
SARA applies: 312...Y 313...N 372...N
Particulates Not Otherwise Regulated: Total TWA 15/mg3 OSHA. Total TLV 10 mg/m3 ACGIH Respirable TWA 5 mg/m3 OSHA

3) HAZARDS IDENTIFICATION

Potential Effects of Exposure:
EYES: Eye Contact with product may cause burns, tissue destruction, eye damage, blindness.
SKIN: Skin contact may cause burns, tissue ulceration, skin damage. Effects may be delayed.
INHALATION: Inhalation may cause irritation, nausea, headache, dizziness, pain, decreased breathing capacity, tissue destruction, internal bleeding, lung damage, damage to respiratory system, chemical pneumonia. Aspiration (breathing) of liquid, mist or vomitus (vomit) into lungs can cause aspiration (chemical) pneumonia, hemorrhaging (bleeding), lung damage, and even death. Symptoms of aspiration pneumonia include coughing, labored breathing and bluish skin.
INGESTION: Ingestion may cause diarrhea, vomiting, burns, tissue ulceration, internal bleeding, even death.
TARGET ORGANS: Overexposure may cause damage to, disorders of, or adversely affect the following systems, function, organs: Destruction of all body tissue.

4) FIRST AID MEASURES

FIRST AID:
EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart to ensure flushing of entire surface. Call a physician.
SKIN: Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing before reuse. Discard contaminated shoes and leather articles. Call a physician.
INHALATION : Remove to fresh air. If not breathing give artificial respiration, mouth to mouth. If breathing is difficult give oxygen. Call a physician.
INGESTION: DO NOT INDUCE VOMITING! Rinse mouth with water. Dilute stomach contents by drinking water. If vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. Call a physician immediately.
ROUTES OF ENTRY: Eye contact and Skin contact.
Overexposure may aggravate disorder of the skin, lungs, respiratory system.
CARCINOGEN STATUS: No components, present in excess of 0.1% by weight are listed as carcinogens by IARC, NTP OR OSHA.

MATERIAL SAFETY DATA SHEET

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5) FIRE-FIGHTING MEASURES

Flash point (method): N/A
Flammable limits (% by volume in Air) UPPER: N/D LOWER: N/D
HMIS info: **Health : 3**
Fire : 0
Reactivity : 1
Special : X
EXTINGUISHING MEDIA: Water fog, foam, carbon dioxide, dry chemical, media appropriate for surrounding fire.
FIRE FIGHTING PROCEDURES: Not considered a fire hazard. Prevent human exposure to fire, fumes, smoke and products of combustion. Evacuate non-essential personnel. Firefighters should wear full face, self-contained breathing apparatus and impervious protective clothing. Do not use a direct stream of water.
UNUSUAL FIRE & EXPLOSION HAZARDS: None currently known.

6) ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Evacuate non-essential personnel, eliminate ignition sources and wear protective equipment(see Sec.VIII). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid run-off to ground water, surface waters and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (lowpH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

7) HANDLING AND STORAGE

LABEL SIGNAL WORD: DANGER!
PRECAUTIONS: Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do not breathe dust. Do not breathe vapor or mist. Do not get in eyes, skin or clothing. Do not swallow.
HANDLING: Keep away from acid. Acid contact may release toxic sulfide vapors. For industrial use only. When diluting, add product slowly to water with agitation. Heat is generated upon dilution with water. Addition of water can cause violent splashing. ATTENTION: This container is hazardous when emptied. Since emptied container contains product residues (vapor and liquid), all labeled hazard precautions must be observed.
STORAGE: Keep container closed when not in use. Store in a cool dry place. Product can cause corrosion on iron and steel at elevated temperatures. Keep out of reach of children.

8) EXPOSURE CONTROLS / PERSONAL PROTECTION

EYES: Chemical goggles, faceshield.
SKIN: Impervious gloves, clean body covering clothing
INHALATION: If exposure limits are exceeded or if exposure may occur use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.
VENTILATION: Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements. Local mechanical ventilation may be required.
ADDITIONAL PROTECTIVE MEASURES:
Safety shower, eye wash fountain and washing facilities should be readily available. In case of emergency or when dusting, misting, or splashing may occur, wear respiratory protection, eye protection gloves, helmet, boots and complete protective body covering.

9) PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: > or = 271°F
Specific Gravity (H_2 0=1): > or = 1.435 - 1.4500 @ 60°F
Vapor Density (Air=1) N/D
Solubility in Water: Complete
Percent Volatile by Volume: > or = 50.00
pH: aqueous approx. 12.000 to 14.000
Appearance: Colorless to lightly yellow colored liquid
Odor : Mild Sulfide Odor

Freezing Point: -20 °F
Vapor Pressure (MM HG.) : N/D
Evaporation Rate (NA =1): N/D

10) STABILITY AND REACTIVITY

STABILITY: Stable
INCOMPATIBILITY: Amphoteric metals, halogenated hydrocarbons, inorganic acids, organic acids. Avoid contact with amphoteric metals which include aluminum, copper, brass and zinc. Contact with water will generate heat, cause violent splashing and spattering. Contact with some metals can generate explosive hydrogen gas. Avoid contact with oxidizing agents. Contact with acids may generate toxic sulfide vapors.
HAZARDOUS POLYMERIZATION: will not occur

11) DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Solids must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted hazardous waste management facility. Dispose of material in accordance with all Federal, State and local regulation. Local regulations may be more stringent than Federal or state.

12) TRANSPORT INFORMATION

Proper Shipping Name:	Potassium Hydroxide Solution
Hazard Class:	8, UN1760 PGII
Label Requirements:	CORROSIVE
Reportable Quantity:	None

13) OTHER INFORMATION / DISCLOSURES

The information presented in this Material Safety Data Sheet is subject to additions and revisions and is not all-inclusive, but represented as the best information available to date. This information was drawn from recognized sources believed to be reliable. However, EMA and/or the preparer of this data sheet will not be responsible for damages of any kind resulting form the use of or reliance upon such information.

The product discussed is sold without warranty, expressed or implied and upon conditions that purchasers shall perform their own verification and testing to determine its suitability for a particular purpose.

EMa

TECHNICAL DATA SHEET
NOVEMBER 2008

KOH-K2S SOLUTION

PROPERTY	SPECIFICATION	TYPICAL
Potassium Hydroxide (wt. %)	30% minimum	40 to 50%
Potassium Sulfide (wt. %)	10% minimum	5%
Potassium Sulfate (wt. %)	1.0% maximum	0.5%
Potassium Carbonate (wt. %)	1.0% maximum	0.5%
pH	13 – 14	13.2
Color	Clear Yellow or Amber	Clear Amber
Density (bs/gal)	10.67 – 11.67	10.84
Odor	slight sulfide odor	

EMA

KOH-K2S SOLUTION ANALYSIS DETAILS:

Analyte	Result	RDL	Units	Analyzed	Method
Arsenic	221	0.010	mg/L	06/26/08 22:59	SW-846 6010B
Barium	0.17	0.010	mg/L	06/26/08 22:59	SW-846 6010B
Cadmium	ND	0.0050	mg/L	06/26/08 22:59	SW-846 6010B
Chromium	0.057	0.010	mg/L	06/26/08 22:59	SW-846 6010B
Lead	0.049	0.015	mg/L	06/26/08 22:59	SW-846 6010B
Mercury	0.02855	0.00200	mg/L	06/25/08 17:48	SW-846 7470A
Selenium	3.65	0.040	mg/L	06/26/08 22:59	SW-846 6010B
Silver	ND	0.010	mg/L	06/26/08 22:59	SW-846 6010B
1,1,1,2-Tetrachloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1,1-Trichloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1,2,2-Tetrachloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1,2-Trichloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1-Dichloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1-Dichloroethene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,1-Dichloropropene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2,3-Trichloropropane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2,4-Trichlorobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2,4-Trimethylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dibromo-3-chloropropane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dibromoethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dichlorobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dichloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dichloroethene(Total)	ND	100000	ug/L	06/30/08 02:06	SW-846 8260B
1,2-Dichloropropane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,3,5-Trimethylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,3-Dichlorobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,3-Dichloropropane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
1,4-Dichlorobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
2,2-Dichloropropane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
2-Butanone	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
2-Chloroethylvinyl ether	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B

2-Chlorotoluene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
2-Hexanone	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
4-Chlorotoluene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
4-Isopropyltoluene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
4-Methyl-2-pentanone	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Acetone	ND	250000	ug/L	06/30/08 02:06	SW-846 8260B
Acrolein	ND	250000	ug/L	06/30/08 02:06	SW-846 8260B
Acrylonitrile	ND	250000	ug/L	06/30/08 02:06	SW-846 8260B
Benzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Bromobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Bromochloromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Bromodichloromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Bromoform	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Bromomethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
n-Butylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Carbon disulfide	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Carbon tetrachloride	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Chlorobenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Chloroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Chloroform	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Chloromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Dibromochloromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Dibromomethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Dichlorodifluoromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
cis-1,3-Dichloropropene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
trans-1,3-Dichloropropene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Ethylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Hexachlorobutadiene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Isopropylbenzene (Cumene)	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Methyl iodide	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Methylene chloride	ND	100000	ug/L	06/30/08 02:06	SW-846 8260B
Naphthalene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Styrene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Tetrachloroethene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Toluene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B

Trichlorocthene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Trichlorofluoromethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Trichlorotrifluoroethane	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Vinyl acetate	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Vinyl chloride	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Xylene (total)	ND	100000	ug/L	06/30/08 02:06	SW-846 8260B
cis-1,2-Dichloroethene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
m,p-Xylene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
n-Propylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
o-Xylene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
sec-Butylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
tert-Butyl methyl ether (MTBE)	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
tert-Butylbenzene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
trans-1,2-Dichloroethene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
trans-1,4-Dichloro-2-butene	ND	50000	ug/L	06/30/08 02:06	SW-846 8260B
Total Organic Carbon	9440	1.0	mg/L	06/26/08 21:56	SM 5310B

SERIAL # 5128496284
T-90

0209-24

S - O

RSH, ASS, 0.827

NaOH = 17.954 (THIS IS ACTUALLY KOH)

KOH = 56 = $\frac{17.954 \times 56}{40}$ = 25.1% AS KOH

39161

D = 1.221 = 24% @ 20°C

NASH TK

A - 8.6
B - 9.7
C - 14.2

CES Environmental Services, Inc.

0109-62

CES SAMPLE EVALUATION FORM

Sample ID # 0209-22 **Date:** 2-10-09

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Hydrocarbon Engineering

Generator Name and Location: Mississippi

Ultimate Objective for Performing Analysis: Fuels or Blackoil

1000 BARRELS

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Recovered product oil

CHLOR D-TECT - 700 ppm

Provide a detailed Composition to the best of your knowledge: API - 28

1527 ppm - H_2O

Component / Approximate Percentage or PPM:

Black oil	40-80		
Bas or Fuel	40-80		

FP - 80°F

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability ✓	Viscosity ✓
Specific Gravity ✓	Light End Suitability ✓	Distillation Test____
Flash ✓	CES Fuel Suitability ✓	Hydro-scout____
Chlor-d-tect ✓	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability ✓	

Other Internal Analysis (List) What Ever you need to run

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CRUCIBLE TARE 63,7891
+ Sx 66,9814
+ ASH 63,8067

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

.0176 = .55%
3.1927

Save Sample For Kim

EPAHO113000701

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-08 **Date:** 2-3-09

CES Sales Representative: Brauchmann

Requested Turnaround / Completion Date: _____

Customer Name: Endigen

Generator Name and Location: Houston

Ultimate Objective for Performing Analysis: Fuels or cutter

18,000

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

off spec Gasoline Blend

ALREADY SOLD

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

50% oxygenates ~98-100

Aromatic HCl

Water 0-2

Done in Product Book

2-3-09

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Solids - 0

H_2O - 0 ppm

SG - .816

API - 42

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability____	Viscosity ✓
Specific Gravity ✓	Light End Suitability ✓	Distillation Test____
Flash ✓	CES Fuel Suitability ✓	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability ✓	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

NOT HLD SOLUBLE

BLENDS w/ LIGHT ENDS

FP - <80

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-15 **Date:** 2-9-09

CES Sales Representative: Brouchman.

Requested Turnaround / Completion Date: _____

Customer Name: VAM-USA

Generator Name and Location: Houston.

Ultimate Objective for Performing Analysis: Waste Water.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Waste water Discharge Limits
≈ 7500 gallon - Sand Blast wastewater, collection sumps

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

water	/ 98-100	_____	/ _____
Dirt	/ 0-2	_____	/ _____
_____	/ _____	_____	/ _____
_____	/ _____	_____	/ _____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability ✓	**Percent Solids** ✓ 0	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** ✓ 7
Phenols____ - 1	**Oil and Grease (water phase)**____	**TOC** ✓ 780
Distillation Test____	**Metals** ✓ (CES-COM)	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Ni - .174
Zn .049

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: Cd - 0.00

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Cd - .047
Cr 0.00

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-11 1 **Date:** 2/5/09

CES Sales Representative: Joy Baker
Requested Turnaround / Completion Date: 2/9/09

Customer Name: QPL
Generator Name and Location: QPL Thibodaux LA
Ultimate Objective for Performing Analysis: Is it processable

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Material in a variety of Drum with Hydrocarbons water & solvents

Provide a detailed Composition to the best of your knowledge: Btm PHASE - ORGANIC - MIXES WITH BLACK OIL OR LIGHT ENDS
Component / Approximate Percentage or PPM:

	/		/ D - .864
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids ___	Percent Oil ___
Specific Gravity ___	Chlor-d-tect (oil phase) ___	pH X
Phenols ___	Oil and Grease (water phase) ___	TOC X
Distillation Test ___	Metals ___	Flash ___
GC/MS ___	Chlor-n-oil (oil phase) ___	Centrifuge Test ___

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

TOP PHASE IS NOT MISCIBLE W/ OIL OR WATER - IT'S HEAVIER THAN LIGHT ENDS AND DOES NOT MIX.

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ___	Black Oil Suitability ___	Viscosity ___
Specific Gravity ___	Light End Suitability X	Distillation Test ___
Flash ___	CES Fuel Suitability ___	Hydro-scout ___
Chlor-d-tect ___	Color ___	Chlor-n-oil ___
Water by Distillation ___	Water Extractability ___	

Other Internal Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

D - .865 - ~~Btm~~ TOP

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide ___	Specific Gravity ___	Sulfides ___
Percent Sodium Hydroxide ___	Chlorides ___	Sodium ___
Percent Solids by Centrifuge ___	Oil by Centrifuge ___	TOC ___

Other Internal Lab Analysis (List) ___
Off-site Lab Analysis (List) ___
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-10 **Date:** 2/5/09

CES Sales Representative: Joy Baker

Requested Turnaround / Completion Date: 2/9/09

Customer Name: QPL

Generator Name and Location: QPL Thibodaux Louisiana

Ultimate Objective for Performing Analysis: Is it processable

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Material in a variety of Drums with Hydrocarbons (water & Solvents)

D- .905 (TOP PHASE)

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	
_____ / _____		_____ / _____	

Ni .445

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**____	**Percent Oil** Zn .12
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols ~5 ppm	**Oil and Grease (water phase)**___	**TOC** ~120,200 TREATED H_2O
Distillation Test____ pH- 1.3	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Cu - .590
Cd - .100

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____ Cr
Specific Gravity____	**Light End Suitability** X	**Distillation Test**____ 2,223
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

FP - H_2O <80°F

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0209-05 **Date:** 2-3-09

CES Sales Representative: Brauchman

Requested Turnaround / Completion Date: ASAP

Customer Name: Flint Hills - Corpus Christi East Plant

Generator Name and Location: Corpus Christi

Ultimate Objective for Performing Analysis: Sulfidic caustic processing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Scrubbing Gas

1 WEEK

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

Sulfidic caustic

High in mercaptans

/ /

/ /

/ /

/ /

/ /

/ /

/ /

/ /

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide✓	Specific Gravity✓	Sulfides✓
Percent Sodium Hydroxide✓	Chlorides✓	Sodium✓
Percent Solids by Centrifuge✓	Oil by Centrifuge✓	TOC✓

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

SEND OUT: Na, K, Cl-

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-68 **Date:** 1/30/09

CES Sales Representative: Jay

Requested Turnaround / Completion Date: std

Customer Name: Arkema Beaumont

Generator Name and Location: same

Ultimate Objective for Performing Analysis: evaluation to take as possible co-product

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Co-product produced from mercaptan production process (ethyl and methyl mercaptan)
quantity: 40,000 gal/year

Provide a detailed Composition to the best of your knowledge: BTU - 12,343

Component / Approximate Percentage or PPM:

DSS / _____ _____ / _____
(diethyl sulfide) / _____ _____ / _____
MSDS attached / _____ _____ / _____
_____ / _____ _____ / _____

1-25-09

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____ BTU - 19525 est.

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity~~N/A~~____	Light End Suitability____	Distillation Test____
Flash~~N/A~~____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List) BTU, Chlorides, Sulfur content

Off-site Lab Analysis (List)_____ (may have to do these outside lab)

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides~~N/A~~____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

K
Cl- ORGANIC

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

(b) (6) [redacted]

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Diethyl Sulfide

Product Use: Sulfiding Chemical
Product Number(s): 0001024826, 0001024545
Synonyms: Diethyl sulfide; 1,1'-Thiobisethane; DES; 3-thiapentane; Diethyl thioether; Ethylthioethane
Product CAS No.: 352-93-2

Company Identification:
Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The WoodlandsTX 77380

Product Information:
MSDS Requests: (800) 852 - 5530
Technical Information: (832) 813 - 4862
Responsible Party: Product Safety Group
Email:msds@cpchem.com

Chevron Phillips Chemicals International N.V.
Brusselsesteenweg 355
B-3090 Overijse
Belgium

24-Hour Emergency Telephone NumbersHEALTH:Chevron Phillips Emergency Information Center 866.442.9628 (North America) and 1.832.813.4984 (International)
TRANSPORTATION: North America: CHEMTREC 800.424.9300 or 703.527.3887
ASIA: +1.703.527.3887
EUROPE: BIG .32.14.584545 (phone) or .32.14.583516 (telefax)
SOUTH AMERICA SOS-Cotec Inside Brazil: 0800.111.767
Outside Brazil: 55.19.3467.1600

SECTION 2 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW
Clear liquid with pungent, garlic-like odor.
NFPA RATINGS: **Health:** 1 **Flammability:** 3 **Reactivity:** 0

GHS Classification and Labeling:
Flammable liquid: Category 2.
Aspiration toxicant: Category 2.
Target organ toxicant (central nervous system): Category 3.
Target organ toxicant (respiratory irritant): Category 3.

EPAHO113000708

Acute dermal toxicant: Category 5.

Signal Word: Danger

GHS Symbol:

Physical Hazards: Highly flammable liquid and vapor.
Health Hazards: Harmful if swallowed. May be harmful if swallowed and enters airways. May be harmful in contact with skin. May cause drowsiness or dizziness. May cause respiratory irritation.
Precautionary Hazard - Prevention: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Hazard - Response: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting. In case of fire: Use manufacturer/supplier or the competent authority to specify appropriate media for extinction.
Precautionary Hazard - Storage: Store in a well-ventilated place. Keep cool. Store locked up.
Precautionary Hazard - Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

EU Classification:
Danger
Risk Phrases:
R11: Highly flammable.
R65: Harmful: may cause lung damage if swallowed.
Safety Phrases:
S51: Use only in well-ventilated areas.
S9: Keep container in a well-ventilated place.
S62: If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.
S16: Keep away from sources of ignition - No smoking.

****

IMMEDIATE HEALTH EFFECTS:
Eye: This material may be irritating to the eyes and could cause prolonged (days) impairment of your vision. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.
Skin: This material may be irritating to the skin. The degree of the injury will depend on the amount of material that gets onto the skin and the speed and thoroughness of the first aid treatment. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include nausea, vomiting, and diarrhea.
Inhalation: Not expected to be harmful if inhaled. This material has a strong objectionable odor that may cause nausea, dizziness, or headache.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	AMOUNT	EINECS / ELINCS	SYM	R-PHRASES
Diethyl Sulfide	352-93-2	> 97.5 % weight	206-526-9	NA	NA
Related Materials	Various	< 2.5 % weight	NA	NA	NA

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Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
Diethyl Sulfide	CPCHEM	Not Established	NA	NA	NA
Related Materials	ACGIH	Not Established	NA	NA	NA

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.
Skin: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop.
Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.
FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid.
NFPA RATINGS: **Health:** 1 **Flammability:** 3 **Reactivity:** 0
FLAMMABLE PROPERTIES:
Flashpoint: -10°C (14°F)
Autoignition: NDA
Flammability (Explosive) Limits (% by volume in air): **Lower:** NDA **Upper:** NDA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form: Carbon Oxides, Sulfur Oxides

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

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Reporting: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL . REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL .

Precautionary Measures: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 15°F.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity' (liquids, powders and dusts), and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids).
General Storage Information: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or disposed of properly. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT:
Eye/Face Protection: Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact.
Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: Teflon
Respiratory Protection: Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate

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protection. Air-purifying respirators are not recommended due to potential olfactory fatigue.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
Diethyl Sulfide	CPCHEM	Not Established	NA	NA	NA
Related Materials	ACGIH	Not Established	NA	NA	NA

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear liquid with pungent, garlic-like odor.
Autoignition: NDA
Boiling Point: 92°C (197.6°F)
Density: 0.843 g/ml @ 15.6 °C (60°F)
Evaporation Rate: NDA
Flammability (Explosive) Limits (% by volume in air): **Lower:** NDA **Upper:** NDA
Flashpoint: -10°C (14°F)
Molecular Formula: C4H10S
Molecular Weight: 90.18 g/mol
Melting Point: NDA
Octanol / Water Partition Coefficient: log-Kow: NDA
pH: NDA
Pour Point: NDA
Solubility (in water): Negligible
Specific Gravity: 0.843 @ 15.6 °C (60°F)
Vapor Pressure: 67 mbar @ 20 °C (68°F)
Vapor Density (AIR=1): 3.1
Viscosity: NDA
Percent Volatile: 100 % volume

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid: heat, sparks, fire, and oxidizing agents.
Incompatibility With Other Materials: No data available
Hazardous Decomposition Products: Carbon Oxides, Sulfur Oxides.
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS:

Acute Oral Toxicity: LD50 / 3415 mg/kg
Acute Dermal Toxicity: LD50 / > 2000 mg/kg
Acute Inhalation Toxicity: LC50 / rat / > 17.9 mg/l / 4 hour(s)

Eye Irritation: Diethyl Sulfide: May cause eye irritation.
Skin Irritation: Diethyl Sulfide: May cause skin irritation.
Sensitization: Dermal - not a sensitizer

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ADDITIONAL TOXICOLOGY INFORMATION:
The toxicological properties of this product have not been tested or have not been tested completely and its handling or use may be hazardous. EXERCISE DUE CARE.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY:
This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE:
The environmental fate of this material is not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition). Consult the appropriate domestic or international mode- specific and quantity- specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

Shipping Descriptions per regulatory authority.

US DOT
UN2375, Diethyl Sulfide , 3, II

ICAO / IATA
UN2375, Diethyl Sulfide , 3, II

IMO / IMDG
UN2375, Diethyl Sulfide, 3, II , (-10°C)

RID / ADR
UN2375, Diethyl Sulfide, 3, II, ADR

SECTION 15 REGULATORY INFORMATION

SARA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	NO
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

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REGULATORY LISTS SEARCHED:

01 = CA Prop 65	17 = FDA 178	33 = RCRA Waste Appendix VIII
02 = LA RTK	18 = FDA 179	34 = RCRA Waste D-List
03 = MA RTK	19 = FDA 180	35 = RCRA Waste P-List
04 = MN Hazardous Substance	20 = FDA 181	36 = RCRA Waste U-List
05 = NJ RTK	21 = FDA 182	37 = SARA Section 302
06 = PA RTK	22 = FDA 184	38 = SARA Section 313
07 = CAA Section 112 HAPs	23 = FDA 186	39 = TSCA 12 (b)
08 = CWA Section 307	24 = FDA 189	40 = TSCA Section 4
09 = CWA Section 311	25 = IARC Group 1	41 = TSCA Section 5(a)
10 = DOT Marine Pollutant	26 = IARC Group 2A	42 = TSCA Section 8(a) CAIR
11 = FDA 172	27 = IARC Group 2B	43 = TSCA Section 8(a) PAIR
12 = FDA 173	28 = IARC Group 3	44 = TSCA Section 8(d)
13 = FDA 174	29 = IARC Group 4	45 = WHIMS - IDL
14 = FDA 175	30 = NTP Carcinogen	46 = Germany D TAL
15 = FDA 176	31 = OSHA Carcinogen	47 = Germany WKG
16 = FDA 177	32 = OSHA Highly Hazardous	48 = DEA List 1
		49 = DEA List 2

The following components of this material are found on the regulatory lists indicated.

Diethyl Sulfide 5, 45

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids

CHEMICAL INVENTORY LISTINGS:

AUSTRALIA	YES (AUS)
CANADA	YES (DSL)
CHINA	YES (IECSC)
EUROPEAN UNION	YES (EINECS)
JAPAN	NO (ENCS)
KOREA	YES (ECL)
PHILIPPINES	YES (PICCS)
UNITED STATES	YES (TSCA)

EU LABELING:

Danger

Symbols:

Xn - Harmful F - Flammable

Risk and Safety Phrases:

R11: Highly flammable.

R65: Harmful: may cause lung damage if swallowed.

S51: Use only in well-ventilated areas.

S9: Keep container in a well-ventilated place.

S62: If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

S16: Keep away from sources of ignition - No smoking.

SECTION 16 OTHER INFORMATION

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NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0 Special: NA

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA).

REVISION STATEMENT: This MSDS was updated to include a GHS review.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	PEL	- Permissible Exposure Limit
ACGIH	- American Conference ofGovernment Industrial Hygienists	OSHA	- Occupational Safety & Health Administration
NIOSH	- National Institute for Occupational Safety & Health	NFPA	- National Fire Protection Agency
WHMIS	- Workplace Hazardous Materials Information System	IARC	- Intl. Agency for Research on Cancer
EINECS	- European Inventory ofexisting Commercial Chemical Substances	RCRA	- Resource Conservation Recovery Act
SARA	- Superfund Amendments and Reauthorization Act.	TSCA	- Toxic Substance Control Act
EC50	- Effective Concentration	LC50	- Lethal Concentration
LD50	- Lethal Dose	CAS	- Chemical Abstract Service
NDA	- No Data Available	NA	- Not Applicable
<=	- Less Than or Equal To	>=	- Greater Than or Equal To
CNS	- Central Nervous System	MAK	- Germany Maximum Concentration Values

This data sheet is prepared according to the latest adaptation of the EEC Guideline 67/548.
This data sheet is prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).
This data sheet is prepared according to the ANSI MSDS Standard (Z400.1).
This data sheet was prepared by EHS Product Stewardship Group, Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, The Woodlands, TX 77380.
This data sheet is prepared according to the Globally Harmonized System (GHS).

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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$$NaOH + Na_2S + 2NO \rightarrow 2NaO + NaNS + H_2O$$

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-67 **Date:** 1/30/09

CES Sales Representative: Jay

Requested Turnaround / Completion Date: asap

Customer Name: ConocoPhillips - Westlake, LA

Generator Name and Location: same

Ultimate Objective for Performing Analysis: caustic eval for NaSH production process and pricing

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Spent Caustic from LPG Unit

quantity: ~4 loads / day

D-1.18

Provide a detailed Composition to the best of your knowledge: CONTAINS H2O SOLUBLE SULFIDE

Component / Approximate Percentage or PPM:

NaOH	5-10%		
Na_2S	5-10%		
Na_2CO_3	2-5%		

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids**___	**Percent Oil**___
Specific Gravity___	**Chlor-d-tect (oil phase)**___	**pH**___
Phenols___	**Oil and Grease (water phase)**___	**TOC**___
Distillation Test___	**Metals**___	**Flash**___
GC/MS___	**Chlor-n-oil (oil phase)**___	**Centrifuge Test**___

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	**Black Oil Suitability**___	**Viscosity**___
Specific Gravity___	**Light End Suitability**___	**Distillation Test**___
Flash___	**CES Fuel Suitability**___	**Hydro-scout**___
Chlor-d-tect___	**Color**___	**Chlor-n-oil**___
Water by Distillation___	**Water Extractability**___	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide X	**Specific Gravity** X	**Sulfides** X
Percent Sodium Hydroxide X	**Chlorides** X	**Sodium** X
Percent Solids by Centrifuge X	**Oil by Centrifuge**___	**TOC** X

Other Internal Lab Analysis (List) Suitability for NaSH production

Off-site Lab Analysis (List)_____

*****Note: Must have an approved P.O. for any external lab analysis*****

Cl^- & K^+ DOES NOT APPLY IF THIS IS A FEED.

Material Safety Data Sheet

SPENT CAUSTIC

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

SPENT CAUSTIC

MSDS Code: MISC0005 Revised: 03-Nov-2000

Synonyms: Mixed Spent Acid Oil Caustic and Spent Sulfidic Caustic

MANUFACTURER/DISTRIBUTOR

Conoco Inc.
P.O. Box 2197
Houston, TX 77252

PHONE NUMBERS

Product Information: 1-281-293-5550
Transport Emergency: CHEMTREC 1-800-424-9300 (U.S. & Canada)
Medical Emergency: 1-800-342-5119 or 1-281-493-2767

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Cresylics		0-40
Sodium Hydroxide	1310-73-2	0-20
Sodium Sulfide	1313-82-2	0-20
Sodium Bisulfide	16721-80-5	0-3
Hydrogen Sulfide Gas (Hydrogen sulfide gas released only if material is acidified or burned.)	7783-06-4	<1

3. HAZARDS IDENTIFICATION

Potential Health Effects

Primary Routes of Exposure/Entry: Skin, inhalation, eyes.

Sodium hydroxide and cresylics are contact irritants and can be corrosive to all tissues. This product may contain sodium sulfide and possibly hydrogen sulfide gas (if material is acidified); these chemicals are irritating at low concentrations to the eyes, skin, and respiratory tract; at higher concentrations, respiratory paralysis and death may occur.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

4. FIRST AID MEASURES

First Aid

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash point is variable and could be as low as Class IA Flammable Liquid.

Hazardous gases/vapors produced in fire are sulfides and hydrogen sulfide.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Use water to keep fire-exposed containers cool. If leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for personnel attempting to stop a leak. Water spray may be used to flush spills away from exposures.

Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Avoid contact with acids, hydrogen sulfide can be released.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Recover free liquid for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

7. HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

Storage

Store in accordance with National Fire Protection Association recommendations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Ventilation: Normal ventilation; mechanical ventilation in confined spaces.

Personal Protective Equipment

Respiratory Protection: Use NIOSH-approved full face, air-supplied respirator or self-contained breathing equipment if airborne concentrations may exceed permissible levels.

Protective Gloves: Should be worn when any potential exists for skin contact. Neoprene, Buna-N or butyl rubber gloves.

Eye Protection: Face shield recommended where splashing can occur.

Other Protective Equipment: Coveralls and impervious rubber boots. Impervious protective clothing, such as aprons or suits should be worn if splashing is possible.

Safety shower and eyewash facilities should be immediately accessible.

Applicable Exposure Limits

Sodium Hydroxide

PEL	(OSHA)	: 2 mg/m3, 8 Hr. TWA
TLV	(ACGIH)	: 2 mg/m3, Ceiling

Hydrogen Sulfide Gas

PEL	(OSHA)	: 20 ppm, Ceiling 50 ppm - 10 Min. Max.
TLV	(ACGIH)	: 10 ppm, 8 Hr. TWA STEL 15 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	: >200 F (>93 C)
Vapor Pressure	: >0.1 mm Hg
Vapor Density	: >1 (Air = 1)
% Volatiles	: (by volume) <1.0
Solubility in Water	: >90%
Form	: Liquid
Color	: Clear, colorless
Odor	: May have slight rotten egg odor and/or cresylic/phenolic odor.
Specific Gravity	: 1.03-1.04 (Water = 1)

10. STABILITY AND REACTIVITY

Chemical Stability

Reacts with oxidizers, acids.

Incompatibility with Other Materials

Incompatible with oxidizers, acids.

Decomposition

Sulfides and hydrogen sulfide evolve when mixed with acid or burned. Cresylic acid may be released when mixed with acid.

Polymerization

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Animal Data

The odor threshold of H2S is 0.3-8 ppb. The rat median lethal concentration is approximately 4400 ppm (4hrs). Rats exposed 90 days (6-hrs/day) to 10-80 ppm H2S had a decrease in weight gain (only at 30-80 ppm) and nasal irritation. H2S is not considered a cumulative toxin since it is rapidly detoxified. Newborn rats, born from females exposed to 10-80 ppm H2S (90 days; 6-hrs/day), showed no reproductive or behavioral, neurological effects.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

No specific aquatic information available for this material.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

If disposed, material is likely to be regulated as a corrosive and/or reactive hazardous waste.

14. TRANSPORTATION INFORMATION

Shipping Information

DOT

Proper Shipping Name	: Corrosive liquid, basic, organic, n.o.s. (sodium cresylate and sodium hydroxide)
Hazard Class	: 8
I.D. No. (UN/NA)	: UN3267
DOT Label(s)	: Corrosive
DOT Placard	: Corrosive

IMO

Proper Shipping Name	: Corrosive liquid, basic, organic, n.o.s. (sodium cresylate and sodium hydroxide)

Hazard Class : 8
UN No. : UN3267
Packing Group : II
IMO Label : Corrosive

ICAO

Same as IMO.

NOTE : Suggest "KEEP AWAY FROM ACIDS" following description.

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15. REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD DETERMINATION
This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA
The material contains the following hazardous substance(s) which, when released in quantities equal to or exceeding the Reportable quantity, triggers National Response Center notification requirements (1-800-424-8802).

Hazardous Substance : Sodium hydroxide (RQ 1000 lbs)

SARA, TITLE III, 302/304
This material is not known to contain extremely hazardous substances at greater than 1.0% concentrations; however, it is possible that this material may contain extremely hazardous substances at a lower concentration so that a large enough spill could warrant an Emergency Release Report under Section 304.

SARA, TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312
Acute : Yes
Chronic : No
Fire : Yes
Reactivity : No
Pressure : No

SARA, TITLE III, 313
This material is not known to contain any chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to release reporting requirements.

TSCA
This material is a mixture as defined by TSCA. The chemical ingredients in this material are in the Section 8(b) Chemical Substances Inventory (40 CFR 710) and/or are otherwise in compliance with TSCA. In the case of ingredients obtained from other manufacturers, Conoco relies on the assurance of responsible third parties in providing this statement.

RCRA
This material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it

could be considered hazardous if it meets criteria for being toxic, corrosive, ignitable, or reactive according to U.S. definitions (40 CFR 261). This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If it is a hazardous waste, regulations 40 CFR 262-266 and 268 may apply.

CLEAN WATER ACT
The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient(s) : Sodium hydroxide (RQ 1000 lbs)

State Regulations (U.S.)

CALIFORNIA "PROP 65"
This material is not known to contain any ingredient(s) subject to the Act.

---

16. OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating

Health	: 1
Flammability	: 3
Reactivity	: 0

NPCA-HMIS Rating

Health	: 3
Flammability	: 3
Reactivity	: 0

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Administrator
Address : Conoco Inc.
PO Box 2197
Houston, TX 77252
Telephone : 281-293-5550

# Indicates updated section.

End of MSDS

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-69(a,b,c) **Date:** 1/30/09

CES Sales Representative: Jay (& Shannon)

Requested Turnaround / Completion Date: std

Customer Name: Envirosolutions (and Petroleum Express)

Generator Name and Location: same

Ultimate Objective for Performing Analysis: pricing / payment

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

a- base oil, QPM-2025 c, line flush QPM 2027

b- mineral oil, QPM 2026

quantity 2 loads each (a,b,c)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**____
Phenols____	**Oil and Grease (water phase)**___	**TOC**____
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: 40°C

Ash____	**Black Oil Suitability**____	**Viscosity** X
Specific Gravity X	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout** X
Chlor-d-tect____	**Color** X	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability** NA	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

2:53:27
3:06:08

6:08
6:33
12:41
720+41=

761 x
80

2:01:14
2:08:21
7:7
427 sec
45
cst

12:20:20 } 85
12:21:45 }

12:22:03 } 86
12:23:29 }

Q_{40} = .10523 cfs

Waste Totes

Tote #	Approx. Quantity (Gallons)	Likely Contents
2	300	olefin X 0209-56
3	300	olefin X 0209-57
4	150	~~old diesel~~
6	200	hexane, kerosene X 0209-58
9	250	olefin X 0209-59
7	200	~~slurry/olefin~~ X - SOLID
10	150	~~slurry/olefin~~ X - SOLID
15	100	old gel X 0209-60
16	150	hexane X 0209-61
20	250	olefin X 0209-62
23	250	olefin/ticl2 X 0209-63
36	100	~~blue dye~~
37	200	~~slurry/olefin~~ X - SOLID (1.5" OF LIQUID ON TOP) 0209-64
38	200	olefin X 0209-65
~~40~~	250	~~olefin X~~
~~50~~	200	~~ticl2;hexane X~~
53	250	~~olefin X~~

1/27/2009
Dan Bopp

X Don't sample the Totes you sampled last time

X Verify the ones you sampled with Dan.

Otherwise sample all with the X

For: DAN

FLOW TECH

2/26/09

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-56A-D **Date:** 1/27/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: FLOW CHEM

Generator Name and Location: FLOW CHEM JAMES MUSE PKWY

Ultimate Objective for Performing Analysis: BRING IN WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC___
Distillation Test____	Metals____	Flash_X_
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) B.T.U.
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

	FLASH	BTU
A	<80	2290
B	<80	14155
C	>140	14376
D	<80	2863

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

"A" ACTUALLY BURNS, NOT FLASHES @ 180°F

$$\frac{.6499}{1} \times 11373 = \begin{array}{r} -10254 \\ 7391 \\ \hline \end{array} = 2863$$

56 C -

BENZOIC - $.4731 \times 11373 = \begin{array}{r} -19857 \\ 5381 \\ \hline 14376 \end{array}$

56 A

$.7242 \times 11373 = \begin{array}{r} 10,526 \\ 8236 \\ \hline 2290 \end{array}$

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-05 **Date:** 1-29-09

CES Sales Representative: Matt Bowman
Requested Turnaround / Completion Date: _____

Customer Name: CES-PACES
Generator Name and Location: _____
Ultimate Objective for Performing Analysis:
— To Find suitable tank @ KMTEX

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
— from oil water Seperator

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

90% oil	____/____
10% water	____/____
____/____	____/____
____/____	____/____
____/____	____/____

Soluble in Water
Very Odorous

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	Percent Solids_____	Percent Oil_____
Specific Gravity_____	Chlor-d-tect (oil phase)_____	pH ✓ 6
Phenols_____	Oil and Grease (water phase)_____	TOC_____
Distillation Test_____	Metals_____	Flash ✓ 100°-110°
GC/MS_____	Chlor-n-oil (oil phase)_____	Centrifuge Test_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	Black Oil Suitability_____	Viscosity_____
Specific Gravity_____	Light End Suitability_____	Distillation Test_____
Flash_____	CES Fuel Suitability_____	Hydro-scout_____
Chlor-d-tect_____	Color_____	Chlor-n-oil_____
Water by Distillation_____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	Specific Gravity_____	Sulfides_____
Percent Sodium Hydroxide_____	Chlorides_____	Sodium_____
Percent Solids by Centrifuge_____	Oil by Centrifuge_____	TOC_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Sodium
Potassium
Total Chlorides
ASN
Zinc
Iron
BTU

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-59 **Date:** 1-27-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: 1-29-09

Customer Name: Rineco
Generator Name and Location: NuStar Terminals VGO Water
Ultimate Objective for Performing Analysis: disposal or recycle at CES

Estimated Volume: 3 tankers / year

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
washout of storage tanks last containg VGO (gas oil)

TREAT GENERATES LOTS OF SOLIDS - ~40%

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

THE CHUNKS OF WAX? WILL GO TO A SLUDGE BOX.

water/95%	____/____
Map Gas Oil/0-5%	____/____
Paraffin oil/1-5%	____/____
Propylene Glycol/1-5%	____/____
____/____	____/____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**X	**Percent Oil**X
Specific Gravity____	**Chlor-d-tect (oil phase)** 2000	**pH** ~7
Phenols ~ 0	**Oil and Grease (water phase)**____	**TOC**X ~ 6749
Distillation Test____	**Metals**X	**Flash**X
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List) RECYCLABILITY?
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**X	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Ni .234
Zn .077
Cu - .062

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides** Cd .043
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____ Cr - 0.00

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: NuStar Terminals Partners TX L.P.
Address: Texas City Terminal #1., 201 Main Dock Road, P. O. Box 3608
City: Texas City **State:** TX **Zip:** 77592
Contact: Bob Hill **Title:** HSE Specialist
Phone Number: 409-948-8254 **Fax Number:** 409-948-4460
24/hr Phone Number: 281-750-1486
US EPA ID No: TXD096036561
State ID No: 31060 **SIC Code:** 5171

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: VGO Water
Detailed Description of Process Generating Waste:

washing out of storage tanks

Physical State: ☑ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: varies **Odor:** mild

Specific Gravity (water=1): 1 **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No

Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ Single-phase ☑ Multi-phase

Container Type: ☐ Drum ☐ Tote ☑ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☐ Monthly ☑ Yearly ☐ One-Time
Quantity: 3 tankers

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☑ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes: _____

Texas State Waste Code Number: 00061021

Proper US DOT Shipping Name: Non Regulated Material

Class: _____ **UN/NA:** _____ **PG:** _____ **RQ:** _____

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
	4-10	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Water	95	%
Map Gas Oil, Hydrodesulfurized Vacuum Light, cas#64742-87-6	0-5	%
Paraffin Oil	1-5	%
Propylene Glycol	1-5	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory : Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory : Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

☐ Interceptor wastes
☐ Off-specification fuels
☐ Underground storage remediation waste
☑ Tank clean-out from petroleum or oily sources
☐ Non-contact used glycols
☐ Aqueous and oil mixtures from parts cleaning operations
☐ Wastewater from oil bearing paint washes

***Organics Subcategory*: Subpart C**

☐ Landfill leachate
☐ Contaminated groundwater clean-up from non-petroleum sources
☐ Solvent-bearing wastes
☐ Off-specification organic product
☐ Still bottoms
☐ Byproduct waste glycol
☐ Wastewater from paint washes
☐ Wastewater from adhesives and/or epoxies formulation
☐ Wastewater from organic chemical product operations
☐ Tank clean-out from organic, non-petroleum sources

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory
☑ Oils Subcategory
☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 1/19/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-58 **Date:** 1-27-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: 1-29-09

Customer Name: Rineco
Generator Name and Location: ConocoPhillips Specialty - Extreme Power
Ultimate Objective for Performing Analysis: dipsoal or recycle at CES. Estimated volume is 1 truck per week.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
out of date/off spec material

Ni - .105
Zn - 0.00

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Sodium Lauryl Sulfate/1-2% ____/____
Alcohols, C12-14 Secondary Ethoxylated/2-6%
Ethylene Glycol/10-40%
Water/remainder
____/____ ____/____
____/____ ____/____

see msds profile attached

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater TreatabilityX	**Percent Solids**____	**Percent Oil**____
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH** = 4
Phenols = 0	**Oil and Grease (water phase)**____	**TOC**____ - 28,580
Distillation Test____	**Metals**____	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)glycol percentage
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: ConocoPhillips Specialty Products, Inc.
Address: 1331 Independence
City: Bryan **State:** TX **Zip:** 77803
Contact: John Devine **Title:** HSE Resource CSPI
Phone Number: 979-821-5429 **Fax Number:** 979-821-5432
24/hr Phone Number: 979-866-9181
US EPA ID No: TXR000011551
State ID No: 84350 **SIC Code:** 2899

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: Extreme Power
Detailed Description of Process Generating Waste:

Out of date/ Off Spec Material

Physical State: ☑ **Liquid** ☐ **Sludge** ☐ **Powder**
☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: varies **Odor:** mild

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No
Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☑ **Single-phase** ☐ **Multi-phase**

Container Type: ☐ **Drum** ☐ **Tote** ☑ **Truck** ☐ **Other (explain)**

Frequency: ☐ **Weekly** ☑ **Monthly** ☐ **Yearly** ☐ **One-Time**
Quantity: 40000 lbs

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☑ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)

Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011

Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No

If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: 10082071

Proper US DOT Shipping Name: Environmentally hazardous substances, liquid, n.o.s. (Ethylene Glycol)

Class: 9 **UN/NA:** UN3082 **PG :** III **RQ:**

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
141-200F	6.5-7.5	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Sodium Lauryl Sulfate	1-2	%
Alcohols, C12-14-Secondary, Ethoxylated	2-6	%
Ethylene Glycol	10-40	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package.

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals:
TCLP Volatiles:
TCLP Semi-Volatiles:
Reactivity:
Corrosivity:
Ignitability:

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☐ YES ☑ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory*: *Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory*: *Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

***Organics Subcategory*: Subpart C**

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☑ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☑ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☐ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 1/12/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date: _____	☐ Approved	☐ Rejected
Approval Number:		

ConocoPhillips

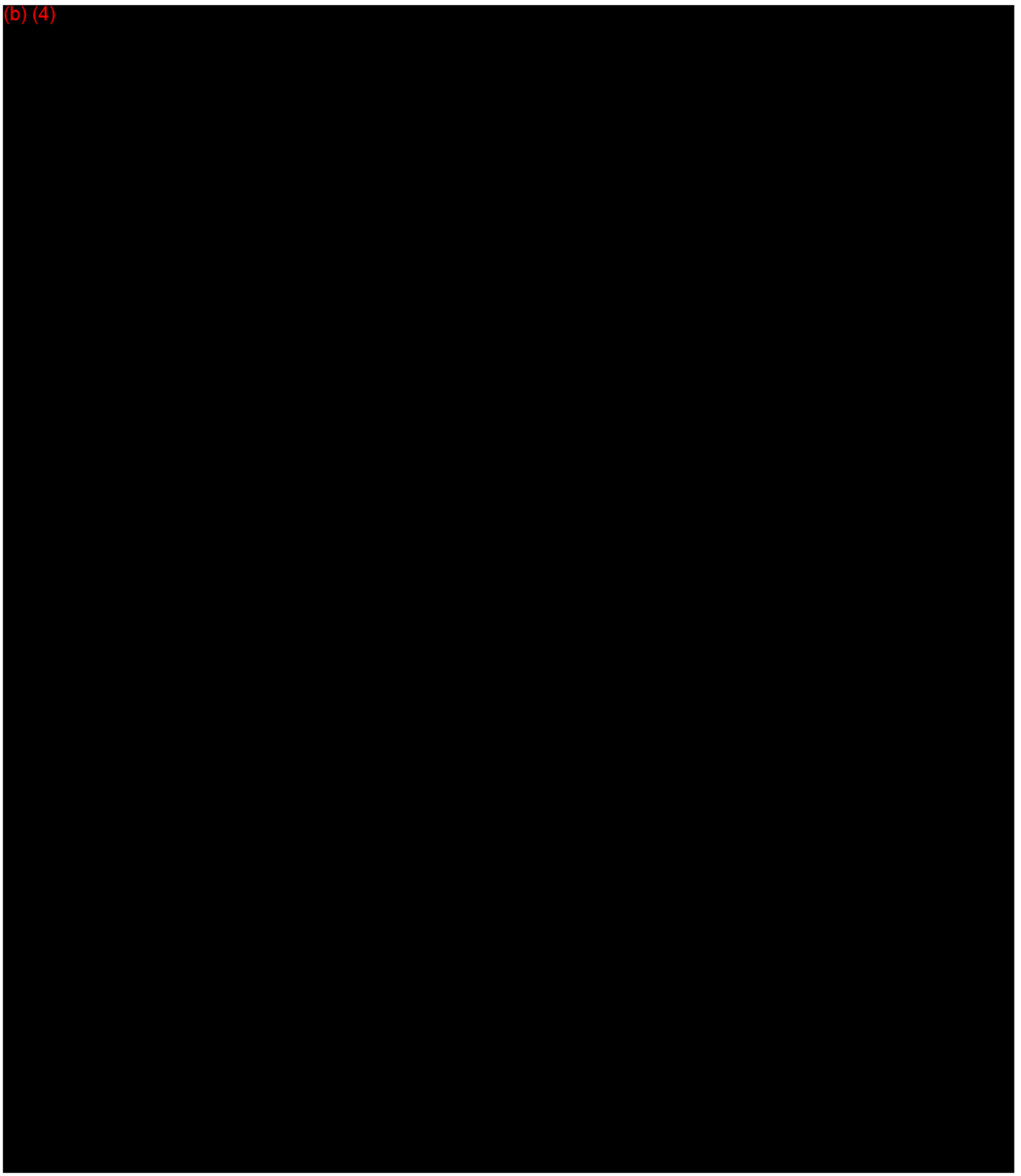
ExtremePower™

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

(b) (4)

[redacted]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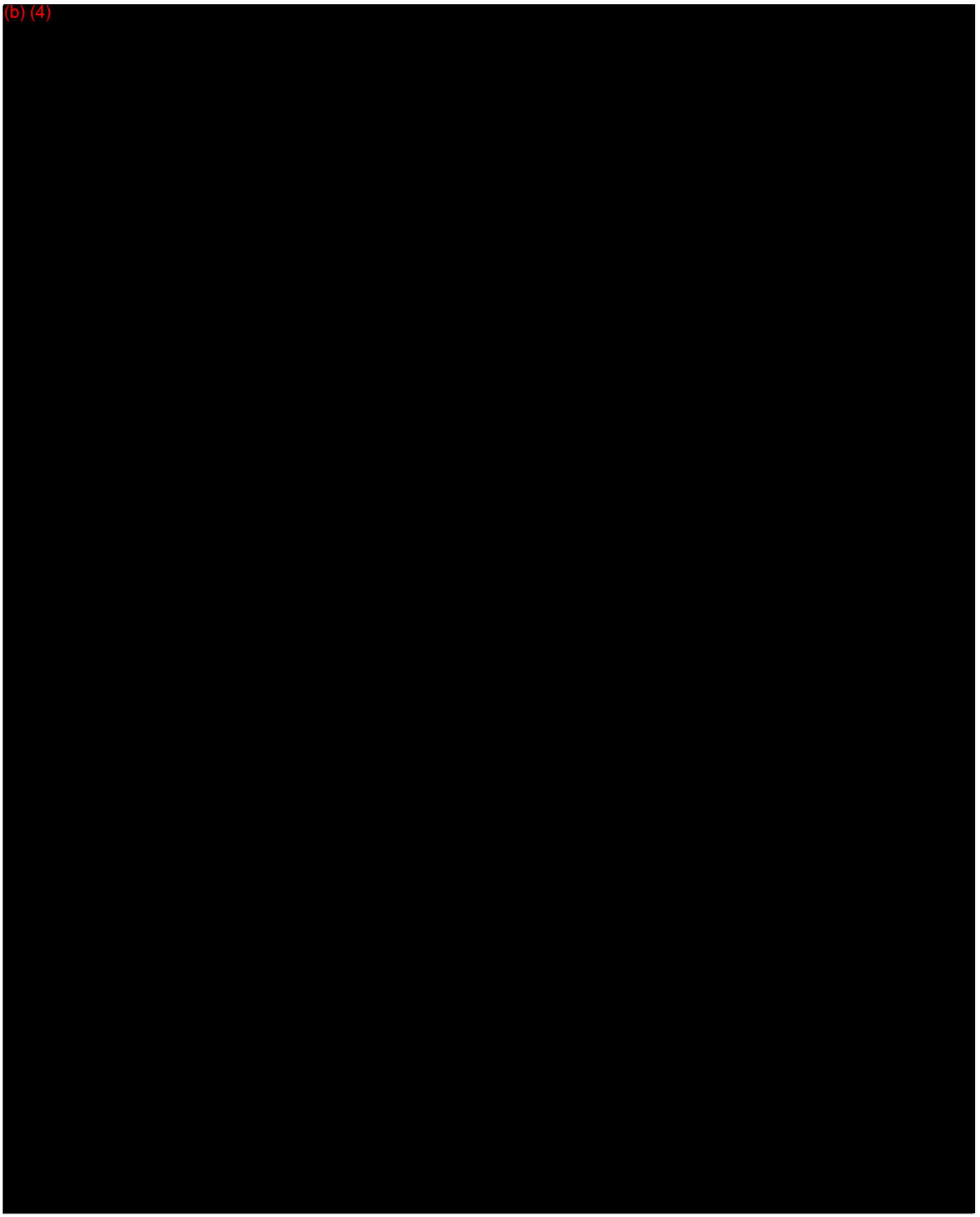
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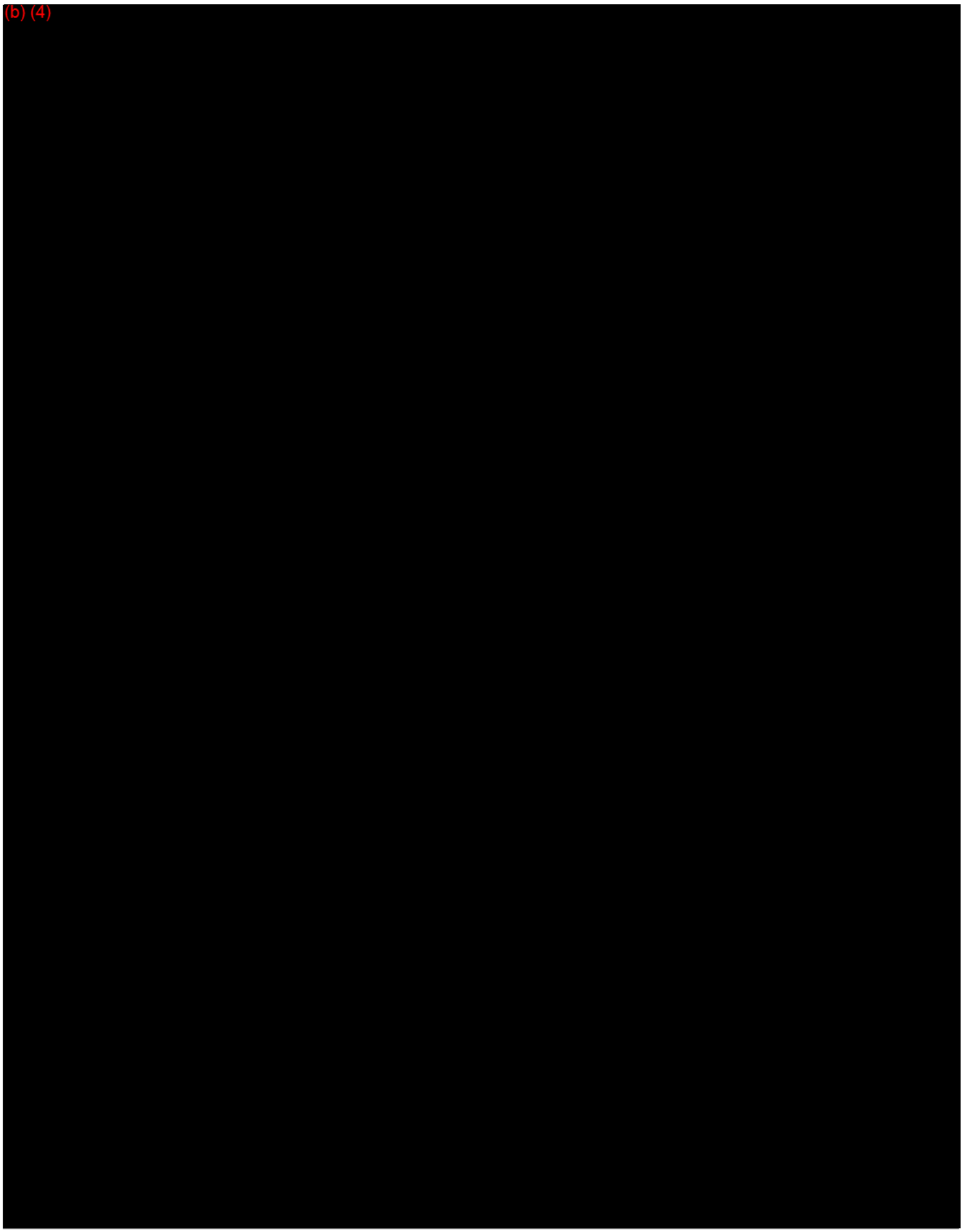
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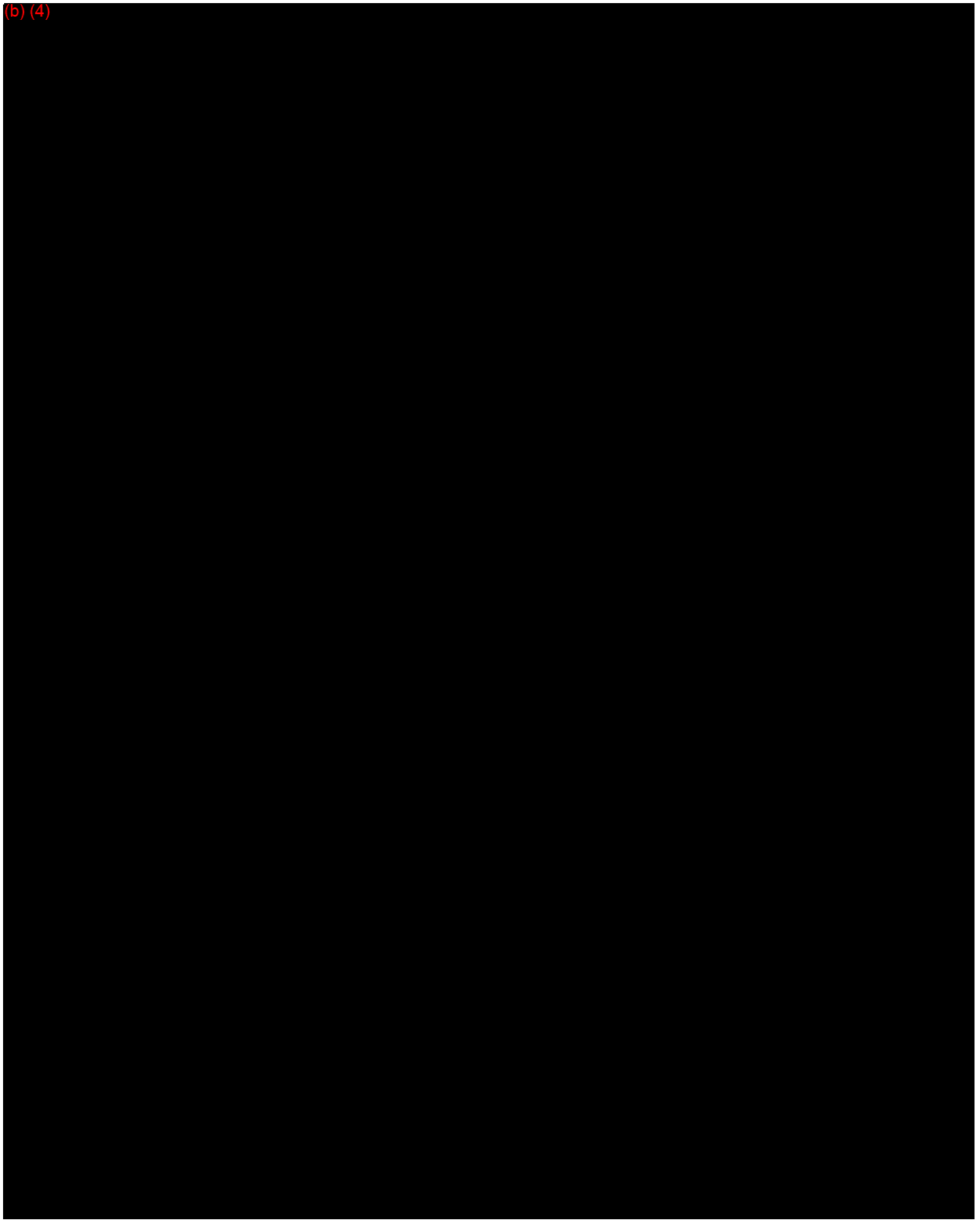


(b) (4)

CES Environmental Services, Inc.

D001

CES SAMPLE EVALUATION FORM

Sample ID # 0109-54 **Date:** 1-26-09

CES Sales Representative: DC

Requested Turnaround / Completion Date: ASAP!

Customer Name: Pineco

Generator Name and Location: Toyota Plant

Ultimate Objective for Performing Analysis: disposal @ CES

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Generated through painting
550 gal totes / 5 totes/month
may increase possible 5000 gal/wk (25 totes/month)

Provide a detailed Composition to the best of your knowledge:

Component / Approximate Percentage or PPM:

See attached profile	/		/
	/		/
	/		/
	/		/

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids___	Percent Oil___
Specific Gravity___ Lots of Solids	Chlor-d-tect (oil phase)___	pH - 8.9
Phenols___ - 0	Oil and Grease (water phase)___	TOC X - 12,340
Distillation Test___	Metals___	Flash X - 135-140
GC/MS___	Chlor-n-oil (oil phase)___	Centrifuge Test___

Other Internal Analysis (List) Amount of dilution needed to remove flash

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash___	Black Oil Suitability___	Viscosity___
Specific Gravity___	Light End Suitability___	Distillation Test___
Flash___	CES Fuel Suitability___	Hydro-scout___
Chlor-d-tect___	Color___	Chlor-n-oil___
Water by Distillation___	Water Extractability___	

Other Internal Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Ni .482
Zn .291
Cu .548
Cd .052
Cr .000

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide___	Specific Gravity___	Sulfides___
Percent Sodium Hydroxide___	Chlorides___	Sodium___
Percent Solids by Centrifuge___	Oil by Centrifuge___	TOC___

Other Internal Lab Analysis (List)___

Off-site Lab Analysis (List)___

Note: Must have an approved P.O. for any external lab analysis

Solids - 8%

Profile No. 73610
Profile Vers. No. 0

WASTE CHARACTERIZATION WORKSHEET

Customer Reference # WCW # 75252

SECTION A GENERATOR INFORMATION

Name TOYOTA MOTOR MFG TEXAS INC
Address 1 LONE STAR PASS

City SAN ANTONIO
State TX ZIP 78264
Contact MICHAEL JASKOWIAK @ RINECO
Title ENVIRONMENTAL SPECIALIST
Phone Fax
Mobile
E-Mail
EPAID TXR000061226
State ID 87601
SIC Code 3711 NESHAP Yes [ ] No [X]
NAIC Code 336211

State Waste Code UNIV209H

BILLING INFORMATION

Sales Representative M. JASKOWIAK @ RINECO
Name TOYOTA MOTOR MFG TEXAS INC
Address 1 LONE STAR PASS

Mail Stop
City SAN ANTONIO
State TX ZIP 78264
Contact
Title
Phone Fax 210 263-4098
Mobile
E-Mail

MANIFEST RETURN INFORMATION

Name TOYOTA MOTOR MFG TEXAS INC
Attention To CHARI QUIROZ
Address 1 LONE STAR PASS, MAIL CODE PE-TX

City SAN ANTONIO
State TX ZIP 78264-3413

IMPORTER OF RECORD

Name
Address

City
State ZIP
EPA ID #
State ID #

SECTION B WASTE INFORMATION

Form Code W209 PRS Houston UWC 15 Organic Liquids

Waste Name WATERBOURNE PAINTS & SOLVENTS
Description
Generating Process GENERATED THROUGH PAINTING
Source Code G06 Origin Code 1 One Time Only [ ] Yes [X] No Event [ ] Yes [X] No
Analysis Attached [ ] Yes [X] No Material Safety Data Sheet [X] Yes [ ] No Profile Sample Submitted [ ] Yes [X] No
Annual Generation Quantity 0.00 Annual Generation UOM [ ] #'s [ ] Gallons [ ] Drums [ ] Tons [ ] Other
Shipping Frequency [ ] Daily [ ] Weekly [ ] Bi-Weekly [ ] Monthly [ ] Bi-Monthly [ ] Quarterly [ ] Yearly [ ] One Time Other
Shipping Container Type [ ] Bulk [X] Container [ ] Both Shipping Container Type
Special Handling Instructions *INCIN ONLY**

SECTION C PHYSICAL CHARACTERISTICS

Physical State @ 70 F [ ] Gas [X] Liquid [ ] Sludge [ ] Solid [ ] Debris [ ] Monolithic [ ] Lab Pack
Layers [ ] Single Phase [X] Bi-Layered [ ] Multi-Layered - Describe Layers LIQUID/SLUDGE
Odor [ ] None [X] Mild [ ] Strong - Describe Odor CHARACTERISTIC
Free Liquids [ ] None [X] Yes Liquid Range 99.00 % - 100.00 Solid Range 0.00 % - 10.00
Specific Gravity [ ] < 0.8 [ ] 0.8 - 1.0 [X] 1.0 - 1.2 [ ] > 1.2 Actual 0.00
Flash Point [ ] < 73F [ ] 73 - 100F [X] 101 - 140F [ ] 141 - 200F [ ] > 200F Actual 0.0000
Flash Test Method [X] MSDS [ ] Generator Knowledge [ ] Open Cup [ ] Closed Cup [ ] None
pH [ ] <= 2.0 [ ] 2.1 - 5.9 [X] 6.0 - 8.0 [ ] 8.1 - 12.4 [ ] >= 12.05 Actual pH 0.00
Color Appearance
Shock Sensitive [ ] Yes [X] No Water Reactive [ ] Yes [X] No
Fuel Characteristics Min. BTU's/# 0 Min. Halogens 0.00 Min. Water % 0.00 [ ] Heated Material (>140 F)
Max. BTU's/# 5000 Max. Halogens 0.00 Max. Water % 70.00

WASTE CHARACTERIZATION WORKSHEET

SECTION D CHEMICAL COMPOSITION

Metal	Code	Non-Reg (TCLP)		TCLP		Total		Analysis	Generator Knowledge
Arsenic	(D004)	X	< 5 ppm		ppm		ppm		X
Barium	(D005)		< 100 ppm	>100	ppm		ppm		X
Cadmium	(D006)	X	< 1 ppm		ppm		ppm		X
Chromium	(D007)	X	< 5 ppm		ppm		ppm		X
Mercury	(D009)	X	< 0.2 ppm		ppm		ppm		X
Lead	(D008)	X	< 5 ppm		ppm		ppm		X
Selenium	(D010)	X	< 1 ppm		ppm		ppm		X
Silver	(D011)	X	< 5 ppm		ppm		ppm		X
Thallium							ppm		X
Sulfur							ppm		X
Copper							ppm		X
Zinc							ppm		X
Nickel							ppm		X

Toxics	None	Actual		Analysis	Generator Knowledge	Toxics	None	Actual		Analysis	Generator Knowledge
PCB's	X		ppm		X	Quinones	X		ppm		X
Dioxins	X		ppm		X	Ammonia	X		ppm		X
Herbicides	X		ppm		X	Phosphorous	X		ppm		X
HOCs	X		ppm		X	Cyanides:					
Aromatic Amines	X		ppm		X	Reactive	X		ppm		X
Pesticides	X		ppm		X	Amenable	X		ppm		X
Fungicides	X		ppm		X	Total	X		ppm		X
Urea / Thiourea	X		ppm		X	Sulfides:					
Phenols	X		ppm		X	Reactive	X		ppm		X
TOCs	X		ppm		X	Total	X		ppm		X
VOCs	X		ppm		X						

Chemical Composition

CAS Number	Characteristic Organics	Chemical Name	Minimum	Maximum
7732185		Water	0.00	70.00
		T-400 SOLVENT CONTAINING THE FOLLOWING	0.00	100.00
111762		2-Butoxyethanol (Ethylene Glycol Monobutyl Ether)	0.00	0.00
108010		Dimethylethanolamine	0.00	0.00
		WATERBORNE PAINTS CONTAINING THE FOLLOWING	0.00	100.00
7727437		Barium Sulfate	0.00	0.00
71363		n-Butyl alcohol	0.00	0.00
67561		Methanol	0.00	0.00
64175		Ethyl Alcohol	0.00	0.00
25551137		Trimethylbenzene	0.00	0.00
50000		Formaldehyde	0.00	0.00
		SOLVENT NAPHTHA	0.00	0.00
872504		N-Methyl-2-pyrrolidone	0.00	0.00
		DK GREY JWPT8110 CONTAINING THE FOLLOWING	0.00	100.00
7727437		Barium Sulfate	0.00	0.00
14807966		talc (no asbestos)	0.00	0.00
		BLOCKED POLYISOCYANATE HARDENER PROPRIETARY	0.00	0.00
		BLOCKED POLYISOCYANATE-PROPRIETARY	0.00	0.00
13463677		Titanium Dioxide	0.00	0.00
104767		2-Ethylhexanol	0.00	0.00
		1,4-DIISOBUTYL-1,4-DIEMTHYLBUTYNEDIOL CAS#126-86-3	0.00	0.00
78831		Isobutyl Alcohol	0.00	0.00
34590948		Dipropylene Glycol Monomethyl Ether	0.00	0.00
1333864		carbon black	0.00	0.00

WASTE CHARACTERIZATION WORKSHEET

872504	N-Methyl-2-pyrrolidone	0.00	0.00
	AR 2000 3 L5 CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
1559359	2-(2-Ethylhexyloxy)Ethanol	0.00	0.00
	POLYOXYPROPYLENE GLYCOL CAS#25322-69-4	0.00	0.00
9014851	Ethoxylated-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	0.00	0.00
	DIPROPYLENEGLYCOL METHYL ETHER, CAS#20324-32-7	0.00	0.00
50000	Formaldehyde	0.00	0.00
	AR2000 1D6 CONTAINING	0.00	100.00
1559359	2-(2-Ethylhexyloxy)Ethanol	0.00	0.00
7429905	Aluminum	0.00	0.00
104767	2-Ethylhexanol	0.00	0.00
	POLYOXYPROPYLENE GLYCOL CAS#25322-69-4	0.00	0.00
9014851	Ethoxylated-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	0.00	0.00
8052413	Stoddard Solvent	0.00	0.00
50000	Formaldehyde	0.00	0.00
	AR2000 1F9 CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
1559359	2-(2-Ethylhexyloxy)Ethanol	0.00	0.00
	POLYOXYPROPYLENE GLYCOL CAS#25322-69-4	0.00	0.00
9014851	Ethoxylated-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	0.00	0.00
50000	Formaldehyde	0.00	0.00
	AR2000 040 CONTAINING	0.00	100.00
1559359	2-(2-Ethylhexyloxy)Ethanol	0.00	0.00
104767	2-Ethylhexanol	0.00	0.00
	POLYOXYPROPYLENE GLYCOL CAS#25322-69-4	0.00	0.00
9014851	Ethoxylated-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	0.00	0.00
	DIPROPYLENEGLYCOL METHYL ETHER, CAS#20324-32-7	0.00	0.00
50000	Formaldehyde	0.00	0.00
	AR2000 #8S6 CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
1559359	2-(2-Ethylhexyloxy)Ethanol	0.00	0.00
	POLYOXYPROPYLENE GLYCOL CAS#25322-69-4	0.00	0.00
9014851	Ethoxylated-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	0.00	0.00
8052413	Stoddard Solvent	0.00	0.00
50000	Formaldehyde	0.00	0.00
	JWBT202X (0806)	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
7727437	Barium Sulfate	0.00	0.00
71363	n-Butyl alcohol	0.00	0.00
1569013	propylene glycol monopropyl ether	0.00	0.00
1333864	carbon black	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
50000	Formaldehyde	0.00	0.00
	JWBT3Q3X (0806) CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
1569013	propylene glycol monopropyl ether	0.00	0.00
71363	n-Butyl alcohol	0.00	0.00
12001262	mica	0.00	0.00
872504	methyl-2-pyrrolidone, n-	0.00	0.00
1333864	carbon black	0.00	0.00
50000	Formaldehyde	0.00	0.00
	JWBT453X (0806) CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
7727437	Barium Sulfate	0.00	0.00
71363	n-Butyl alcohol	0.00	0.00
1569013	propylene glycol monopropyl ether	0.00	0.00
1333864	carbon black	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
50000	Formaldehyde	0.00	0.00
	JWBT658X (0806) CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
7727437	Barium Sulfate	0.00	0.00
71363	n-Butyl alcohol	0.00	0.00
1569013	propylene glycol monopropyl ether	0.00	0.00

WASTE CHARACTERIZATION WORKSHEET

1333864	carbon black	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
50000	Formaldehyde	0.00	0.00
	JWBT8T7X (0806) CONTAINING	0.00	100.00
104767	2-Ethylhexanol	0.00	0.00
7727437	Barium Sulfate	0.00	0.00
1569013	propylene glycol monopropyl ether	0.00	0.00
71363	n-Butyl alcohol	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
50000	Formaldehyde	0.00	0.00
	TEX DK BROWN 456 B (PM) CONTAINING	0.00	100.00
34590948	Dipropylene Glycol Monomethyl Ether	0.00	0.00
	2-PROPANOL, 1-(2-BUTOXY-1-METHYLETHOXY)- CAS#29911-28-2	0.00	0.00
1333864	carbon black	0.00	0.00
	MWPT3801 (0019) CONTAINING	0.00	100.00
7727437	Barium Sulfate	0.00	0.00
	ETHYLENE GLYCOL MONOHEXYL ETHER, CAS#112-25-4	0.00	0.00
1333864	carbon black	0.00	0.00
67630	Isopropyl Alcohol	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
	MWPT803 (0019) CONTAINING	0.00	100.00
13463677	Titanium Dioxide	0.00	0.00
67630	Isopropyl Alcohol	0.00	0.00
	ETHYLENE GLYCOL MONOHEXYL ETHER, CAS#112-25-4	0.00	0.00
872504	N-Methyl-2-pyrrolidone	0.00	0.00
	1-BUTOXY-2-PROPANOL, CAS#5131-66-8	0.00	0.00
51796	Urethane	0.00	0.00
	BLACK OUT-WATER BASE WHEEL HOUSE CONTAINING	0.00	100.00
111762	2-Butoxyethanol (Ethylene Glycol Monobutyl Ether)	0.00	0.00
12141467	Aluminum Silicate	0.00	0.00
7727437	Barium Sulfate	0.00	0.00
1317653	calcium carbonate, respirable	0.00	0.00
1333864	carbon black	0.00	0.00
67641	acetone	0.00	80.00
	TRACE AMOUNTS OF OIL	0.00	.01

Refer Next Page for Section E,F,G

WASTE CHARACTERIZATION WORKSHEET

SECTION E TRANSPORTATION INFORMATION

D.O.T. Hazardous Material	X	Yes		No	Marine Hazardous		Yes	X	No	Inhalation Hazard	Yes X No
UN / NA #	UN1992										
DOT Shipping Name	Flammable liquids, toxic, n.o.s. (Barium Sulfate, acetone)										
Hazard Class	3	(6.1)	ERG	131	Packing Group		II			Reportable Quantity (RQ) in #'s	0.00
Transportation Comments											

SECTION F REGULATORY INFORMATION

USEPA Regulated Hazardous Waste?	Yes	X	No	Radioactive Waste?	Yes	X	No
State regulated waste?	Yes	X	No	Explosive Material?	Yes	X	No
Subject to Categorical Discharge Stnrds?	Yes	X	No	Waste Contains Friable Asbestos?	Yes	X	No
TSCA Regulated PCBs?	Yes	X	No	Waste Contains Non-Friable Asbestos?	Yes	X	No
CERCLA Cleanup Action Waste?	Yes	X	No	Waste Subject to Subpart CC Regulations?	Yes	X	No
Dioxin Bearing Waste per CFR 261.31?	Yes	X	No	Infectious or Medical Waste?	Yes	X	No

State Code(s) , UNIV209H
Additional Information

SECTION G LANDBAN INFORMATION

Waste Subject to Land Ban Restrictions?	Yes	X	No	Waste Water?	Wastewater	X	Non-wastewater
Does this waste meet definition of RCRA hazardous debris?	Yes	X	No	Land Disposal restriction notification attached?	Yes	X	No
Land Ban material meets federal treatment standards?	Yes	X	No				
				Is a UHC form required?	Yes	X	No

Form Completed By : _____ Date : 4/10/08

PSC Representative : _____ Date : _____

RINECO TECHNICAL SERVICES PROFILE SAMPLE ANALYTICAL

Date Received:	Date sample submitted to Lab:	Rineco Profile #:	LDMS Submission ID#:	Lab Receipt #:
12/23/08	1-5-09	0901- 00089	66398	0812-45

Generator Name:	City/State (or other location identifier):	LDMS Sheet:
TOYOTA		1652

Waste Name: WATERBOURNE PAINTS Y

Prior to testing submitted profile identified as: HAZARDOUS or NON HAZARDOUS

Lab Sample Code: SOLVENTS

	Results:	Comments:	Tech	Date
Physical Description:	Purple Liquid		TRC	1/5/09
BTU/lb (include % of sample):	—		TRC	〃
%Halogens:	—		〃	〃
%Water:	85.2%		〃	〃
Density (lb/gal):	8.74		BAG	1/5/09
Total Solids:	10.60%		TRC	1/5/09
Rocks/gravel (%, description, size estimate)	—			
Viscosity (cPs):	<150		BAG	1/5/09
pH: (if <3-enter % acidity)	9		〃	〃
Water Solubility:	very			
Water Compatability:(Comment required if failed)	pass			
Fuel Compatability:(Comment required if failed)	pass			
Cyanide: (if fail-enter reactive result below)	pass			
Reactive Cyanide Results:	N/A			
Sulfide: (if fail-enter reactive result below)	pass			
Reactive Sulfide Results:	N/A			
Oxidizer:	pass			
Peroxide:	pass		〃	〃
PCB Screen: (reporting limit 50 mg/kg)	ND		CAL	〃
Flammability:	N/A			
Flashpoint:	—			
Additional Testing for Waste Water Samples				
Total Suspended Solids	(ab) Too Thick Too Thick		TRC	1/5/09
Total Dissolved Solids	— —		—	—

P-Pass F-Fail ND-Not detected NA - Not applicable

Elements	Results mg/kg	Reporting Limit mg/kg
Antimony - Sb	<50	<50
Arsenic - As	<5	<5
Barium - Ba	5350 ~~<500~~	<500
Beryllium - BE	<1	<1
Cadmium - Cd	<5	<5
Chromium - Cr	<50	<50
Copper - Cu	28 <500	<500
Iron - Fe	<1000	<1000
Lead - Pb	<50	<50
Mercury - Hg	<0.5	<0.5
Nickel - Ni	<50	<50
Selenium - Se	<5	<5
Silver - Ag	<5	<5
Thallium - Tl	<5	<5
Zinc - Zn	<500	<500
Date of Analysis:	1/6/09	Tech: TRB

The data entered and results reported are correct.

Superintendent: [signature]

Date/Time: 1/6/09 11:19

This has been reviewed with regards to the profile.

Laboratory or Quality Director: [signature]

Date/Time: 1/6/09

This analytical does or does not reflect results expected from the profile.

Notes:

EPAHO113000756

RINECO TECHNICAL SERVICES PROFILE SAMPLE ANALYTICAL

Date Received:	Date sample submitted to Lab:	Rineco Profile #:	LDMS Submission. ID#:	Lab Receipt #:
12-23-08	1-5-09	0901-00089	66319	0812-46

Generator Name:	City/State (or other location identifier)	LDMS SLS#:
TOYOTA		9653

Waste Name: WATERBOURNE PAINTS + SOLVENTS

Prior to testing submitted profile identified as: ~~HAZARDOUS~~ or NON HAZARDOUS

Lab Sample Code:	Results:	Comments:	Tech	Date
Physical Description:	Purple liq		TMC	1/5/09
BTU/lb (include % of sample):	— 0		TMC	"
%Halogens:	—		"	"
%Water:	77.9 %		"	"
Density (lb/gal):	8.65		BAG	1/5/09
Total Solids:	10.34 %		TMC	1/5/09
Rocks/gravel (%, description, size estimate)	0			
Viscosity (cPs):	< 150		BAG	1/5/09
pH: (if <3-enter % acidity)	9.0			
Water Solubility:	very			
Water Compatability:(Comment required if failed)	pass			
Fuel Compatability:(Comment required if failed)	pass			
Cyanide: (if fail-enter reactive result below)	pass			
Reactive Cyanide Results:	N/A			
Sulfide: (if fail-enter reactive result below)	pass			
Reactive Sulfide Results:	N/A			
Oxidizer:	pass			
Peroxide:	pass		"	"
PCB Screen: (reporting limit 50 mg/kg)	ND		COLOR	"
Flammability:	N/A			
Flashpoint	"			
Additional Testing for Waste Water Samples				
Total Suspended Solids	TOO THICK		TMC	1/5/09
Total Dissolved Solids	"		"	"

P-Pass F-Fail ND-Not detected NA - Not applicable

Elements	Results: mg/kg	Reporting Limit: mg/kg
Antimony - Sb	< 50	<50
Arsenic - As	< 5	<5
Barium - Ba	4840	<500
Beryllium - BE	< 1	<1
Cadmium - Cd	< 5	<5
Chromium - Cr	< 50	<50
Copper - Cu	27 < 500	<500
Iron - Fe	< 1000	<1000
Lead - Pb	< 50	<50
Mercury - Hg	< 0.5	<0.5
Nickel - Ni	< 50	<50
Selenium - Se	< 5	<5
Silver - Ag	< 5	<5
Thallium - Tl	< 5	<5
Zinc - Zn	< 500	<500
Date of Analysis:	1/6/09	Tech: TRB

The data entered and results reported are correct.

Superintendent: T Hagee

Date/Time: 1/6/09 11:20

This has been reviewed with regards to the profile.

Laboratory or Quality Director: M Zimmer

Date/Time: 1/6/09

This analytical does or does not reflect results expected from the profile.

Notes:

EPAHO113000757

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-45/0109-46 **Date:** 1-22-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: _____

0109-46 - PRODUCES LOTS OF SOLIDS WHEN (~50%) TREATED SPUN DOWN

Customer Name: Southcoast Terminals
Generator Name and Location: Wallisville
Ultimate Objective for Performing Analysis:
treatability test and confirm that sample conforms to profile 1199

PHENOLS - O

TOC - 9503

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
washwater from cleaning trailers

Provide a detailed Composition to the best of your knowledge: 0109-45 IS OIL
Component / Approximate Percentage or PPM:

see profile /_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____
_____/_____ _____/_____

13,000 PPM

BLENDS WELL W/ BLACK OIL

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Ni - .835
Zn .900
Cu - .046
Cd .010
Cr 1.000

Wastewater TreatabilityX **Percent Solids**_____ **Percent Oil**_____
Specific Gravity_____ **Chlor-d-tect (oil phase)**_____ **pH**_____
Phenols_____ **Oil and Grease (water phase)**_____ **TOC**_____
Distillation Test_____ **Metals**X **Flash**_____
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-48 **Date:** 1-22-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: Monday Tuesday

Customer Name: Rineco
Generator Name and Location: Schlumberger North Campus - wash water containing zinc
Ultimate Objective for Performing Analysis: disposal at ces

_____

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
washing equipment
TRENTS OK - LARGE FLOC.

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

see attached profile/_____ _____/_____
_____/_____ _____/_____ Ni .182
_____/_____ _____/_____
_____/_____ _____/_____ Zn .110
_____/_____ _____/_____ Cu .000

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: Cd .056
Wastewater TreatabilityX **Percent Solids**_____ **Percent Oil**_____ Cr .260
Specific Gravity_____ **Chlor-d-tect (oil phase)**_____ **pH**X ~9 - 1746
PhenolsX – 0 **Oil and Grease (water phase)**_____ **TOC**X
Distillation Test_____ **Metals**X **Flash**_____
GC/MS_____ **Chlor-n-oil (oil phase)**_____ **Centrifuge Test**_____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:
Ash_____ **Black Oil Suitability**_____ **Viscosity**_____
Specific Gravity_____ **Light End Suitability**_____ **Distillation Test**_____
Flash_____ **CES Fuel Suitability**_____ **Hydro-scout**_____
Chlor-d-tect_____ **Color**_____ **Chlor-n-oil**_____
Water by Distillation_____ **Water Extractability**____
Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:
Percent Potassium Hydroxide_____ **Specific Gravity**_____ **Sulfides**_____
Percent Sodium Hydroxide_____ **Chlorides**_____ **Sodium**_____
Percent Solids by Centrifuge_____ **Oil by Centrifuge**_____ **TOC**_____
Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

0109-48

CES Environmental Services, Inc.
4904 Griggs Road Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit No: 30948
U.S. EPA ID No: TXD008950461 ISWR No: 30900

SECTION 1: Generator Information

Company:	Schlumberger Technology IPC - North		
Address:	555 Industrial Blvd, MD 21.		
City, State, Zip:	Sugar Land, TX, 77478		
Contact:	Virginia Jee	**Title:**	
Phone No:	281-285-4267	**Fax No:**	281-285-7784
24/hr Phone:	281-595-3518		
U.S. EPA I.D. No:	TXD089797799		
State I.D.	32572	**SIC Code:**	

SECTION 2: Billing Information – ☐ Same as Above

Company:	Rineco Chemical		
Address:	P.O. Box 729		
City, State, Zip:	Benton, AR, 72018		
Contact:	Angela Brown	**Title:**	Non-Fuels Chemist
Phone No:	800-377-4692	**Fax No:**	501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: Wash Water Containing Zinc
Detailed Description of Process Generating Waste: Washing Equipment

Physical State: ☒ **Liquid** ☐ **Sludge** ☐ **Powder** ☐ **Solid** ☐ **Filter Cake** ☐ **Combination**

Color: _____ **Odor:** mild

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Layers: ☒ **Single-phase** ☐ **Multi-phase**

Container Type:	☐ **Drum**	☐ **Tote**	☐ **Truck**	☒ **Other (explain)**
Container Size:	_____	_____	_____	vac tanker

Frequency: ☐ **Weekly** ☒ **Monthly** ☐ **Quarterly** ☐ **Yearly**
Number of Units (containers): 1 to 2 **Other:** _____
Texas State Waste Code No: 00321141
Proper U.S. DOT Shipping Name: Non Regulated Material
Class: _____ **UN/NA:** _____ **PG:** _____ **RQ:** _____

Flash Point _____	**pH** 4-10	**Reactive Sulfides** _____mg/l	**Reactive Cyanides** _____mg/l	**Solids** _____%
Oil&Grease _____mg/l	**TOC** _____mg/l	**Zinc** _____mg/l	**Copper** _____mg/l	**Nickel** _____mg/l

EPAHO113000760

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE The waste consists of the following materials	Concentration Ranges are acceptable	Units or %
Water	99	%
Zinc Sludge	1	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data, and/or analysis attached to this form as part of the waste approval package.
SAMPLE #0612-16632

SECTION 7: Incompatibilities

Please list all incompatibilities (if any):

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, WAS NOT PERFORMED based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Generator's Certification

The information contained herein is based on ☒ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** _____

Printed Name/Title: _____

CES USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer: _____ Additional Information: _____

Date: _____ Approved Rejected _____

Approval Number: _____ _____

EPAHO113000761

SECTION 10: Waste Receipt Classification Under 40 CFR 437

Is this material a wastewater or wastewater sludge? ☐ YES ☐ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources
- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

Organics Subcategory: Subpart C

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

EPAHO113000762

(1) If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2) If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3) If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

☐ Metals Subcategory

☐ Oils Subcategory

☐ Organics Subcategory

SECTION 11: Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

EPAHO113000763

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-49 **Date:** 1-22-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: Monday / Tuesday

Customer Name: Rineco
Generator Name and Location: Schlumberger North Campus Oily/Zinc Water Streams
Ultimate Objective for Performing Analysis: disposal at ces

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
water from cleaning equipment - and discarding water used during production

Provide a detailed Composition to the best of your knowledge: A FEW PARTICLES OF "STUFF" FLOATING ON TOP.
Component / Approximate Percentage or PPM:

see attached profile/____	____/____	____/____
____/____	____/____	Ni - .126
____/____	____/____	Zn - .293
____/____	____/____	Cu - .000
____/____	____/____	

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: Cd .042

Wastewater TreatabilityX	**Percent Solids**____	**Percent Oil**____ Cr .020
Specific Gravity____	**Chlor-d-tect (oil phase)**____	**pH**X - 7
PhenolsX – 0	**Oil and Grease (water phase)**____	**TOC**X - 9185
Distillation Test____	**Metals**X	**Flash**____
GC/MS____	**Chlor-n-oil (oil phase)**____	**Centrifuge Test**____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	**Black Oil Suitability**____	**Viscosity**____
Specific Gravity____	**Light End Suitability**____	**Distillation Test**____
Flash____	**CES Fuel Suitability**____	**Hydro-scout**____
Chlor-d-tect____	**Color**____	**Chlor-n-oil**____
Water by Distillation____	**Water Extractability**____	

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	**Specific Gravity**____	**Sulfides**____
Percent Sodium Hydroxide____	**Chlorides**____	**Sodium**____
Percent Solids by Centrifuge____	**Oil by Centrifuge**____	**TOC**____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.
4904 Griggs Road, Houston, TX 77021
Phone: (713) 676-1460 Fax: (713) 676-1676
http://www.cesenvironmental.com
TCEQ Industrial Solid Waste Permit Number: 30948
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900

SECTION 1: Generator Information

Company: Schlumberger Technology - North Campus
Address: 555 Industrial Blvd, MD 21
City: Sugar Land **State:** TX **Zip:** 77478
Contact: Virginia Jee **Title:**
Phone Number: 281-285-4267 **Fax Number:** 281-285-7784
24/hr Phone Number: 281-595-3518
US EPA ID No: TXD089797799
State ID No: 32572 **SIC Code:** 3357

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Rineco
Address: PO Box 729 - Haskell
City: Benton **State:** AR **Zip:** 72118
Contact: Douglas Highsmith **Title:** Non-Fuels Chemist
Phone Number: 800-377-4692 **Fax Number:** 501-778-8505

SECTION 3: General Description of the Waste

Name of Waste: Oily/Zinc Water Streams
Detailed Description of Process Generating Waste:

water from cleaning equipment - and discarding water used during production

Physical State: ☑ Liquid ☐ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: varies **Odor:** mild

Specific Gravity (water=1): _____ **Density:** _____ lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No
Answer "Yes" if your waste contains benzene **AND** if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ Single-phase ☑ Multi-phase

Container Type: ☐ Drum ☐ Tote ☑ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☑ Monthly ☐ Yearly ☐ One-Time
Quantity: 3000gal

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☑ No
If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number:

Proper US DOT Shipping Name: Non Regulated Material
Class: UN/NA: PG: RQ:

Flash Point	pH	Reactive Sulfides	Reactive Cyanides	Solids
>200	4-10	mg/l	mg/l	%
Oil & Grease	**TOC**	**Zinc**	**Copper**	**Nickel**
mg/l	mg/l	mg/l	mg/l	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Water	97-99	%
Zinc Sludge	0-1	%
N-Hexane Extractable Material	0-36	ppm
N-Hexane Extractable Material, Silica Gel Treated	0-25	ppm
Oil	0-3	%

SECTION 5: Safety Related Data

If the handling of this waste requires the use of special protective equipment, please explain.

_____

_____

_____

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. _____

_____

_____

SECTION 7: Incompatibilities

Please list ALL incompatibilities (if any):

_____

_____

_____

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge:

TCLP Metals: _____
TCLP Volatiles: _____
TCLP Semi-Volatiles: _____
Reactivity: _____
Corrosivity: _____
Ignitability: _____

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☑ YES ☐ NO
If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☑ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

***Organics Subcategory*: Subpart C**

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ Byproduct waste glycol
- ☐ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory.

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations in excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☑ Metals Subcategory
- ☐ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations. This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☑ generator knowledge and/or ☐ analytical data.
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of compostion properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: _____ **Date:** 1/23/2009

Printed Name/Title: Douglas Highsmith/Non-Fuels Chemist

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-47 **Date:** 1-22-09

CES Sales Representative: Dana C
Requested Turnaround / Completion Date: ASAP

Customer Name: Superbag Corp
Generator Name and Location: Houston
Ultimate Objective for Performing Analysis: check pH and odor - this waste will be put in class 1 liquids box

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
see profile attached

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

see profile /_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____
_____/_____	_____/_____

PH - 6
ODOR - ok

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability_____	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pHX**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC_____**
Distillation Test_____	**Metals_____**	**Flash_____**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List) Odor
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

CES Environmental Services, Inc.

☑ CES Environmental Services - Houston Facility	☐ CES Environmental Services - Port Arthur Facility
4004 Griggs Road, Houston, TX 77021	2420 S. Gulfway Dr., Port Arthur, TX 77641
Phone (713) 676-1460 Fax: (713) 676-1460	Phone (713) 676-1460 Fax: (713) 676-1460
U.S. EPA ID Number: TXD008950461 ISWR Number: 30900	U.S. EPA ID Number: TXR000079307 ISWR Number: 88165
TCEQ Industrial Solid Waste Permit Number: 30948	

SECTION 1: Generator Information

Company: Superbag Corp.
Address: 9291 Baythorne Dr.
City: Houston **State:** Tx. **Zip:** 77041
Contact: Salvador Olveda **Title:** Plant Manager
Phone Number: 713-462-1037 **Fax Number:** 713-690-7891
24/hr Phone Number:
US EPA ID No:
State ID No: **SIC Code:**

SECTION 2: Billing Information - ☐ **Same as Above**

Company: Superbag Corp.
Address: 9291 Baythorne Dr.
City: Houston **State:** Tx. **Zip:** 77041
Contact: Marilyn Pabon **Title:** Accounts Payable
Phone Number: 713-462-1037 **Fax Number:** 713-462-8145

SECTION 3: General Description of the Waste

Name of Waste: Used oil, ammonia water mixed with water based inks
Detailed Description of Process Generating Waste:

inks are used to print on plastic film, ammonia is used to dilute the inks, oil is replaced on various machine components

Physical State: ☑ Liquid ☑ Sludge ☐ Powder ☐ Solid ☐ Filter Cake ☐ Combination

Color: varies **Odor:** hydrocarbon

Specific Gravity (water=1): .9-1 **Density:** 8.3-8.34 lbs/gal

Does this material contain any total phenolic compounds? ☐ Yes ☑ No

Does this material contain any para substituted phenolic compounds? ☐ Yes ☑ No

Is the Waste subject to the benzene waste operation NESHAP? (40 CFR Part 61, Subpart FF) ☐ Yes ☑ No
Answer "Yes" if your waste contains benzene AND if the SIC code from your facility is one of the following:

2812	2813	2816	2819	2821	2822	2823	2824	2833	2834
2835	2836	2841	2842	2843	2844	2851	2861	2865	2869
2873	2874	2876	2879	2891	2892	2893	2896	2899	2911
3312	4953	4959	9511						

Layers: ☐ Single-phase ☑ Multi-phase

Container Type: ☑ Drum ☐ Tote ☐ Truck ☐ Other (explain)

Frequency: ☐ Weekly ☐ Monthly ☐ Yearly ☑ One-Time
Quantity: 40 drums

Is this a USEPA "Hazardous Waste" per 40CFR 261.3? ☐ Yes ☑ No

If "Yes", then please complete, sign and date the Underlying Hazardous Constituents Form attached hereto

If "Yes", Is it: ☐ D001 (Ignitable) ☐ D002 (Corrosive) ☐ D003 (Reactive)
Characteristic for Toxic Metals: ☐ D004 ☐ D005 ☐ D006 ☐ D007 ☐ D008 ☐ D009 ☐ D010 ☐ D011
Characteristic for Toxic Organics: D012 thru D043 (please list all that apply)

Is this an "F" or "K" Listed waste or mixed with one? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Is this a commercial product or spill cleanup that would carry a "U" or "P" waste code under 40 CFR 261.33(e) or (f)? ☐ Yes ☑ No
If "Yes", then please list ALL applicable codes:

Texas State Waste Code Number: CESQ2191

Proper US DOT Shipping Name: Non RCRA Non DOT Regulated Material
Class: NA UN/NA: NA PG: NA RQ: NA

Flash Point		pH		Reactive Sulfides		Reactive Cyanides		Solids	
>140		NEUTRAL		NA	mg/l	NA	mg/l	<1	%
Oil & Grease		**TOC**		**Zinc**		**Copper**		**Nickel**	
<1500	mg/l	<1000	mg/l	NA	mg/l	NA	mg/l	NA	mg/l

SECTION 4: Physical and Chemical Data

COMPONENTS TABLE	CONCENTRATOIN	UNITS
The waste consists of the following materials	Ranges are acceptable	or %
Aqua Ammonia	5-15	%
Ink (various colors)	10-20	%
Hydraulic fluid	30-40	%
Water	20-35	%

SECTION 5: Safety Related Data
If the handling of this waste requires the use of special protective equipment, please explain.
Standard

SECTION 6: Attached Supporting Documents

List all documents, notes, data and/or analysis attached to this form as part of the waste approval package. MSDS

SECTION 7: Incompatibilties

Please list ALL incompatibilities (if any):

strong acids, most common metals, strong oxidizing agents, mercury, chlorine, bromine, iodine, calcium, silver oxide, hypochlorite, bronze, brass, copper,and aluminum

SECTION 8: Generator's Knowledge Documentation

Laboratory analysis of the hazardous waste characteristics, listed below, **WAS NOT PERFORMED** based upon the following generator knowledge.

TCLP Metals:	X
TCLP Volatiles:	X
TCLP Semi-Volatiles:	X
Reactivity:	X
Corrosivity:	X
Ignitability:	X

SECTION 9: Waste Receipt Classification Under 40 CFR 437 (Prtaining to Pre-Treatment Requirements for Centralized Waste Treatment Facilities)

Is this material a wastewater or wastewater sludge? ☐ YES ☑ NO

If 'Yes', complete this section.

PLEASE CHECK THE APPROPRIATE BOX. IF NO APPROPRIATE CATEGORY, GO TO THE NEXT PAGE.

Metals Subcategory: Subpart A

- ☐ Spent electroplating baths and/or sludges
- ☐ Metal finishing rinse water and sludges
- ☐ Chromate wastes
- ☐ Air pollution control blow down water and sludges
- ☐ Spent anodizing solutions
- ☐ Incineration wastewaters
- ☐ Waste liquid mercury
- ☐ Cyanide-containing wastes greater than 136 mg/l
- ☐ Waste acids and bases with or without metals
- ☐ Cleaning, rinsing, and surface preparation solutions from electroplating or phosphating operations
- ☐ Vibratory deburring wastewater
- ☐ Alkaline and acid solutions used to clean metal parts or equipment

Oils Subcategory: Subpart B

- ☐ Used oils
- ☐ Oil-water emulsions or mixtures
- ☐ Lubricants
- ☐ Coolants
- ☐ Contaminated groundwater clean-up from petroleum sources
- ☐ Used petroleum products
- ☐ Oil spill clean-up
- ☐ Bilge water
- ☐ Rinse/wash waters from petroleum sources

- ☐ Interceptor wastes
- ☐ Off-specification fuels
- ☐ Underground storage remediation waste
- ☐ Tank clean-out from petroleum or oily sources
- ☐ Non-contact used glycols
- ☐ Aqueous and oil mixtures from parts cleaning operations
- ☐ Wastewater from oil bearing paint washes

***Organics Subcategory*: Subpart C**

- ☐ Landfill leachate
- ☐ Contaminated groundwater clean-up from non-petroleum sources
- ☐ Solvent-bearing wastes
- ☐ Off-specification organic product
- ☐ Still bottoms
- ☐ By product waste glycol
- ☑ Wastewater from paint washes
- ☐ Wastewater from adhesives and/or epoxies formulation
- ☐ Wastewater from organic chemical product operations
- ☐ Tank clean-out from organic, non-petroleum sources

(1)

If the waste contains oil and grease at or in excess of 100 mg/L, the waste should be classified in the oils subcategory

(2)

If the waste contains oil and grease less than 100 mg/L, and has any of the pollutants listed below in concentrations ir excess of the values listed below, the waste should be classified in the metals subcategory.

Cadmium: 0.2 mg/L
Chromium: 8.9 mg/L
Copper: 4.9 mg/L
Nickel: 37.5 mg/L

(3)

If the waste contains oil and grease less than 100 mg/L, and does not have concentrations of cadmium, chromium, copper, or nickel above any of the values listed above, the waste should be classified in the organics subcategory.

- ☐ Metals Subcategory
- ☐ Oils Subcategory
- ☐ Organics Subcategory

SECTION 10 Additional Instructions

If you cannot determine the correct subcategory in Section 9 and you did not furnish data for the concentration of Cadmium, Chromium, Copper, Nickel, and Oil and Grease, CES will send offsite to a commercial laboratory a sample to determine these concentrations This will be prior to acceptance. The generator will be responsible for the cost of the analysis.

SECTION 11: Generator's Certification

The information contained herein is based on ☐ generator knowledge and/or ☐ analytical data. I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this document.

Authorized Signature: S. Oliveda **Date:** 01/016/09

Printed Name/Title: Salvador Oiveda

CES USE ONLY (DO NOT WRITE IN THIS SPACE)		
Compliance Officer:		
Date:	☐ Approved	☐ Rejected
Approval Number:		

NO REPORT.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-34 **Date:** _____

CES Sales Representative: DC

Requested Turnaround / Completion Date: _____

Customer Name: SouthCoast

Generator Name and Location: Wallisville

Ultimate Objective for Performing Analysis: check zinc & treatability to remove zinc (Profile 1199)

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

_____

_____

Provide a detailed Composition to the best of your knowledge: 11.4% H_2O

Component / Approximate Percentage or PPM:

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

_____/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals X	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____

Off-site Lab Analysis (List)_____

Note: Must have an approved P.O. for any external lab analysis

pK_a = H_2S - 7

CO_2 = [illegible]

Carbonic Acid - 6.4

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-33 **Date:** 1/9/09

CES Sales Representative: DAN BOWMAN

Requested Turnaround / Completion Date: ASAP

Customer Name: CH 2S (BOB GARZA)

Generator Name and Location: ALVIN, TX

Ultimate Objective for Performing Analysis: RECEIVE WASTE

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

H_2O - 16.5% (HEATED, MIXED SX)

BTU - 10,588

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)___	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List) PERCENT (WATER, BTU, PHYSICAL STATE WHEN HEAT IS APPLIED.
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals: TURNS INTO A SLURRY.

Ash____	Black Oil Suitability____	Viscosity____
Specific Gravity____	Light End Suitability____	Distillation Test____
Flash____	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect____	Color____	Chlor-n-oil____
Water by Distillation____	Water Extractability____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-08 **Date:** 01/05/2009

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: Regular turnaround

Customer Name: Kinder Morgan
Generator Name and Location: Kinder Morgan – Jefferson Truck Rack (V140)
Ultimate Objective for Performing Analysis: Determine whether there are any hydrocarbon recoverables that can be used for recycling.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
From sump ast the truck rack
Provide a detailed Composition to the best of your knowledge: FULL OF STICKS, SLUDGE, SOLIDS, DIRT
Component / Approximate Percentage or PPM:

Diesel/_____ _____/_____
Gas /_____
/Sludge _____/_____ CENTRIFUGING OUT WILL RECOVER 15% OIL
/_____ _____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge: ~23%

Wastewater Treatability___	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH**
Phenols_____	**Oil and Grease (water phase)**_____	**TOC**
Distillation Test_____	**Metals**_____	**Flash**
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**X	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 0109-07 **Date:** 01/05/2009

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: Regular turnaround

Customer Name: Kinder Morgan
Generator Name and Location: Kinder Morgan – Witter (Box 165)
Ultimate Objective for Performing Analysis: Determine whether there are any hydrocarbon recoverables that can be used for recycling.

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Cleaning of a pit. Pit is the drainage from around tank areas.
Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

Diesel/_____	_____/_____
Gas /_____	
Water/_____	_____/_____
_____/_____	_____/_____

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability___	**Percent Solids_____**	**Percent Oil_____**
Specific Gravity_____	**Chlor-d-tect (oil phase)_____**	**pH**
Phenols_____	**Oil and Grease (water phase)_____**	**TOC**
Distillation Test_____	**Metals_____**	**Flash**
GC/MS_____	**Chlor-n-oil (oil phase)_____**	**Centrifuge Test_____**

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash_____	**Black Oil Suitability_____**	**Viscosity_____**
Specific Gravity_____	**Light End Suitability_____**	**Distillation Test_____**
Flash_____	**CES Fuel Suitability_____**	**Hydro-scout_____**
Chlor-d-tect_____	**Color_____**	**Chlor-n-oil_____**
Water by Distillation_____	**Water Extractability____**	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity_____**	**Sulfides_____**
Percent Sodium Hydroxide_____	**Chlorides_____**	**Sodium_____**
Percent Solids by Centrifuge_____	**Oil by Centrifuge_____**	**TOC_____**

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
*****Note: Must have an approved P.O. for any external lab analysis*****

UISC @100
10:13:14
1:15:10
116 SEC

CES Environmental Services, Inc.

UISC @40°C
8:52:54
9:07:23
14:29 = 869 SEC
9:08:52
9:23:21
14:29
869 SEC
91.4 cst @ 40°C

CES SAMPLE EVALUATION FORM

Sample ID # 0109-02 Date: 1-2-08

CES Sales Representative: GB/KN

Requested Turnaround / Completion Date: ASAP

10:15:38
10:17:55
10:19:51
116 SEC

Customer Name: Intercontinental Terminal

Generator Name and Location: " " Pasadena

Ultimate Objective for Performing Analysis: Base or Black oil

100 BBLS

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
Refrigerant oil ~~of~~ Drained from Equipment - Traces of propylene

12.15
CSC

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

CHLOR-D-TECT- 200
D- 1.17

oil	95-100		
propylene	0-5		
water	0-5		

TARE CRUCIBLE 61.1034
+SX 64.5084
+ASH 61.1008

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability____	Percent Solids____	Percent Oil____
Specific Gravity____	Chlor-d-tect (oil phase)____	pH____
Phenols____	Oil and Grease (water phase)____	TOC____
Distillation Test____	Metals____	Flash____
GC/MS____	Chlor-n-oil (oil phase)____	Centrifuge Test____

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

H_2O- 0.00 %
-0 ppm

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

Ash ✓	Black Oil Suitability ✓	Viscosity ✓
Specific Gravity ✓	Light End Suitability____	Distillation Test____
Flash ✓ >140	CES Fuel Suitability____	Hydro-scout____
Chlor-d-tect ✓	Color____	Chlor-n-oil____
Water by Distillation ✓	Water Extractability ~~____~~	Base oil ✓

Other Internal Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

BTU: .6095 = 8814
.8313

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide____	Specific Gravity____	Sulfides____
Percent Sodium Hydroxide____	Chlorides____	Sodium____
Percent Solids by Centrifuge____	Oil by Centrifuge____	TOC____

Other Internal Lab Analysis (List)____
Off-site Lab Analysis (List)____
Note: Must have an approved P.O. for any external lab analysis

BTU - 8814

DOESN'T BLEND w/ BLACK OIL

Miles, Please call me about this sample before testing. -Shannon

Volume: 1 load a year.

CES Environmental Services, Inc.

CES SAMPLE EVALUATION FORM

Sample ID # 1208-57 **Date:** 12/23/2008

CES Sales Representative: Shannon
Requested Turnaround / Completion Date: ASAP

Customer Name: Tornado
Generator Name and Location: Tornado – Alleyton, Texas
Ultimate Objective for Performing Analysis: wastewater treatability

Provide a Detailed Description of the Process Generating the Waste, Material, or Product:
W/W from rinsing both used and newly fabricated flares

Provide a detailed Composition to the best of your knowledge:
Component / Approximate Percentage or PPM:

_____/_____ _____/_____
_____/_____
_____/_____ _____/_____
_____/_____ _____/_____

PH - 7
TREATS EASILY
PHENOLS - 0
TOC - 2258
FP > 140 f

Internal Analysis to be Performed on Wastewater/Sludge and Oily Water/sludge:

Wastewater Treatability X	**Percent Solids**_____	**Percent Oil**_____
Specific Gravity_____	**Chlor-d-tect (oil phase)**_____	**pH** X
Phenols_____	**Oil and Grease (water phase)**_____	**TOC** X
Distillation Test_____	**Metals**_____	**Flash** X
GC/MS_____	**Chlor-n-oil (oil phase)**_____	**Centrifuge Test**_____

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Ni - .141
Zn - .112
Cu - .071
Cd - .062

Internal Analysis to be Performed on Hydrocarbons or other Organic Chemicals:

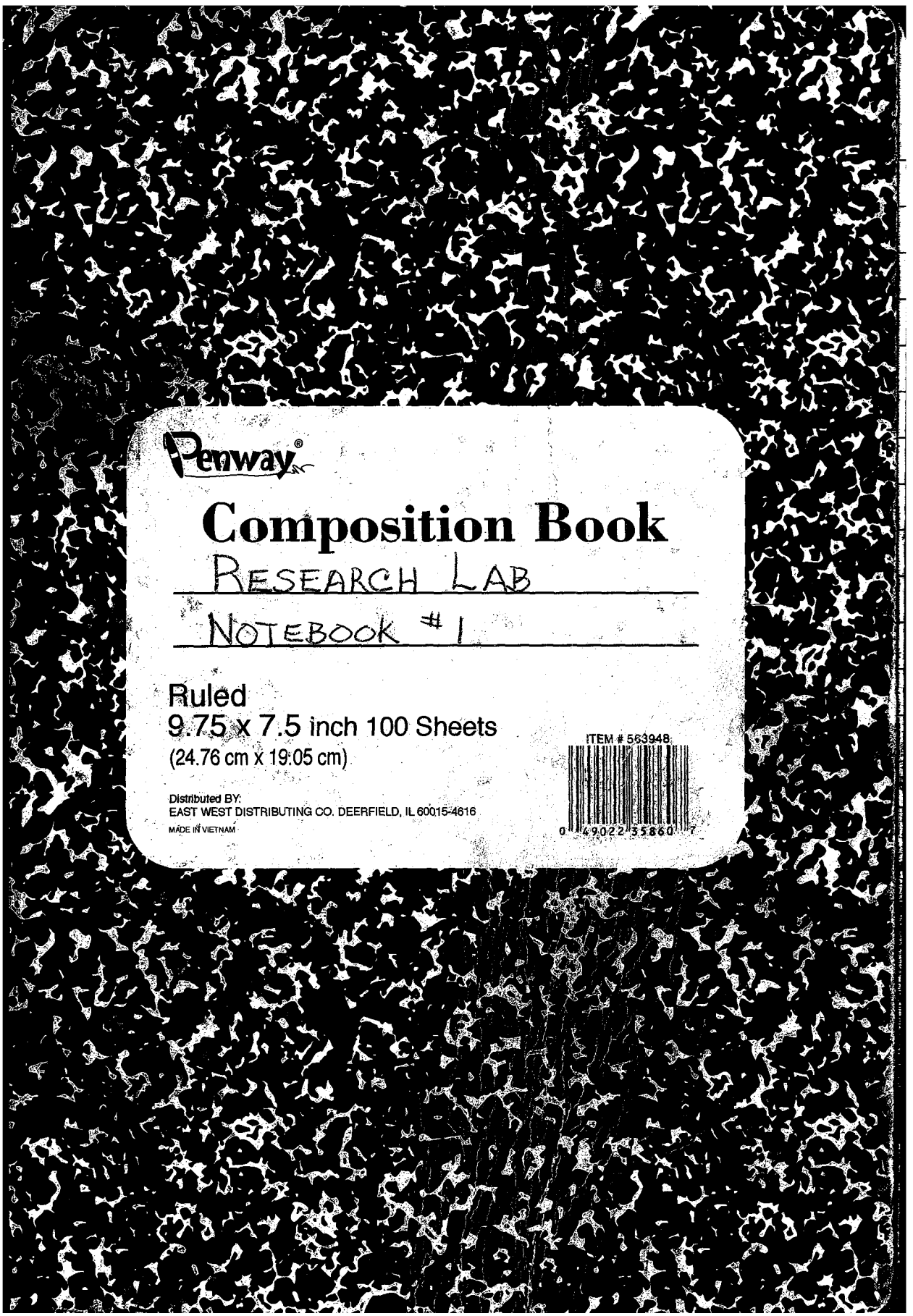
Ash_____	**Black Oil Suitability**_____	**Viscosity**_____
Specific Gravity_____	**Light End Suitability**_____	**Distillation Test**_____
Flash_____	**CES Fuel Suitability**_____	**Hydro-scout**_____
Chlor-d-tect_____	**Color**_____	**Chlor-n-oil**_____
Water by Distillation_____	**Water Extractability**____	

Other Internal Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis

Internal Analysis to be Performed on Spent Caustic:

Percent Potassium Hydroxide_____	**Specific Gravity**_____	**Sulfides**_____
Percent Sodium Hydroxide_____	**Chlorides**_____	**Sodium**_____
Percent Solids by Centrifuge_____	**Oil by Centrifuge**_____	**TOC**_____

Other Internal Lab Analysis (List)_____
Off-site Lab Analysis (List)_____
Note: Must have an approved P.O. for any external lab analysis


Penway®
Composition Book
RESEARCH LAB
NOTEBOOK #1
Ruled
9.75 x 7.5 inch 100 Sheets
(24.76 cm x 19.05 cm)
ITEM # 563948
Distributed BY:
EAST WEST DISTRIBUTING CO. DEERFIELD, IL 60015-4616
MADE IN VIETNAM
0 49022 35860 7

01/17/08

SAMPLE EVAL 0108-34 -

SALES - GARY BRAUCKMAN

CANRIG - TWO SAMPLES - A&B

COMPOSITE SAMPLES - CHECK FOR POSSIBILITY OF PUTTING INTO BLACK OIL OR FUELS

CANRIG KLEEN-A-PARTS

SAMPLE "A" HAS AN AQUEOUS LAYER ~ 20% AND IS DARKER THAN "B".

TESTING - DONE ON EQUAL VOL. COMPOSITE

DENSITY - 0.825 AMBIENT -

F. POINT - > 145°F

COMPATIBILITY - TOTALLY MIXES WITH BLACK OIL.

CHLOR-D-TECT - > 4000 - IT APPEARS TO BE CONSIDERABLY GREATER THAN 4000.

Mike Cook
01/18/08

01/17/08

SAMPLE EVAL 0108-35

SALES - MATT BOWMAN

ENTERPRISE PRODUCTS, PORT ALLEN, LA

SG. - 1.200 @ 20.5°C (68.9°F) = 1.203 @ 15.5°C

OIL & SOLIDS BY CENTRIFUGE - OIL - NONE. 1½-2% SOLIDS

KOH (TITRATION) N x V x 5.6 / SS

[0.1 x 37.1 x 5.6] / 1.002 = 20.7 wt% KOH

SULFIDES - POSITIVE BY PbAc PAPER

SG. - CORRECTION FACTOR - 0.00059/°C

Mike Root
01/18/08

01/18/08

NOLTEX - SAMPLE EVAL # 0108-29

MATT BOWMAN, JOY BAKER

THIS SAMPLE IS A MIXTURE OF METHANOL AND VINYL ACETATE. VARYING MIXES OF SAMPLE AND WATER WILL BE MIXED TOGETHER TO DETERMINE BEST FIT TO RECOVER THESE 2 CHEMICALS. VINYL ACETATE IS ~2.5% SOLUBLE IN WATER. I HOPE TO EXTRACT THE MeOH AWAY AND THEN DRY BY DISTILLATION

1ST TESTING - MAXIMIZE ORGANIC LAYER-

Sx.	H_2O	ORGANICS ON TOP (mL)	
50	10	NONE	
50	20	NONE	
50	30	2.5	
50	40	6.0	
50	50	7.0	
40	40	6.0 mL	
40	50	6.1	} JUST OVER 6 mL - BUT
40	60	6.1	} CANNOT ACCURATELY DETERMINE

1/18/08

1/21/08

SITTING OVER THE WEEKEND, THE SAMPLES ARE ALL CRYSTAL CLEAR. THE 40:50 RATIO IS THE BEST USAGE OF WATER FOR MAX RECOVERY OF MeOH VS. VINYL ACETATE. I WILL USE THIS RATIO FOR MY DISTILLATION.

THE DISTILLATION OF THE BOTTOM PHASE PRODUCES THE FOLLOWING DATA-

ML	OH	POT
IBP	60	74
10%	66	83
20	78	87
25	80	89
30	82	91
35	87	94
40	91	96
45	97	99

I RETAIN THE DISTILLATE FOR GC ANALYSIS.
I ALSO RETAIN THE VINYL ACETATE LAYER FOR GC.
I NEED TO KNOW APPROXIMATE ISOMERS IN THESE SAMPLES BEFORE I CONTINUE.

PRECISION PETROLEUM LABS, INC.

5915 Star Lane Houston, TX 77057
Ph. 713-680-9425 Fax: 713-680-9564

CERTIFICATE OF ANALYSIS

Company:	CES Environmental Services, Inc
Invoice No.:	36239
Lab Reference No.:	2008-01-562
Product ID:	Sample ID-0108-42 01-21-08
Date Received:	01-21-2008
Authorized By:	Miles Root

Parameter	Test Method	Results
Water by K.F. Wt%	D-1744	17.78

GAS CHROMATOGRAPHY, WT%	Dry Basis Results	Wet Basis Results
Methylene Chloride	< 0.01	< 0.01
Methanol	70.37	57.86
Vinyl Acetate	22.28	18.32
Methyl Acetate	3.62	2.98
Others	3.73	3.06

Daniel Zablhi
QA Manager
Date: 01-22-2008

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

Daniel Zablhi
QA Manager
Date: 01-22-2008

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

Miles Root
01/24/08

EPAHO113000786

PRECISION PETROLEUM LABS, INC.

5915 Star Lane Houston, TX 77057
Ph. 713-680-9425 Fax: 713-680-9564

CERTIFICATE OF ANALYSIS

Company:	CES Environmental Services, Inc
Invoice No.:	36239
Lab Reference No.:	2008-01-563
Product ID:	Sample ID-0108-43 01-21-08
Date Received:	01-21-2008
Authorized By:	Miles Root

Parameter	Test Method	Results
Water by K.F. Wt%	D-1744	2.37

GAS CHROMATOGRAPHY, WT%	Dry Basis Results	Wet Basis Results
Methylene Chloride	< 0.01	< 0.01
Methanol	3.14	3.07
Vinyl Acetate	94.04	91.81
Others	2.82	2.75

Daniel Zabihi
QA Manager
Date: 01-22-2008

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

Miles Root
01/24/08

EPAHO113000787

THESE ARE THE LAB RESULTS. ALL OF THIS WORK WAS ISSUED IN A LAB MEMO 08-0010 ON 1/24/08.

Mike Root
01/24/08

VINYL ACETATE - METHANOL PROJECT.

ANOTHER TRY AT SEPARATION USING ETHYLENE GLYCOL. A 40:60 mL COMPOSITE (40 SX : 60 ETHYLENE GLYCOL) IS PREPARED AND THEN DISTILLED.

VINYL ACETATE HAS A BOILING POINT OF 72.7°C.
METHANOLS BP IS 64.7°C
THIS 40-60 MIX WAS DISTILLED WITH THE FOLLOWING DATA OBTAINED.

%	POT	OH
IBP	76	59
10	83	60
15	90	62
20	95.5	65
25	99.5	66.5
35	143	68
37	175	69.5
38	183	73
38.5	186	93

TEPPCO SOLIDS PROJECT

NEAT SOLIDS TESTING - BTU - 10,988

% ASH - CRUCIBLE TARE 58.1864

CRUCIBLE + SX 61.7365 - SX - 3.5501

CRUCIBLE + ASH 58.9784 ASH - 0.792

% ASH = 22.3 WT %

A 1:1 MIX - SOLIDS / TOLUENE -

GOES INTO SOLUTION WITH LOTS OF MIXING, BREAKING UP OF PIECES, AND STIRRING W/ SPATULA.

HEAT BRIEFLY ON HOT PLATE TO ~ 110°F - REALLY HELPS!

AFTER MIXING, SAMPLE ALLOWED TO SIT, AND THEN AN ASH RUN ON LIQUID, AS A SLUDGE FALLS OUT OF SOLUTION - PROBABLY JUST SATURATED.

CRUCIBLE TARE - 51.6926 - + SX - 54.7684 + ASH 51.7277

% ASH = 1.1 WT % SLUDGE ~ 20% - HARD TO MEASURE

SAMPLE SENT TO METROHM PEAK FOR CHLORIDES - 29.56 mg/Kg

SLUDGE SENT TO LCS - ND FOR BENZENE

A 2:1 MIX OF TOLUENE: SOLIDS GIVES MUCH QUICKER SOLUBILITY, WITH LESS "SLUDGE" FALLING OUT OF SOLUTION. HEATING HELPS, BUT IS NOT ESSENTIAL AT THIS MIX. LESS SOLIDS (SLUDGE) USUALLY, BUT DID NOT QUANTITATE.

2/19/08

DISTILLATION OF $MeCl_2$ TRAILER 7240 ON 2/20/08
WELL SHAKEN SAMPLE.

	%	POT	OH	COMMENTS
IBP	37	37		
10	38	37		
20	38	37		
30	38	37		
40	38.5	37		
50	38.5	37		
60	39	37.5		
65	47.5	37.5		
68	73	40.5	←	$MeCl_2$ TO MeOH CHANGE
69	76	66		
70	77	69		
73	79	72		
78	84	76		
80	88	79	←	END POINT FOR MeOH CUT.
82	95	81		
83	99	97		

2/20/08

EVALCA TRAILER 258 2/21/08

THIS IS METHANOL WITH A PLASTIC THAT ENDS UP IN THE POT.

%	POT	OH	COMMENTS
IBP	71	66	
10	74	71	
20	76	71	
30	77.5	71	
40	79	73	
50	81	76	
60	84	80	← EXCESS WATER BY VISUAL
62	85	81	
63	85	82	
65	87	83	
67	89	85	

MJK 02/21/08

METHANOL - VINYL ACETATE

CONTINUATION of EDAL# 0108-29

A 40:60 MIX of Sx.: ETHYLENE GLYCOL WAS PREPARED INTO AN ATTEMPT TO "EXTRACT" THE METHANOL IN A DISTILLATION. ETHYLENE GLYCOL HAS BEEN USED IN EXTRACTIVE DISTILLATIONS FROM MY INTERNET RESEARCH.

SAMPLE WELL MIXED AND THEN DISTILLED IN REGULAR FASHION.

%	POT	OH
IBP	76	59
10	83	60
15	90	62
20	95.5	65
25	99.5	66.5
35	143	68
37	175	69.5
38	183	73
38.5	186	93

AS SEEN ABOVE, THERE IS NO TEMP BREAK IN THIS DISTILLATION TO SEPARATE OUT COMPONENTS.

2/21/08

METHANOL DISTILLATION - 02/22/08

A MIX OF TRAILERS 213 (63.4%) AND 414 (36.6%) WAS PREPARED AND SET ON FOR DISTILLATION IN THIS DISTILLATION I WILL RUN THE METHANOL UNTIL A 0.90 DENSITY IS REACHED. AFTER, A TOC WILL BE RUN ON THE POT BTMS FOR THIS RUN, A 300 mL DISTILLATION WILL BE DONE

mL	Pot	OH	Comments
IBP	37	37	
50	44	38	
75	50 40	50 40	
90	61	46	MEOH CHANGEOVER - 30%
95	67	54	
105	70	64	
110	73	68	
200	78	74	
235	82	80	0.868 DENSITY } 10 mL TAKEN FROM THIS POINT
255	90.5	88	0.918 DENSITY - }

TOC ON POT BTMS IS 4956 mg/L

∴ 265 mL ENDPOINT IS A BIT TOO HIGH, WHICH IS 88.3%.

2/22/08

EPAHO113000794

EVALCA METHANOL

TRAILER 258 -

SET UP AND DISTILL OVER 80%. RUN TOC ON POT BTMS. 4254 mg/L IS VALUE

02/22/08 MJB

TRAILER 243 - 02/26/08

THIS IS A MIX OF METHANOL, H_2O AND RSH.

%	OH	
IBP	68	
20	71.5	
35	73	
40	73.5	
50	75	
55	75.5	
60	77	
65	79	
67	80	
68	81	
70	82	
71	84	← VISUALLY WET OH
73	88	
74	90	

2/26/08

PPG METHYLENE CHLORIDE - TRAILER 15816 2/26/08

DISTILLATION IS BELOW:

%	POT	OH	COMMENTS
IBP	38	38	
20	40	38.5	
25	40	38.5	
40	41	39	
45	43.5	39.5	
50	64	40	
50.5	83	42	
51	92	56	← START OF MeOH RUN
52	95	76	← ESSENTIALLY NO MeOH
54	97	86	
55	98	94	

2/26/08

2/27/08 - DISTILLATION OF TRAILERS 15816 + 414

A COMPOSITE BX OF 66% 15816 ($MeCl_2$) AND 34% TRL 414 ($MeCl_2$) WAS PREPPED.

(#414 - 3000 GAL #15816 - 5800 GAL)

%	POT	OH	COMMENTS
IBP	37	37	
20	39	38	
30	39.5	38	
50	51	39	
51	67	39	
52	79	43	← END OF $MeCl_2$ CUT
53	83	67	
56	85.5	71	
57	86	72	
58	87	74	
60	89	75	
61	90	77	
~~63~~	—	—	
62	93	81	← END OF MeOH
63	93.5	85	VISUALLY WET
64	95	89	
65	97	94	

2/27/08 - MK

2/27/08

KMCO Butanol Distillation - BTL

Run distillation on H_2O/Butanol to remove H_2O
Run BTL on distillate. BP = 117.8 for Butanol,
~~DE~~ 56-0.90 on neat SX.

%	Pot	OH	Comments
IBP	98	88	
5	107	92	
10	116	93.5	
13	126	113	
17	127	115.5	← Poured into beaker.
57	171	112	← Cut off.

High boiling material left in pot.
Godfrey will run BTL on neat SX.
If it is high, then project is complete.

MJR 2/27/08

EPAHO113000798

TRAILER 243 02/28/08

STINKY METHANOL -

DISTILL OVER UNTIL METHANOL DENSITY GETS TOO HIGH (WET), THEN RUN TOC ~~OO~~ ON POT AND CHECK ODOR.

NOTE: A BTU VALUE ON A CARBON CONTACTED A DEAN STARK DISTILLED SX. IS 7400 BTU. THE RESULTS OF THIS TESTING IS TO GET A DIST'L ENDPOINT THAT WILL HAVE A BTU > 8000. TOC IN POT IS OF NO CONSEQUENCE

%	POT	OH	COMMENTS
~~20~~	76	70.5	
40	79	72	
53	82	75	
60	84	77	

BTU - SX. WT. - 1.0210 DENSITY - 0.812 (~ 90% MeOH)

= BTU 7362

INTERNET SEARCH SHOWS BTU VALUE OF METHANOL AS 8600. THERE IS NO PRACTICAL WAY FOR THIS MATERIAL TO BE DISTILLED TO THAT LEVEL.

A 50:50 BEAKER BLEND OF THE BUTANOL AND METHANOL IS 10,214 BTU.

02/28/08

PPG TRAILER 7045 - 3/2/08

METHYLENE CHLORIDE - SX. DATED 2/20/08

DOCUMENT # 59540

%	POT	OH	COMMENTS
10	39	37	
30	39	38	
35	49	38	
37	72	39	← $MeCl_2$ CUT
38	77	67	
42	81	71	
50	84	73	
55	87	74	
57	89	76.5	
60	92	80	VISUALLY WET OH
61	93.5	83	← END -
64	97	91	

3/2/08

MJB

PPG TRAILER 225 - $MeCl_2$

DOCUMENT# 59539

%	POT	OH	COMMENTS
10	38	37	
20	39	37	
35	39	37.5	
45	42	38	
50	47	38	
52	54	38	
55	63	39.5	← MeCl CUTOFF
56	68	50	
57	70	61	
60	73	67	
65	74	68.5	
71	76	70	
80	79	73	
87	88	79	
88	92	83	
89	95	88	← VISUALLY WET OH CUT OFF
90	98	93	

03/02/06

3/3/08.

	(TREATED SAMPLES)		(HEAT ONLY)
METALS	EVAP	DIE CAST	OIL (H_2O PHASE)
Cd	0.000	0.000	0.000
Cu	0.000	0.000	0.047
Ni	0.791	0.594	0.553
Zn	0.404	0.137	1.521
TOC	51,550	5700	5305

EVAPORATOR WASTE CLASS 1 TREATS WITH A FINER SOLIDS PRODUCED THAN THE DIE CAST.

OIL - 44% BY VOL AFTER HEAT.

CHLOR-D-TECT - 300 mg/L

0308-10 EVAPORATOR WASTE CLASS 1
0308-11 PROCESS DIE CAST WATER
0308-12 OILY WATER

THE ABOVE SUBMITTED BY JOE WILSON

3/3/08

EPAHO113000802

03/04/08 VB 75 DISTILLATION

THIS IS THE "GAS LAYER" FROM THE VB75.

%	POT	OH
IBP	101	98
10	101	100
25	101	100
50	101	100
70	101	100
80	101	100
90	101	100
95	105	100
96	105	100

TESTING DONE ON SHAKEN SAMPLE.
TOC ON DISTILLATE - 1427
FLASH POINT ON DISTILLATE - < 95°F
FLASH POINT ON "WATER" PORTION OF DISTILLATE - THAT IS - UNDER THE TRACE OF HYDROCARBON LAYER - > 140°F.

MJE 03/04/08

03/05/08 TRL 243 DISTILLATION

THIS IS THE "SMELLY" METHANOL THAT IS BEING DISTILLED TO CHECK % METHANOL. SAMPLE DISTILLED TO 90°C OVERHEAD TEMP. 74% RECOVERY DENSITY IS 0.816, ON THE WHOLE DISTILLATE. THIS IS APPROXIMATELY A 91% METHANOL CUT.

9/05/08

3/06/08

KMCO BUTANOL - DISTILLATION + ASH

THIS IS THE SAME MATERIAL THAT WAS RUN ON 2/27/08
A 100 mL SAMPLE WILL BE DISTILLED TO REMOVE THE BUTANOL (BP - 117.8). THE VOL% OH RECORDED. AN ASH WILL BE RUN ON THE POT BTMS AND BLENDABILITY WITH BLACK OIL.

DISTILLATE DENSITY - 0.8196 - AMBIENT →

3/06/08

3/06/08 NAPHTHENIC ACID SAMPLE

A SAMPLE WILL BE QUANTITATIVELY SPRUNG W/ HCl, ALL WTS AND VOLUMES RECORDED. RECORD WC AND ADJUST BRINE FROM ITS pH OF 2 TO A 5 WITH VIRGIN 50% CAUSTIC. RECORD ALL VOLUMES. ON BRINE, RUN TOC, PC AND SEND OUT FOR TOTAL BENZENE AND RCRA 8 METALS.

%	POT	OH	KMCO BUTANOL DIST.
30	130	116	
45	135	116	
55	150	116	
60	165	113	

← AT THIS POINT THE SAMPLE POT IS SMOKING AND OH TEMP DROPPING - INDICATING DECOMPOSITION.

ASH ON POT BTMS

CRUCIBLE TARE - 59.3713 > SX. - 3.3293

CRUCIBLE + SX. - 62.7006 >

CRUCIBLE + ASH 59.8486 ASH - 0.4773

% ASH = 14.3%

THE POT BTMS WAS BLENDED WITH BLACK OIL AND HAS NO ISSUES.

3/06/08

3/6/08 PPG TRL 15819

DISTILLATION ON THIS IS NOT NEEDED, AS THIS IS "STREAM 6"

MJE

NAPHTHENATE SAMPLE-

CONTINUED FROM PREVIOUS PAGE:-

500 mL = 516.6 g

12.3 mL OF PLANT H_2SO_4 TO BRING TO pH 2.0

RECOVERY OF NAP ACIDS-

BOTTLE - 230.8 -

BOTTLE + Sx - 276.0

Sx WT - 45.2 g

% NAP ACID = $(45.2/516.6) \times 100 = 8.75$

50% NaOH TITRATION OF BRINE TO pH 5.0

mL. 35.0 ~ 37.7 - = 2.7 mL

PHENOLS ON THE BRINE $\frac{1000}{2} \times 3 = 1500$ ppm

TOC = 4050 mg/L

ODOR OF NAP ACID IS NOT CONTAINED BY THE NEUTRALIZER/ ODORLESS DIESEL SOLUTION.

MJE 3/6/08

3/6/08

EVALCA METHANOL DISTILLATION

TRL 258 Job# 59919 3/6/08

NEAT SX. HAD ~ 10% SOLIDS

%	POT	OH	COMMENTS
IBP	68	61	
20	72	67	
40	73.5	68	
60	74	71	
70	77	72	
80	82	76	
85	88	81	
87	96	90	←
88 mls			RECOVERY

MK 3/6/08

3/7/08

KMCO METHANOL TBL 241

Job# 59954

%	POT	OH
IBP	80	74
10	81	78
20	82	79
30	82	79
40	83	79.5
50	84	80
60	85	80.5
70	87.5	81
75	92	84
77	97	90

DENSITY OF THIS CUT IS 0.833 (~ 84%)
DENSITY OF ETHANOL IS 0.789

3/7/08

3/11/08

PPG $MeCl_2$/MeOH TRL 7045 - DISTILLATION

DOC.# 60237 PROFILE # 28 2281

%	POT	OH	COMMENTS
IBP	37	37	
10	37	37	
20	38	38	
30	38	38	
40	53	38.5	
41	71	40	← $MeCl_2$ CUTOFF
42	77	59	
44	79	69	
45	80.5	71	
50	84	75	
55	87	79	
58	90	83	
60	91	84.5	
62	96	90	← MeOH CUTOFF - OTSEALLY WET.
63	97	93	
64	98	95	

3/11/08

3/11/08

THIS IS A DISTILLATION OF A 50/50 MIX OF TRL 7045 AND TRL 414.

%	POT	OH	COMMENTS
IBP	36	37	
20	38.5	37.5	
25	39	38	
35	39	38	
45	39	38	
60	54	46	
61	65	46	
62	73	43	← $MeCl_2$ CUTOFF
63	76	55	
64	77	65	
65	79	67	
70	82	70	
75	88	74	
78	95	90	← MeOH ENDPOINT

3/11/08

3/12/08

DISTILLATION OF 4:1 - TRL 1264 : TRL 414

TRL 1264 IS - ? METHANOL TRL 414 IS $MeCl_2$/MeOH

%	POT	OH	
IBP	40	40	
10	49	41	
15	55	42	← $MeCl_2$ CUTOFF
20	65	47	
21	68	53	
22	69	61	
23	71	64	
30	73	67	
40	73	68	
45	74	69	
50	74	69	
60	76	70	
70	78	72	
80	85	76	
83	93	83	
84	97	90	← MeOH CUT OFF
85	99	98	

FEW SOLIDS - MINIMAL

3/12/08 [signature]

3/12/08

EVALCA MeOH TRL 258

DISTILLATION RUN ON A "SETTLED" SAMPLE, WHERE MUCH OF THE EVOH IS AT THE BOTTOM.

NO POT TEMP. NO THERMOWELL

%	POT	OH	COMMENTS
IBP		65	
25		67	
50		68	
60		69	
70		70	
80		72	
90		77	
92		90	

AT THE ENDPOINT, NO "PLASTIC" SOLIDS ARE LEFT IN THE POT.

MB 3/12/08

3/18/08

TRAILER 8177 - BUTANOL DISTILLATION

DISTILLATION OF THIS BUTANOL, TO KEEP THE POT TEMP TO WHERE JUST THE WATER DISTILLS OVER, AND TO SEE WHAT HAPPENS. CHECK TO SEE IF THE POT BTMS BLENDS WITH BLACK OIL.

%	POT	OH	COMMENTS
IBP	106	80	
5	110	92	
10	121	92	
13	126	112	
15	127	115	
25	129	116	

THE DISTILLATION WAS CUT OFF AT THIS POINT. THE POT BTMS BLENDS WELL WITH BLACK OIL. THE WET BUTANOL DOES NOT. THE DISTILLATE DOES NOT BLEND WITH BLACK OIL, BUT SEEMS TO BLEND WITH LIGHT ENDS. DENSITY ~ 0.83

3/18/08

3/18/08 SPENT ETHYLENE GLYCOL DIST.

Sx. BROUGHT IN BY GARY LENERTZ.

A SAMPLE OF SPENT ETHYLENE GLYCOL IS DISTILLED FOR CHARACTERIZATION.

%	POT	OH	COMMENTS
IBP	124	99	
5	131	101	
10	138	101	* NOTE: I NOTICED THE HUE
15	154	106	HAS CHANGED TO A YELLOW
20	170	110	FROM NEAR WATER WHITE,
25	190	114	WITHIN 3 HRS.
30	195	184	
35	200	192	
40	200	193	
50	201	195	
60	202	195	
70	202	195	
75	203	195	
80	206	195	POT BTMS BLACK WITH
85	212	195	SOME SOLIDS. OH IS GOOD
88	223	193	LOOKING - CLEAR - NEAR WATER
90	228	191	WHITE.

MJB 3/19/08

3/18/08

NAPHTHENIC CAUSTIC - ACIDIFICATION

TRAILER 221.-

Sx. Wt.- 365.0 g

Bottle- 232.5 g

Bottle + Nap Acid- 287.3

Nap Acid- 54.8 g

% Nap Acid = $(54.8/365.0) \times 100$ = 15.0 wt%

F.P. > 140 ~ <150

Sample sprung to a pH of 2 and then allowed to separate in a sep. funnel. Brine removed and adjusted to ~ pH 7. (Difficult to accurately adjust pH to any set value; wild swings in pH with minor additions of H_2SO_4/NaOH.

Flash point run on pH adjusted brine water.

Phenols on brine is >1000 ppm

3/19/08

EPAHO113000816

3/18/08

EVALCA MeOH DISTILLATION

TRL 258 ; DOC # 60533 ; PROFILE 2616

%	POT	OH	COMMENTS
IBP		64	
5		67	
10		68	
20		69	
40		71	
50		71	
83		91	← END POINT-

MJB 3/18/08

3/19/08 DISTILLATION - TRL 225 - $MeCl_2$/MeOH

Sx: TRL 225 DOC# 60546 PROFILE: 2281

%	POT	OH	COMMENTS
IBP	32	37	
10	34	37	
20	36	37	
30	37	37	
40	38	37.5	
50	39	38	
60	47	38	
61	52	40	← $MeCl_2$ CUTOFF
62	54	40.5	)
63	56	41	)
64	57	43	) IN-BETWEEN
65	59	45	)
66	61	47	
67	64	49	←
68	67	56	MeOH
70	72	64	
75	75	68	
80	78	72	
85	87	77	
86	93	90	
87	RECOVERY		

3/24/08

#1 FRONT DISTILLATION - DISTILLATION

A SAMPLE OF $MeCl_2$ FROM THE FRONT DISTILLATION UNIT IS BEING DISTILLED TO SEE ANY ABNORMALITIES.

%	POT	OH	
IBP	46	38	
6	64	41	← $MeCl_2$
8	70	49	
10	73	65	
12	75	69	
20	78	71	
30	80	73	
40	83	76	
50	85	79	
55	87	81	
60	90	85	
63	93	90	← MeOH CUTOFF
65	95	93	
68	98	96	

3/24/08

EPAHO113000819

3/24/08

EVALCA METHANOL

TRL 258 DOC# 60822 3-21-08

SX. LOOKED TO CONTAIN 7 AVG. SOLIDS.

%	POT	OH
60	\	75
70	\	78
75	\	82
78	\	90 ← END.
~~80~~		
79		95

3/24/08

EPAHO113000820

3/25/08

EXXON MOBIL BATON ROUGE NAPHTHENIC CAUSTIC

A SAMPLE OF NAPHTHENIC CAUSTIC FROM EXXON MOBIL, BATON ROUGE WILL BE SPRUNG OUT, THE BRINE pH ADJUSTED, AND TESTED NAP ACID WILL ALSO BE WATER WASHED AND THEN TESTED AS WELL.

QUANTITATE ALL STEPS-

EVALS 0308-87

4 x 1L SAMPLES WILL FIRST BE COMPOSITED. 6700g FROM EACH SX ARE TAKEN, FOR A TOTAL OF 2800g.

SX WT - 2400g

mL H_2SO_4 - 30.4 + 20.0 + 18 + 30 + 15 = 113.4 mL OF PLANT SULFURIC ACID.

SAMPLE POURED INTO 2000mL SEP FUNNEL AND ALLOWED TO SIT FOR ~ 1 HR.

NAP ACID RECOVERED.

BOTTLE WT - 230.5 BOTTLE + NAP ACID - 342.4

NAP ACID = 93.9g 111.9

% NAP ACID = $\frac{93.9}{2400} \times 100$ = ~~3.9 wt. %~~

% NAP ACID = $\left[\frac{111.9}{2400}\right] \times 100 = 4.66$

19 mL OF 50% NaOH REQUIRED TO ADJUST BRINE TO pH 5.0.

3/25/08

3/25/08

NAPHTHENATE TESTING - CONTINUED

PHENOLS ON BRINE - ~ 300 ppm

TOC = 5400 mg/L

NAP ACID EXTRACTED IN A RATIO 3:1 (N.A/H_2O) WITH TAP H_2O. WATER PHASED OUT AND TESTED.

PRECISION PETROLEUM LABS, INC.

5915 Star Lane Houston, TX 77057
Ph. 713-680-9425 Fax: 713-680-9564

CERTIFICATE OF ANALYSIS

Company:	CES Environmental Services, Inc
Invoice No.:	37021
Lab Reference No.:	2008-03-717
Product ID:	0308-90 3-26-08
Date Received:	03-26-2008
Authorized By:	Miles Root

PARAMETER	TEST METHOD	TEST RESULT
Sodium, PPM	EPA-6010	4,769
Total Acid number, Mg KOH/gm	D-974	151.53

Daniel Zabihi
QA Manager
Date: 03-28-2008

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

RM
ppm
3/25/08
MK

< 0.1 ppm

4,769 mg/L
KID - 3,998 mg/L

3/2:

TINUED

3:1 (N.A/H_2O)
AND TESTED.

PRECISION PETROLEUM LABS, INC.

5915 Star Lane Houston, TX 77057
Ph. 713-680-9425 Fax: 713-680-9564

CERTIFICATE OF ANALYSIS

Company:	CES Environmental Services, Inc
Invoice No.:	37021
Lab Reference No.:	2008-03-718
Product ID:	0308-91 3-26-08
Date Received:	03-26-2008
Authorized By:	Miles Root

Volatile Organics	Test Method	Reporting Limit, PPM	Results PPM
Benzene	S.W. 8260	0.100	BRL

Daniel Zabihi
QA Manager
Date: 03-28-2008
BRL = Below Reporting Limit

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

RM
PPM

03/25/08

MJR

< 0.1 ppm

4,769 mg/L
KID - 3,998 mg/L

3/2

TINUED

3:1 (N.A/H_2O)
AND TESTED.

PRECISION PETROLEUM LABS, INC.

5915 Star Lane Houston, TX 77057
Ph. 713-680-9425 Fax: 713-680-9564

CERTIFICATE OF ANALYSIS

Company:	CES Environmental Services, Inc
Invoice No.:	37021
Lab Reference No.:	2008-03-719
Product ID:	0308-92 3-26-08
Date Received:	03-26-2008
Authorized By:	Miles Root

TOTAL METAL	TEST METHOD	PREPARATION METHOD	REPORTING LIMIT, PPM	TEST RESULTS, PPM
Sodium	EPA-6010B	EPA-3040/3050	1.500	3,998

BRL = Below Reporting Limit

Daniel Zabihi
QA Manager
Date:03-28-2008
PREPARATION METHOD: EPA-3040 FOR ORGANICS, EPA-3050 FOR ALL OTHER SOLID MATRICES.

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

RM
PPM
03/25/08

< 0.1 ppm

4,769 mg/L
KID - 3,998 mg/L

3/25/08

NAPHTHENATE TESTING - CONTINUED

PHENOLS ON BRINE - ~ 300 ppm

TOC = 5400 mg/L

NAP ACID EXTRACTED IN A RATIO 3:1 ($N.A/H_2O$) WITH TAP H_2O. WATER PHASED OUT AND TESTED.

TOC - 81,100

PHENOLS - ~~$\frac{100}{2} \times \frac{50}{10} \times 1 = 250$ ppm~~

$\frac{100}{2} \times \frac{50}{10} \times \frac{25}{2} \times 1 = 3125$ ppm

03/25/08

MK

OUTSIDE TESTING RESULTS

BENZENE, ON pH ADJUSTED BRINE < 0.1 ppm

ACID NUMBER - 151.53

TOTAL Na^+ - SPRUNG NAP ACID - 4,769 mg/L

TOTAL Na^+ - WATER WASHED NAP ACID - 3,998 mg/L

03/26/08 DISTILLATION - KM TEX 0308-94

RUN DISTILLATION AND RECORD TEMP & RECOVERY. THIS SAMPLE IS THE OH.

%	POT	OH
IBP	103	83
10	103	100
20	105	100
30	106	100
40	107	100
50	108	101
60	114	101.5
70	132	105
80	200	196
90	203	196
95	215	193

← POT IS STARTING TO SMOKE BUT THIS IS NOT A SMOKE POINT CUT-OFF.

MJR 3/26/08

03/26/08 DISTILLATION KMTEX - BTMS 0308-95

DISTILLATION WITH TEMP. & RECOVERY - THIS IS BTMS

	°C	
%	POT	OH
IBP	235	173
10	246	202
15	252	212
20	256	218
30	268	230
40	279	240
50	290	246

DISTILLATION STOPPED, AS THE THERMOMETERS WERE REACHING THE LIMITS OF THEIR TEMP. RANGE.

03/26/08

3/26/08

KMTEX SAMPLES FOR TOC

RUN TOC FOR GL & MATT BOWMAN

0308-100	T- ~~224~~ 607	3/18/08	0318	FEED	TOC-4882
0308-101	T/S 607	3/19	0319		TOC-14160
0308-102	T-607	3/22	0322		TOC-14690
0308-103	T-607	3/24	0324		TOC 14075
0308-104	CITGO CCL 20	22-08			TOC-13595

03/26/08

MK

3/27/08

PPG MeOH/$MeCl_2$ DISTILLATION-

TRAILER 7045 DOC# 60956

%	POT	OH	
IBP	40	38	
7	83	60	← 7% IS CUTOFF FOR $MeCl_2$
10	85	73	
16	90	86	
20	92	88	
23	94	90	← MeOH CUTOFF

ONLY 7% $MeCl_2$ AND 16% MeOH

3/27/08

MJB

3-30-08

TRL 415 - DISTILLATION

THIS SX. IS LOW % ETHANOL.

%	POT	OH
IBP	78	77
10	80	80 78
20	80.5	79
30	81	79
40	81	79.5
50	81	80
60	82	80
70	83	81
80	84	81.5
85	86	81
88	95	87 ← ETHANOL ~ 88% RECOVERY.
89	98	98

3/30/08

ETHANOL DISTILLATION

3-31-08 - THE SAME SX. ABOVE IS BEING REDISTILLED AND STOPPED AT ~ 81°C OH TO SEE IF A 90% ETHANOL SPEC. CAN BE MET.

3/31/08 -

3-31-08

ETHANOL DISTILLATION - CONTINUED

THE DENSITY @ 86% RECOVERY IS 0.828, AROUND 86% ETHANOL.

SECOND RUN WAS CUT OFF AT 63% RECOVERY WITH AN OH TEMP ~ 80°C. DENSITY OF 0.825.

A THIRD RUN WAS DONE, STOPPING AT 80°C, AND APPROXIMATELY 52% RECOVERY. DENSITY IS 0.821, WHICH IS ESSENTIALLY 88%

A 90% CONCENTRATION IS NOT FEASIBLE BY DISTILLATION ALONE.

3/31/08

3/31/08

EVALCA TRL 258 - METHANOL DISTILLATION

DISTILLATION - TRL 258 Doc# 60150

%	OH
15	68
20	68
30	69
40	69
60	70.5
70	71.5
75	72
80	73
82	73
85	75
86	81
87	90

3/31/08

4/1/08

Evalca TRL 258 methanol distillate

Doc # 61353

%	OH
10	68
20	68
30	69
40	69
50	69.5
60	70
70	71
75	72
80	75
85	78
86	80
86	85

4/3/08

EVALCA MeOH

Doc 61503 TRL 258

%	OH
IBP	67
10	67
30	67
50	69
60	69
80	71
85	72
90	82
91	90 ← ENDPOINT -

4/3/08

4/3/08

PPG $MeCl_2$ + MeOH -

TRL 225 Doc # 61605 Profile - 2181

%	Pot	OH	
~~IBP~~	35	37	
10	38	37	
20	38	37	
30	40	37	
40	41	38	
45	65	40	← $MeCl_2$
46	72	60	
47	73	64	
49	74	67	
50	75	68	
56	76	71	
70	80	74	
~~80~~			
79	92	81	
80	96	86	
81	98	90	← MeOH

4/3/08

TRL 7240 and 416
04-09-08

%	OH
~~38~~	
10	38
20	38
30	39
35	39
38	40
40	40 → $MeCH_2$
43	45 ↙
45	55
47	60
48	65
55	68
65	70
70	73
80	75
85	76
87	80 ← MeOH

Godefroy

EPAHO113000836

4/8/08

EVALCA METHANOL TBL 258

TBL 258 DOCUMENT # 61690

%	OH
IBP	62
5	65
10	65
20	66
30	66
40	66.5
50	67
60	67
70	68
80	69
85	71
90	72
94	90

4/08/08

4/10/08

EVALCA TRL 258

MeOH TRL 258 Doc# 61885

%	OH
IBP	63
25	67
40	67
60	68
70	69
85	71
90	90

92% Recovery-

4/10/08

4/16/08

PPG TRL 7045 $MeCl_2$/MeOH

SAMPLE IS DOC # 62378. SAMPLE HAS 2 PHASES.

%	POT	OH	
IBP	35	37	
10	37	38	
20	38	38	
30	38	38	
40	39	38	
45	51	38	
46	71	38	
48	84	60	← $MeCl_2$
49	86	70	
51	88	79	
56	93	90	← MeOH
57 - FINAL RECOVERY			

46% $MeCl_2$ 10% MeOH

MJR 4/16/08

4/17/08

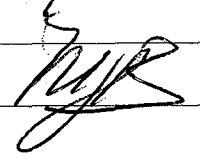
EVALCA METHANOL TRL 258

EVALCA TRL 258, DOCUMENT # 62464

%	OH
IBP	64
10	68
20	68
30	69
40	69.5
50	70
60	71
70	72
80	75
85	78
89	90

90% RECOVERY. TYPICAL WHITE SOLIDS

4/17/08



4/22/08

EVAL 0408-71

%	POT	OH	
5	91	79	
10	95	80	← LOTS OF FOAMING IN THE
30	98.5	80	POT BETWEEN THESE POINTS
40	114	80.5	
45	119	82	← ~1 mL OF DEFOAMER ADDED DUE TO EXCESSIVE FOAMING UP INTO COLUMN.
46	122	98	
47	123	100	
52	138	103	
55	153	105	
58	182	108	
58			← CUT OFF. POT AT 195, OH AT 108

THE ABOVE WAS DONE TO GET AN IDEA OF THE VOLUMES THAT MAY BE RECOVERED, AND THE BOILING RANGES.

4/23/08

4/23/08

EVAL 0408-71

ANOTHER DISTILLATION IS BEING RUN TO COLLECT 3 CUTS FOR FURTHER TESTING.
A 200 mL SAMPLE IS DISTILLED. 10 DROPS OF ANTI FOAM ARE ALSO ADDED BEFORE HAND. 10 DROPS IS NOT ENOUGH, ANOTHER APPROX. 1 mL IS ADDED.

	%	POT	OH	
	IBP	90	78	
(20 mL)	10	92	79.5	← ADD 1 mL DEFOAMER
				← A SECOND 1mL ADDED
(40 mL)	20	94	80	← A 3RD 1 mL ADDED
(60 mL)	30	98	81	
(80 mL)	40	108	81	
(90 mL)	45	119	92	← END OF 1ST CUT - 91 mL
(91 mL)				

TESTING ON FIRST CUT -
DENSITY - 0.821 ; WATER WHITE
ODOR - AMMONIA - TEST KIT SHOWS > 400 ppm NH_4

ADDED 1 mL DEFOAMER TO WATER CUT.
WATER CUT - POT - 163 OH - 112. SHUT DOWN
29 mL RECOVERED.

4/23/08

WATER CUT- DENSITY = 0.995

TOC = 15960 mg/L, ODOR OF AMMONIA

POT BTMS - DENSITY - 1.09

APPEARANCE IS VERY DARK BROWN

HAS ODOR OF AMMONIA.

MJR 4/23/08

Miles Root

From: Gary Lenertz
Sent: Friday, April 18, 2008 4:15 PM
To: Miles Root
Cc: Gary Peterson; Marlin Moser; Kim Harmon; Joe Wilson
Subject: Sample Distillation Request Sample 0408-71

Miles

We have a new stream that we want to evaluate to see if we could recycle. I labeled it 0408-GL in the lab since I did not have a number handy. Since then, I logged it in the shared spreadsheet under 0408-71.

I would like to run a distillation keeping records of the boiling point at 10% increments. Separate the material flashing at temperatures less than 100C.

I would also try to take a separate water cut so we could see if that is something we could discharge. This is probably a long shot.

Then lastly, if we can get a cut for everything above water. We might be able to sell to JT Baxter.

The composition according to the supplier (Teris), is as follows:

2% Acetone (bp ~56C)
45% IPA (bp ~82C)
2% Methanol (bp~64C)
15% Water
6% 1-Methyl 2-Pyrolildinone (bp ~202C)
20% 1 Metholy 2 propanol (bp~120C)

For now, I just want the following analysis:

Light cut – S.G., color, odor, organic chlorides
Water cut – TOC, SG
Heavy cut – SG, color, odor

Call me if you have any questions.

Best Regards,

Gary Lenertz
Director of Sales and Marketing

4/28/08

PPG $MeCl_2$/MeOH TRL 7045

TRL 7045 DOCUMENT # 63116 PROFILE # 2281

%	Pot	OH
IBP	37	37
10	38	37
30	61	38
31	69	38.5 ← $MeCl_2$
32	76	45
33	76	66
65	84	77
70	88	77
75	94	88
76	—	90 ← MeOH CUTOFF

NO SOLIDS FORMED IN POT!

4/28/08

EPAHO113000844

5/1/08

EVALCA METHANOL TRL 254

TRAILER 254; DOCUMENT # 63180; PROFILE 2616

%	OH
IBP	68
10	69
20	69.5
30	69.5
40	70
50	71
60	72
70	73
75	74
80	76.5
85	86

86% - RECOVERY

5/1/08

MK

5-2-08

PPG $MeCl_2$

TRL 15816 Doc 63408

%	P	OH
5	37	37
10	38	37
20	41	38
30	42	38
40	45	39
48	48	40
55	55	47
60	65	58
65	70	65
70	70	68
75	71	68
80	72	68
85	75	68
90	80	68

48% → $MeCl_2$ 48% $MeCl_2$

→ MeOH (42%)

5-4-08

PP6 $MeCl_2$

TRL 225; DOCUMENT # 63398

%	POT	OH	
IBP	39	38	
10	41	38.5	
20	44	40	
30	47	41	← $MeCl_2$
40	53	44	
47	60	50	
50	63	55	
53	67	63	
57	69	66	
60	70	66	
65	70.5	67	
70	71	68	
75	72	69	
80	73	70	
90	75	73	
94	84	73	← MeOH

THIS SAMPLE IS A SINGLE PHASE AND PRODUCES ESSENTIALLY NO SOLIDS IN THE POT.

5/4/08

EPAHO113000847

~~5-2-08~~ KMCO ETHANOL

5/6/08 TRAILER 266, DOCUMENT 63368

PROFILE 2095

%	POT	OH
~~IBP~~	79	78
10	81	79
20	81.5	79
30	82	80
40	82.5	80
50	83	80
60	84	80.5
70	86	81
75	89.5	81 ←
77	93	84
79 80	96	89

5/6/08

5/8/08

KMCO ETHANOL

TRL. 266; DOCUMENT 63725; PROFILE 2095

%	POT	OH	
IBP	83	78	
10	85	81	← END. ETHANOL
15	86	82	
20	86.5	82.5	
25	87	83	
30	87.5	84	
35	88	85	
40	89	85.5	
45	90	87	
50	92	88	

SX. DOESN'T LOOK OR SMELL RIGHT. IT HAS AN OILY LOOKING DROPLETS LAYER.

5/09/08

5/9/08

EVALCA METHANOL- TRL 258

TRL 258; DOCUMENT # 63843; PROFILE 2616

%	OH
~~BP~~	—
10	66
30	67
40	68
50	68
60	69
70	69.5
75	70
81	71
85	71.5
90	73
92	75
93	75 ← NOTHING LEFT IN POT.

TYPICAL SOLVS IN BTMS

MR
5/09/08

5/12/08

TRAILER 238 DISTILLATION

TO DETERMINE APPROXIMATE % ALCOHOL (ETHANOL)
THIS IS METHANOL.

%	POT	OH
~~IBP~~	68	67
10	71	69
15	71	69
20	71.5	69
30	73	70
40	73	70.5
50	73.5	71
60	74	72
70	77.5	73.5
80	81	75.5
85	86	78
~~90~~		
89	96	83
90	99	88

MJK

5/12/08

5/13/08

KMCO ETHANOL TRL 253

TRAILER 253, DOCUMENT # 64055 PROFILE 2095

%	OH
IBP	78
10	81 ← ETHANOL CUT OFF
17	82
20	82.5
30	84
40	85.5
50	88
55	90

5/13/08

5/15/08

KMCO TRAILER 7253

TRAILER 7253, DOCUMENT # 64056; PROFILE 2095

%	OH
12	81
15	81
20	81.5
23	82
30	83
40	85.5
50	89

5/15/08

5/15/08

PPG METHYLENE CHLORIDE

TRAILER 225 Doc# 64159 PROFILE - 2281

%	Pot	OH	
IBP	39	37	
10	43	37	
20	48	37.5	
25	55	40	$MeCl_2$
29 ~~30~~	64	41	← ~~MeOH~~ CUTOFF
30	66	46	
31	70	61	
33	71	65	
37	73	67	
50	74.5	68	
55	75.5	69	
70	79	72	
80	84	74	
82	88	75	
85	94	79	
86	97	84	← MeOH CUTOFF
86+	98	90	

MK 5/15/08

5/19/08 PPG METHYLENE CHLORIDE / METHANOL - TRL 15816

TRL 15816 DOCUMENT # 64337

%	POT	OH	
IBP	34	35	
10	36	37	
30	38	37	
40	38	37.5	
50	38.5	38	
56	61	38	
58	75	41	← $MeCl_2$ CUTOFF
59	78	64	
65	83	70	
70	89	71.5	
72	96	82	← MeOH CUTOFF
73	97	90	

REMAINDER IS SOLIDS ∴ > NORMAL

MJR
5/19/08

5/20/08

NaSH TRL 268

%Na = 6.59

%S = 2.857

Sulf = 62 ∴ only NaOH and Na_2S

$\%\ Na_2S = 62\% \times \%Na \times \frac{78}{46} = .62 \times 6.59 \times \frac{78}{46} = 6.9$

%NaHS = 0 ; Sulf < 100

EPAHO113000856

5/20/08

EVALCA MeOH - TRL 210

EVALCA TRL 210, DOCUMENT # 64512; PROFILE 2616

%	OH
IBP	65
10	67
20	67.5
30	68
40	68
50	68.5
60	69
70	69
80	71
88	74
90	83
91	90

LESS THAN TYPICAL SPECS.

5/20/08

EPAHO113000857

5/22/08

TRL 215 - STREAM 3

THE BOTTOM PHASE (D - 0.81) CONTAINING TOLUENE/MeOH WAS EXTRACTED 1:1 WITH TAP WATER. 26% OF THE SAMPLE REMAINED AS NON WATER SOLUBLE. THE WATER PHASE IS TO BE DISTILLED TO CHECK FOR MeOH RECOVERY.

%	POT	OH
IBP	76	64
10	82	74
20	85	77
28	88	80
30	88.5	80.5
35	91.5	84

38% RECOVERY - D = 0.843

MJK

5/22/08

5/27/08

EVALCA DISTILLATION - TRL 238

TRL 238; DOCUMENT # 64871; PROFILE # 2616 (MeOH)

%	OH
IBP	65
10	67
20	68
30	68.5
40	69
50	69.5
60	70
70	71
80	73
89	88 ← End Point - MeOH
89+	90

MJB 5/27/08

5/28

EVAL 0408-71

THIS IS A NELES SX. OF THIS SAME SOURCE. @ 1.0 g OF CITRIC ACID ADDED TO REMOVE NH_4^+ ODOR. (100 mL SX) - 0.5g/100 mL IS NOT ENOUGH.

%	POT	OH
IBP	82	79
20	83	80
30	84	80
40	84	80
45	84.5	80
50	84.5	80
55	84.5	80
60	85	80
65	85.5	80
70	86	80
75	87	80
80	88.5	80+
82	91	80.5

NO FOAMING IS NOTED!

DISTILLATION STOPPED DUE TO SMOKE DECOMPOSITION IN FLASK.

THE DISTILLATE IS WATER WHITE. THE POT BTMS BLENDS EASILY AND WITHOUT ISSUE WITH BLACK OIL. NO NH_4^+ ODOR IS NOTED!

5/28/08

EPAHO113000860

5/29/08

EVAL 0508-67

D - 1.1628 pH = 12.48

% NaOH (TITRATION) = 11.98

MJK
05/29/08 -

5/30/08

PPG METHYLENE CHLORIDE

TRAILER 7045 DOCUMENT # 65057 PFI 2281

%	Pot	OH	
IBP	38	38	
10	47	42	← $MeCl_2$
20	51	44	
30	56	45	
33	59	47	
34	59.5	48.5	
35	60.5	50	
38	62	57	
40	63	60	←
50	65	64	
55	67	65	⇐ START OF MeOH (BP = 64.65°C)
60	68	66	
65	68	66.5	
70	69	67.5	
75	70.5	69	
80	76	71	← ENDPOINT
82	92	68	

MJR 5/30/08

6/2/08 PPG TRL 226

Doc # 65062 DATE 5/30 PFI # 2327

40% OF THIS SX. IS A TOP PHASE ORGANIC. OF THE BTM 60% A 50/50 MIX WITH H_2O SHOWS A 5 ml WATER INSOLUBLE LAYER - OR 10% WATER INSOLUBLE.

DENSITY - TOP - 0.8518

DENSITY - BTM - 0.9917

FLASH POINT - BTM $\leq$ 125°F

DIST ON TOP PHASE

%	POT	OH	
TBP	113	88	YOU CAN TELL SX. HAS JUST
10	113	107	A BIT OF H_2O
25	113	108	
40	114	109	
65	114	109.5	
70	115	109	
80	117	110	← SMOKE FROM SOME TYPE
85	124	109.5	OF DECOMPOSITION BEING IN COLUMN.

EPAHO113000863

6/2/08

PPG 226 - CONTINUED

A PORTION OF THE AQUEOUS PHASE WAS EXTRACTED 1:1 WITH H_2O TO REMOVE ANY ORGANICS. A DISTILLATION ON THE WATER EXTRACT FOLLOWS:

%	POT	OH
IBP	101	97
5	102	99

ENDED - NO RECOVERABLE MeOH

TOC ON NEXT AQUEOUS PHASE: - 276,900

@ 6/2/08

6/4/08

SUNCOAST BIODIESEL DISTILLATION

BO BROUGHT A SA. FROM SCOTT RAINEY OF BIODIESEL. WANT TO SEE HOW MUCH METHANOL THERE COULD BE. RUN DISTILLATION.

% POT OH

JBP

POT REACHED 208°C WITH JUST SMOKING, NOTHING EVEN CLIMBING INTO THE COLUMN. ∴ NO METHANOL.

MJK
6/4/08

6/4/08

EVALCA METHANOL - TRL 268

TRL 268; DOCUMENT# 65322; PFI 2616 (MeOH)

%	OH
IBP	65.5
10	68
25	69.5
35	70
40	70
50	71
60	71.5
70	74
75	78
78	84
79	90 ← CUTOFF

6/4/08

6/9/08

ZACH DISTILLATION

THIS IS THE BOTTOMS PHASE OF A ZACH STREAM 3". DISTILL TO SEE IF IT CONTAINS POSSIBLE ALCOHOLS.

%	OH
IBP	66
5	77
10	97
15	98
20	99
30	99.5 ← STOPPED

ALL OF THE LIGHT ALCOHOLS ARE BOILED OVER BY THE 106 CUT.

6/9/08

6/12/08

TRAILER 262 DISTILLATION

THIS IS A MIX OF MeOH / $MeCl_2$ / TOLUENE

DENSITY OF NEAT SX IS 0.825

%	POT	OH
IBP	65	59.5
5	68	66
10	69	66.5
20	70	67
30	71	67.5
40	72	68
50	73	68.5
60	73.5	69.5
70	74.5	70
80	77	71
85	80	72
90	90	75
91	99	90

6/12/08

6/12/08

FRONT DIST. UNIT

A SX. BROUGHT TO SEE IF WE CAN RECOVER MeOH.

%	POT	OH
IBP	—	—
5	68	63
10	69	66
25	72	68.5
30	73	69
40	74	70
50	75	71
55	75.5	71.5
60	76.5	71.5
70	78	72
75	81	72.5
80	89	75
83	—	85
84	97	90

MJS
6/12/08

6/23/08 ZACH EVAL # 0608-47

A STREAM CONTAINING MeOH (25-40%); XYLENES (5-20%); MTBE (30-70%) AND DMADC - DIMETHYL ACETYLENE DICARBOXYLATE (<1%) IS TESTED FOR PROCESSING.

AS THE MeOH IS WATER SOLUBLE, EXTRACTIONS USING VARIOUS RATIOS OF SX/H_2O WERE TESTED TO FIND THE SMALLEST RATIO TO RECOVER THE MeOH.

ML SX.	90	80	70	60	50
ML H_2O	10	20	30	40	50
ML AQUEOUS	14	26.5	39	47	59

FROM THE ABOVE DATA WE SEE THE 70/30 EXTRACTION USES THE LEAST AMOUNT OF H_2O TO RECOVER THE METHANOL.

DENSITY - NEAT SX. - 0.8045
DENSITY - 70/30 EXTRACTED SX - 0.7986
D-MTBE - 0.7404 D-MeOH - 0.79
D-XYLENE - ~0.87

~~FROM~~ USING THESE DENSITIES, AND THE ASSUMPTION THAT EXTRACTED SX. IS XYLENES + MTBE RATIO IS ~ 64% MTBE - 36% XYLENES
BP. MTBE - 55.2°C BP XYLENES ~ 138°C

6/23/08

ZACH EVAL 0608-47 CONT.

A DISTILLATION OF THE TOP PHASE FOLLOWS:

%	OH
30	53
40	53.5
50	54
58	57
60	57
65	57.5
68	56
69	53

THE OVERHEAD DISTILLATE IS PALE YELLOW IN APPEARANCE AND HAS A DENSITY of 0.739 @ AMBIENT. THE POT BTMS ARE DARK BROWN IN APPEARANCE.

CONCLUSION- SX. HAS ~9% METHANOL 63% MTBE AND 28% XYLENES (w/ <1% DMAS)
USE 3/7 RATIO OF H_2O/LOAD RECEIPT TO EXTRACT MAX. METHANOL WITH LEAST H_2O. WATER WILL THEN CONTAIN 23% METHANOL, WHICH CAN BE DISTILLED.

Mike Root
6/23/08

6/23/08

EVALCA MeOH DIST. - TRL 266

DOCUMENT 66567; PROFILE 266

%	OH
IBP	65
10	67.5
20	68.5
30	69
40	70
50	70
60	71
70	73
80	77
81	87
82	90

← END POINTS

Mike Root
6/23/08

6/24/08

TRL 411 DISTILLATION

PROFILE 2852 - WATER WASH BOTTOMS.

MIXED ALCOHOLS - MeOH/IPA.

%	POT	OH
IBP	73	68
10	80	71
20	83	80
30	83	80
40	83	80
50	83	81
60	84	81
70	87	81
80	95	82
81	100	99

← BROWN DECOMPOSITION SEE IN OH AT THIS POINT

85	103	99.5
90	107	99.5

DISTILLATION STOPPED - NOTED DECOMPOSITION IN POT BOTS

Mike Root
6/24/08

EPAHO113000873

6/25/08

ZACH TBL. 347 DISTILLATION

DOCUMENT # 66702, 6/25/08; PFI 2556

%	OH	
~~IBP~~	66	
20	67.5	
30	69.5	Looks like METHANOL
40	71	
50	71	
60	72	
70	73	
75	74.5	
80	77	
85	98.	← CUT OFF.

Mike Root

6/25/08

6/26/08

EVALCA MeOH TRL 237

TRAILER 237, DOCUMENT # 66632, PFL-2616

%	OH
IBP	67
20	70
30	70.5
40	71
50	72.5
60	73.5
70	75.5
80	82
81	85
82	90

Mike Root
6/26/08

6/26/08

IPA - Density vs. Concentration

Several wt% mixes of IPA/H_2O will be prepared and their densities determined.
Prep 200 gram standard solutions.

IPA	Grams IPA	Grams H_2O	Density
98%	196	4	0.7617
95%	190	10	0.7725
90%	180	20	0.7843
85%	170	30	0.7936
80%	160	40	0.8059
75%	150	50	0.8201
(99.5 min) 100%			0.7584

6/29/08

PPG TRL 1581G

TRL 1581G; Document # 66924; Pg 2281

%	OH	
IBP	37	
10	39.5	
20	42	← End of $MeCl_2$
30	49	
~~40~~		
38	60	
39	62	
40	63	← Start of MeOH
42	65	
50	67	
60	70	
70	72	
75	75	
80	77	
81	82	
82	90	← Cut Off

Mike Root
6/29/08

EPAHO113000877

6/30/08

PPG TRL 7240 - PFI 2327

NEW STREAM - TRL 7240, DOC# 67006; PFI 2327

%	POT	OH
IBP	101	82
5	103	99
10	104	99.5
20	106	99.5
30	107	99.5
40	117	100
50	168	100
52	200	100 ← STOPPED DUE TO EXCESSIVE SMOKING IN POT.

THE POT BTMS IS A DARK AMBER-VISCOUS MATERIAL. THE DISTILLATE HAS A 4 ml LAYER OF SOME ORGANIC ON THE WATER. DISTILLATE IS WATER WHITE.

Mike Root
6/30/08

7/1/08

EVALCA MeOH TRL 237

TRL 237; DOCUMENT # 67044; PFI 2616

%	OH
IBP	65
10	68
20	69
30	69.5
40	70.5
50	71
60	72
70	74
75	76
80	79
82	85
83	90

CUT OFF - 84% RECOVERY.

Mike Root
7/01/08

7/15/08

ZACH TBL 215

DOCUMENT 67756; PFI 2880; TBL 215

%	POT	OH	%	POT	OH
IBP	59	58	80	72	70
10	62	60	85	75	71.5
20	64	60	90	80	75
30	65.5	61	93	120+	75
40	67	63.5	SMOKING STARTS -		
50	68	66	SHUT DOWN.		
60	69	67			
70	70.5	68			

NOTED 2-PHASED DISTILLATE DURING MID PORTION OF DISTILLATION - BUT TOTALLY SOLUBILIZED LATER.

A SET OF H_2O:SAMPLE WASHES WAS PERFORMED TO DETERMINE BEST RECOVERY RATIO

H_2O	SAMPLE	RESULTING AQUEOUS	ML RECOVERED
10	90	25	15
20	80	26-25 (2ND RUN)	6-5 (2ND RUN)
5	95	21	16

7/15/08

EPAHO113000880

7/17/08 GREEN HUNTER BIODIESEL

THIS IS THE ACTUAL MATERIAL RECEIVED RE EVAL 0708-32
T-4. TESTING DONE WITH THIS TRUCK MATERIAL.

99.9g Sx.
5 ml PLANT H_2SO_4.
CENTRIFUGE 40% H_2O 10% EMULSION 50% Oil
TOC- 146,900 ppm ON STM H_2O
BTU- 0.6480 g BENZOIC Acid
0.4060 g Sx.-
1.0540 TOTAL

BTU = 12011 ; OF THIS - BENZOIC ACID
CONTRIBUTION IS 11373 BTU/lb x .6480 = 7370
∴ 12011 - 7370 = 4641 BTU/lb. FOR FATTY Acid

THE ABOVE FATTY ACIDS ARE NOT SOLUBLE
IN BLACK OIL OR LIGHT ENDS.

Mike Root
7/17/08

07/17/08

ZACH DISTILLATIONS

	TRL LT 1305 # 68087 PFI 2880		TRL 220 # 68088 PFI 2880	
%	POT	OH	POT	OH
~~IBP~~	56	51	55	51
10	59	56	57	53
20	62	58	59	55
30	63	59	60	55
40	65	61	61	56
50	67	63	63	59
60	70	65	64	61
70	72	65	67	64
80	80	66	70	65
85	110	67	78	66
85.5	140	67 ← Shut Down-		
~~90~~				
88			125	65 ← Shut Down

Mike Root
7/17/08

7/17/08

GREEN HUNTER WORK

THIS IS A CONTINUATION OF PREVIOUS WORK FROM 7/17.

TRL 7735 - THIS IS A POURABLE LIQUID
100 g Sx. + 5 mL H_2SO_4 GIVES 20% WATER AND 80% ORGANICS.
THE TOP PHASE IS BLACK OIL SOLUBLE. IT BECOMES A GEL UPON SITTING.
SAME TESTING FOR TK-7 - THIS IS A SLUDGE
100 g Sx. + 5 mL H_2SO_4 GIVES 40% H_2O, 7% EMULSION AND 55% ORGANIC. THE TOP ORGANICS MIX WITH BLACK OIL WITHOUT ISSUE. (50/50)
A TOC ON THE H_2O IS 124,400
BTU: 0.6184 g BENZOIC
0.4730 g Sx
BTU = 12,282.
BENZOIC CONTRIBUTION = .6184 × 11373 = 7033
∴ 12282 - 7033 = 5249 BTU/lb FOR Sx.

Mike Root 7/17/08

ASH ON ACID FROM T-7 MIXING -
CRUCIBLE - 53.6436 CRUCIBLE + Sx. 56.7548
CRUCIBLE + ASH % ASH =

7/23/08

EVAL 0708-40

DISTILLATION OF A SAMPLE CONTAINING ~ 17.6 % MeOH AND 3.3% IPA, AND 75 % H_2O

%	POT	OH
IBP	92	72
5	94	79
10	97	89
11	98	91

ONLY 10% RECOVERY OF "WET METHANOL".

Mike Rost
7/23/08

EDACO METHANOL

TRL 262, Doc # 68394 PFI-2616

%	OH
10	67
20	68
30	69
40	70
50	71
60	72
70	74.5
80	81
82	90

← METHANOL CUT OFF -

Mike Rost
7/24/08

7/29

EVALCA TRL 267 - METHANOL

DISTILLATION - EVALCA TRL 267 DOC # 68607

PFI - 2616 7/28/08

%	OH
IBP	67
10	69
20	70
30	71
40	71.5
50	73
60	76
70	80
73	90

75 mL - RECOVERY -

Mike Root
7/29/08

8/14

EVALCA TRL 267 - MeOH

EVALCA - Doc# 69531 PFI - 2616 08-13-08

%	OH
IBP	65
10	66
20	67
30	68
40	69
50	69
60	70
70	71
80	72
90	82
91	90

Mike Root
8/14/08

8/15/08 PRESTON ENVIRONMENTAL EVAL 0808-08

DISTILLATION OF SAMPLE - 100 mL
FIRST CUT IS WET METHANOL - 34 mL
DENSITY - 0.8102
SECOND CUT IS WATER - 40 mL
TOC - 15200
FLASH POINT > 140°F

POT BOTTOMS - 23 mL (NO H_2O)
BTU - 6962
BTU (#2) 6671
ASH -

CRUCIBLE TARE	63.1440	> Sx wt	3.6448
CRUCIBLE + Sx	66.7888	ASH wt	.0389
CRUCIBLE + ASH	63.1829		

% ASH = 1.07

9/17/08

8/15/08

GREEN EARTH SAMPLES

2 OIL SXS. FROM GREEN EARTH, NO SX. #5.
THE GOOD LOOKING SAMPLE HAS NO H_2O BY DEAN STARK.
THE SECOND SAMPLE IS ~10% OIL, WITH THE REST H_2O.

GOOD LOOKING SX -
BTU - 15469
ASH - WT% = 0.18
CRUCIBLE TARE - 63.1564
CRUCIBLE + SX 67.4104
CRUCIBLE + ASH 63.1642
WATER, DEAN STARK - 0%

Mike Rast
8/19/08

8/21/08 TRL 208- L&B

DISTILLATION OF "GREEN" METHANOL.

%	Pot	OH
IBP	66	66
10	68	67
20	69	67.5
30	70	68
40	71	68
50	72	68.5
60	73	69
70	74	70
80	77	71
90	93	75
92	100	90

THE BOTTOMS IS GREEN, THE OH PROD IS WATER WHITE.

Mike Root
8/21/08

8/21/08

Color Removal From Methanol

Color Removal from methanol on previous page. Activated carbon will be weighed and a known volume of MeOH used to see best color removal

Carbon wt	MeOH vol	Color Removal
10	100	Yes - Quick
1	100	No
2	100	No
4	100	Yes - Slow
5	100	Yes - Good

Mike Root
8/21/08

8/25/08 PPG TRL 15816

Doc# 70836

%	OH
IBP	66
10	79
20	84
25	89

SAMPLE SHOWS NO $MeCl_2$.

[signature]
8/25/08

8/26/08

PPG TRAILER 225

Doc # 70862, MeOH AND $MeCl_2$

%	OH
IBP	38
10	39
20	39.5
30	39.5
40	40

42% RECOVERY OF $MeCl_2$

REMAINDER IS SOLIDS IN THE POT BOTTOMS.

Mike Lott

8/26/08

9/2/08

PPG TRAILER 1581L

DISTILLATION - Doc # 71133 PFI - 2281 8/28/08

%	OH	
25	38	← $MeCl_2$ CUTOFF
27	65	
28	68	
30	70	
40	76	
43	82	
45	84	
47	89	← MeOH CUTOFF

Mike Root
9/2/08

9/2/08

EVAL 0808-44 - SUNBURT TRUCKING

CHLOR-D-TECT - 1600 ppm

API - 28

ASH - CRUCIBLE TARE 58.2841

CRUCIBLE + Sx 61.7930

CRUCIBLE + ASH - 58.3210

Sx WT 3.5089 ASH WT .0369 % ASH 1.05

FLASH POINT - > 140°F

BTU - 16520

H_2O - 1.93%

SALES: KEN NOAKES

Mike Root
9/2/08

9/3/08

GREEN METHANOL DISTILLATION

A SAMPLE WAS REDISTILLED TO GET A DISTILLATE DENSITY.
RECOVERY, UP TO ~85° C, WAS 92 VOL %.
DENSITY = 0.7954
EQUATES TO 99 % MeOH
$\%X = .0034 \times (4/.011)$

100% MeOH = .792 > .011
96% MeOH = .803

$\frac{.011}{4} = \frac{.0034}{X}$

9/3/08

09/18/08

EVALCA METHANOL

TRL 266, DOC ~~2616~~ 72154, PFL 2616 FROM 9/17/08

%	OH
IBP	66
10	67
20	68
30	69
40	69
50	70
60	71
70	72
80	84

82% RECOVERY TO 90°C OH.

Mike Scott
9/18/08

9/22/08

EVALCA METHANOL

TRL 266, DOC # 72184, PFL 266 09/19/08

%	OH
IBP	66
10	68
20	69
30	70
40	70
50	70
60	71
70	72
75	74
80	75
83	90

84% RECOVERY.

TYPICAL SOLIDS

Mike Root 9/22/08

9/24/08

T-187 TREAT

T-187 WAS H_2SO_4 + H_2O_2 TREATED BY MATT BOWMAN. A HEAT AND SPIN OUT SHOWS 4% SOLIDS, 30% H_2O, 30% OIL AND 36% SLUDGE. THE 4% SOLIDS ARE ON THE BTM, AND MAY BE Na_2SO_4. THE 36% SLUDGE IS LIKE "CRUD", OR A WET CRUDE.

OIL BTU = 15,410

Mike Root
9/24/08

10/1/08

PPG $MeCl_2$ DISTILLATION

TRL 225, PFI 228, DOCUMENT# 72871

%	OH
IBP	98
5	99

NO $MeCl_2$ IN THIS LOAD.

Mike Lott

10/1/08

10/1/08

PPG $MeCl_2$ Distillation

TRL 7005, PFI 2281, Document # 72919

%	OH
~~8~~ IBP	73
10	78
20	85

No $MeCl_2$ in this load.

Mike Root
10/1/08

10/3/08

PPG Distillation

TRL 7240 Document 73604 PFI- 2281

%	OH	
IBP	39	
10	40	
20	41	
25	42	
30	42	← $MeCl_2$
32	44	
34	53	
35	60	← Start of Good MeOH
37	64	
45	68	
50	68	
55	69	
60	69	~ 30% $MeCl_2$
70	70	~ 54% MeOH
75	71	
80	72	
85	74	
89	90	

Kyle Root
10/3/08

10/6/08

PROMAXIMA EVALS 1008-08 → 10

3 DIFFERENT SXS FOR EVALUATION.

1008-08 - ACIDIC - ADJUSTMENT OF pH W/ LIME DOES NOTHING. LOTS OF 50% NaOH FORMS HIGH VOLUME OF SALTS. NOT REALLY TREATABLE

1008-09 - STRONG ACID, - VIOLENT RX UPON ADDITION OF 50% NaOH. - CANNOT TREAT.

1008-10 - CAUSTIC, - pH-14 - OF COURSE, VIOLENT RX WHEN YOU TRY TO ACIDIFY. WHAT CAUSTIC IS THIS? IT FOAMS WHEN SHAKEN SO HAS A DETERGENT - WHICH MEANS TOC MAY BE HIGH.
TOC = 94,000.

Mike Root
10/06/08

10/7/08

PPG $MeCl_2$ Distillation

PPG TRL 7005, Doc# 73302, PFI 2281

%	OH	
IBP	37	
10	37	
20	38	
~~30~~		
27	38	← $MeCl_2$
30	56	
40	73	
45	75	
50	78	
55	88	
58	90	← MeOH

Mike Rost
10/7/08

10/9/08

LOW FLASH WASTEWATER

THIS WATER IS FROM KMTEX, PORT ARTHUR

	165	195
PH	6	6
TREAT	USE NaOH/LIME COMBO FOR GOOD TREAT	
TOC (TREATED)	1850	4650
METALS		
Ni	.234	.293
Zn	.110	.074
Cu	.060	.037
Cd	.118	.064
PHENOL	5	5
OIL	~20%	
CHLOR-D-TEST	600 ppm	

TREAT THIS SAMPLE W/ H_2SO_4 + FERRIC AS USUAL, BUT ADD NaOH TO ADJUST PH, THEN SMALL AMOUNT OF LIME + POLY, OTHERWISE, SOLIDS ARE EXCESSIVE.

Mike Lott
10/09/08

10/15/08

Distillation Unit #3

A distillation of the bottoms of this unit shows:

%	Pot	OH
IBP	66	65
10	69	68
20	72	69
30	73	69.5
40	73	70
50	74	71
60	75	71.5
70	77	72
80	83	75
90	95	80
95	110	98

Mike Root
10/15/08

10/16/08

EVAPCA DISTILLATION - TRL 210

TRL 210, DOC # 73898, PFI 2616 - MeOH

%	OH
IBP	65
10	68
20	69
30	71
40	71
50	72
60	73
70	74
80	80
84	90

Mike Lott
10/16/08

10/20/08

PPG Distillation - $MeCl_2$? - MeOH

PPG TRL 7005 ; DOC# 73875 ; PFI 2281

%	OH
IBP	67
10	73
20	79
25	83
30	86
34	90

% MeOH Recovery ~ 35%

Mike Rook
10/20/08

10/20/08

TRAILER 416 DISTILLATION

A SAMPLE OF TRAILER 416, CONTAINING "WHO KNOWS WHAT" IS DISTILLED TO CHECK ON WHAT TO DO WITH IT. IT HAS TOLUENE, ALCOHOLS, THE "IN BETWEEN" CUT + ??.

%	POT	O/H
IBP	39	38
10	43	41
20	46	43
30	51	47
40	57	52
50	66	64
65	72	68
70	74	69
80	81	72
88	98	95

TOP PHASE OF SAMPLE IS 68% H_2O SOLUBLE
BTM PHASE OF SAMPLE IS 18% H_2O SOLUBLE

10/20/08

TRL 416 - CONT.

BTM PHASE - H_2O EXTRACTED 1:1

THIS IS A 50 mL DISTILLATION

%	(°F) OH
IBP	38
10	40
17	42
25	44
30	46
34	48 ← SMOKE IN OH.
35	55. - STOPPED.

TOP PHASE - H_2O EXTRACTED 1:1

%	OH (°F)
IBP	42
~3	53
~4	64
5	66
10	74
15	80
20	85
25	90

10/2/08

TRAILER 416 - CONT.

DISTILLATION OF NEAT BTM PHASE OF TRL 416

%	POT	OH
IBP	38	38
5	39.5	39.5
10	41.5	40
15	44	41
20	44	42
35	48	44
40	49	45
45	50	46
50	53	47
55	56	49
60	58	51
65	61	5[illegible]7
75	66	65
80	72	66
85	98	80

TOP LAYER D- 0.853
BTM LAYER D- 1.006

SMOKING ENDPOINT IN OH- PROBABLY H_2O-
2 DISTINCT LAYERS FORMED, AND A 3RD
"EMULSION" BETWEEN THE 2.
90% RECOVERY. TWO DISTINCT LAYERS - 78 ML +
12 ML ON TOP OF THAT.

10/22/08

TRL 416- CONT.

DISTILLATION OF TOP PHASE

%	POT	OH
IBP	38	38
5	41	40
10	42	40.5
15	45	41
20	47	42
25	50	43
30	55	47
35	61	56
45	67	65
50	70	67.5
60	73	70
70	75	71
75	77	71.5
80	78	72.5
85	83	74
90	96	88

WATER VISIBLE IN COLUMN AND OVERHEAD.

10/22/08

TAL 416 - Cont.

DISTILLED TOP PHASE - ~ 30 mL OVER. - A DENSITY OF THIS PRODUCT IS 1.170, AND SHOULD BE ~ 81% $MeCl_2$.

RECOMMEND DISTILLING BOTH PHASES SEPARATELY TO RECOVER $MeCl_2$ AND THEN MeOH.

Mike Lott
10/22/08

10/23/08

KMTEX MEK/TOLUENE DISTILLATION

KMTEX TRL 210, DOC# 7429B; PFI 3034-
CONTAINS MEK AND POSSIBLY TOLUENE.

%	POT	OH	
IBP	74	72	WATER AZEOTROPES
10	76	73	W/ MEK @ 73.4 °C
20	84	73	WATER AZEOTROPES
25	93	73	W/ TOLUENE @ 84.1 °C
26	97	99	

SAMPLE HAS NO TOLUENE,
AND LOTS OF WATER.

10/23/08

10/23/08

PPG TRL 7240 - $MeCl_2$/MeOH

PPG TRAILER 7240, DOC# 74438; PFI 2281

%	POT	OH	
IBP	38	38	
10	38	38	
20	38	38	
30	38	38	
40	37	39.5	← $MeCl_2$
41	69	42	} IN BETWEEN
42	74	55	} IN BETWEEN
43	77	64	← MeOH
50	83	71	
55	87	76	
60	92	88	

61% RECOVERY - TOTAL

Kyle Root
10/23/08

10/29/08

EVALCA MeOH - TRL L6731

EVALCA MeOH, TRL 6731, DOC# 74538; PFI 2616

%	OH
IBP	65
10	68
20	69
30	70.5
40	71
50	72
60	73.5
70	77
75	83

RECOVERY TO 90°C - 80 mL

Mike Root
10/29/08

10/29/08 MEK DISTILLATION

THE MEK THAT WAS FINISHED DISTILLING THIS MORNING IS NOT CORRECT. THE TRAILER SHOWS 2 LAYERS, A BOTTOM ~45% AND TOP 55% LAYER.
TOP HAS D= .833, VERY CLOSE TO THE SAMPLE SENT TO LCS YESTERDAY (D= .826).
THE BOTTOMS WAS DISTILLED BY ME IN THE CUBE

%	OH
IBP	73
10	73
20	73
30	73
38	100

DENSITY ON THIS OH PRODUCT IS D= .828.
THE BOTTOMS OF THE TRAILER WILL NEED TO BE REDISTILLED TO PRODUCE GOOD PRODUCT. 38% CAN BE RECOVERED.
NOTE: TRAILER ABOVE IS 210

Mike Rost
10/29/08

11/03/08

KMTEX T-181 DISTILLATION

A DISTILLATION RUN ON KMTEX T-181 SX - TO CONTAIN;- WATER, MEK, TOLUENE

%	OH	POT	%	OH	POT
IBP	72.5	74	85	82	86
10	73	75	90	83	88
20	73	76	92	84	92
30	73	78	93	85	97
40	74	78	94	85	114
50	74.5	79	(95	82	135
60	78	81	SMOKING DECOMPOSITION		
65	79.5	82			
70	80	83			
75	81	84			
80	81	85			

	CMPD	BP
	MEK	79.6
AZEO	MEK: H_2O	73.4
	TOLUENE	110.7
AZEO	TOLUENE: H_2O	84.1

RW OUTSIDE LAB TEST SHOWS:

H_2O - 6%

MEK (DRY BASIS) - 84.68

TOLUENE (DRY) - 14.67

OTHERS - .65

Mel Root
11/3/08

11/10/08 RADA TECHNOLOGIES EVALS. 1108-24(A-C) -22(A-E)

1108-22A. TOP "OIL" LAYER IS NOT MISCIBLE WITH BLACK OIL.

%	POT	OH	
IBP		67	
10	80	70	
20	83	73	LOTS OF FOAMING IN THE POT.
30	85	76	
40	90	80	DENSITY OF OH = 0.8274 ∴ ~87% MeOH
47	96	88	HAS ODOR LIKE FATTY ACIDS

48% RECOVERY.

THE TOP OIL PHASE WAS AGAIN TESTED 1:1 WITH BLACK OIL AND ALLOWED TO SIT OVERNIGHT.

TOC ON POT BTMS IS 126,400 ppm.
IT FOAMS WHEN SHAKEN, JUST LIKE SOAPS.

Mike Root

11/10/08

RNDA TECH - CONT.

DISTILLATION - SX HAS BLACK "TUROS" FLOATING ON TOP OF SAMPLE. THESE APPEAR TO BE "FAT" BALLS - NOT SOLUBLE IN TOLUENE

1108-22B

%	POT	OH
IBP	73	65
10	78	72
20	81	74
30	85	76
40	90	81
45	93	85
48	95	88

DENSITY OF OH = 0.838
~ 84% MeOH

50% RECOVERY.

FOAMING NOTED IN POT DURING DISTILLATION.
TOC IS 104,000 ON POT BTMS

Mike Root

11-10-08 RADA TECH - CONT.

1108-24A - MIXED 1:1 WITH 10% NaOH AND SHAKEN AND CENTRIFUGED. YOU OBTAIN A BTM AQUEOUS LAYER (UNUSED NaOH), SALTS OF FATTY ACIDS, AND A TOP OIL PHASE. THE TOP OIL PHASE IS MIXED ~ 1:1 WITH BLACK OIL. IT APPEARS TO HAVE NO ISSUES.

[FRAC TK 259742]

11-11-08

1 DIST. OF 1108-22C FRAC TK # 239751

%	POT	OH	
IBP	76	67	LOTS OF FOAMING DURING
10	80	72	LATTER PART OF DIST.
20	83	74	DENSITY - 0.829 ~ 87% MeOH
30	85	75	POT BTMS - TOC - 158,800
40	90	78	
44	95	85	
45	% RECOVERY		

Mike Foster

11/11/08

RADA TECH - CONT.

DIST. OF 1108-22 D

%	POT	OH	
IBP	80	69	NO FOAMING.
10	82	72	
20	85	75	D - 0.8417 ~ 82% MeOH
30	89	78	TOC ON POT BTMS - 146,400 ppm
39	97	88	

43% RECOVERY -

DIST. OF 1108-22 E

%	POT	OH	
IBP	76	66	SX. HAD A PARTIAL OIL SHEEN
			NO FOAMING
10	82	72	D - 0.836 ~ 84% MeOH
20	85	74	TOC ON POT BTMS - 166,200 ppm
30	90	78	
40	98	89	

41% RECOVERY

Mike Rost

11/11/08

RADA TECH- CONT

1108-24 B & C WERE BOTH MIXED 1:1 WITH 10% NaOH TO SEE IF ANY OILS BROKE OUT. ALL THAT WAS CREATED IN EACH CASE WAS SOAPS THAT PHASED OUT TO THE TOP.

Mike Root

11/11/08 PHOENIX POLLUTION CONTROL ELOG 1108-27(A-C)

TYPICAL BIODIESEL OFF-SPEC - END OF RUN - STUFF.
MIX OF A TOP - MID - BTM (A-C) SAMPLES.
THE TOP 2 LOOK THE SAME. THE BTM APPEARS TO BE SALTS.
A SAMPLE OF THE TOP BLENDS INTO TOLUENE. ADDING CAUSTIC TO THE SAMPLE FORMS A SLURRY, WHICH, WHEN CENTRIFUGED, BREAKS OUT OIL ON TOP. THIS LOOKS LIKE GOOD OIL. IT IS APPROX 30% GOOD OIL.

Mike Rost 11/11/08

11/12/08

OPTIMA CHEMICALS - EDAC 1108-23

SAMPLE IS ONE PHASE WITH A TRACE OF OIL.
SAMPLE IS TOTALLY WATER MISCIBLE.
MAY CONTAIN - MINERAL OIL, THF, TOLUENE, HEXANE, IPA, MEOH, MEK.

DISTILLATION

%	POT	OH	
IBP	88	98.5	} ?- MEK - IPA
10	101	80	
12	104	98	
15	107	99	
20	108	99	
30	110	99	
40	111	99	
50	113	99.5	
60	114	99.5	
65	114	99.5	

DISTILLATION STOPPED AT THIS POINT
POT IS COATED WITH A WHITE FILM. IT IS SOME TYPE OF SALTS.

Mike Root 11/12/08

11/12/08

SULFIDE - WASTE WATER TREAT - FOR METAL REMOVAL

FIRST STEP - ADD VARYING AMOUNTS OF NaSH PRODUCT TO 50g OF FRAC TK 1004. MIX THOROUGHLY, SPIN OUT AND FILTER THRU GF A/A PAPER. SULFIDE SLUDGE IS FORMED IN EACH CASE.

Sx wt	50	50	50	50	50	50	NEAT
S/S wt.	.10	.22	.29	.43	.50	1.0	—
Ni	1.46	0.62	0.46	0.51	0.49	.67	3.52
Zn	8.0	~~6.26~~ 5.42	5.40	5.81	5.85	6.89	9.29

NOTE* - THERE IS A LIMIT OF SOL'N $S^{=}$ IN A WATER DISCHARGE STREAM.

A SECOND APPROACH OF ONLY ADDING S/S TO A pH ADJUSTED Sx. WAS DONE. A pH ~ 8.5 Sx. WAS "TREATED" WITH S/S, POLYMER. Sx. FILTERED THRU D.E. TO REMOVE SOLIDS.

1.740 Zn 0.646 Ni

Sx. SMELLS LIKE S/S, BECAUSE IT IS!

Mike Keel 11/12/08

11/17/08 SULFIDES - WAST WATER TREAT

A SAMPLE OF FRAC TK 1004 WAS AGAIN TREATED WITH A MIX OF Na_2S (0.7%) WITH LIME, TO TEST THE VALIDITY OF USING THIS MIX.
MIXING BOTH TOGETHER SHOWS NO REAL REDUCTION IN Ni OR Zn.
ALSO - ADDING THE Na_2S AFTER THE LIME GIVES SIMILAR RESULTS.
IN ALL CASES, 0.7% Na_2S WAS USED, WHICH IS EASILY IN EXCESS OF THAT WHICH IS NEEDED. SAMPLES WERE ALSO CENTRIFUGED OUT TO REMOVE SOLIDS VS. IN ACTUAL FILTRATION.

	#1	#2	#3
Ni	.937	.899	1.867
Zn	8.16	7.3	9.6

#1 & 3 ABOVE ARE S/S + $Ca(OH)_2$ ADDED TOGETHER.
#2 - S/S ADDED SEPARATELY.

THERE IS NOT MUCH POINT IN ADDING THESE TOGETHER.

Mike Rost
11/17/08

11/18/08

KMTEX MEK

TRAILER 254, DOC# 76133, PFI 3034 - 11/18/08

%	OH
IBP	73
10	73+
20	73+
30	73+
35	90+..

35% RECOVERY.

THIS IS THE AZEOTROPE TEMP - H2O/MEK.

73.4°C.

Mylle Root

11/18/08

11/18/08

PPG $MeCl_2$ - TRL 7005

TRL 7005, Doc # 75968, PFI 2281

%	OH
IBP	5%
5	99

THIS IS REALLY JUST A LOAD OF WATER.

Mike Root
11/18/08

11/18/08 (WASTEWATER TREAT WITH S/S - CONT

SAMPLE TREAT SUMMARY + Ni - Zn RESULTS ARE FOUND BELOW.

Ni	Zn	Sample
1.4	5.68	H_2SO_4 → NaOH → S/S → FILTER W/ DE
.681	1.570	S/S → FILTER W/ DE
1.039	7.03	S/S → POLY - FILTER W/ DE - H_2O_2
2.05	8.2	.5% S/S → DE FILTER -
1.179	8.2	.5% S/S → DE FILTER + H_2O_2
1.849	8.9	2.5% S/S → DE FILTER
1.897	8.9	2.5% S/S → DE FILTER + H_2O_2

11/20/08

EVALCA MeOH - TRL 221

TRL 221, DOC# 76370, PFI 2616

%	OH
IBP	67
10	69
20	71
30	72
40	74
50	75
60	76
70	82
73	88

76% RECOVERY WET MeOH

Mike Root
11/20/08

11/26/08

PPG - $MeCl_2$ Dist

PPG TRAILER 7240, DOC # 76296, PFI - 2281

%	OH	
IBP	37	EXCESSIVE FOAMING -
10	37.5	- BLEW CALMED DOWN AFTER
20	37.5	40% OVERHEAD.
30	37.5	
40	37.5	
45	50	← $MeCl_2$
46	66	← MeOH
47	70	
52	73	
58	85	
60	90	

60% RECOVERY - TOTAL

Mike Root
11/26/08

EPAHO113000932

11/26/08 PPG TRAILER 15816-

PPG TRAILER 15816; DOC# 76306; PFI- 2281

%	OH	
IBP	38	Minor FOAMING.
10	39	
20	40	
30	41	
35	42	← $MeCl_2$
37	60	← MeOH
38	75	
40	76	
44	90	

Lots of solids!

[signature]
11/26/08

BASE OIL VISCOSITIES

TWO TRAILERS OF BASE OIL FOR SALE NEED VISCOSITY @ 100°C.

TRAILER 262 (11/18)
TIME - 10:09:24 → 10:10:39 - 75 SEC.
CONSTANT - @ 100 = 0.10477 cSt/SEC
75 × .10477 = 7.86 cSt.

TRAILER 410 (11/25)
TIME - 11:09:08 - 11:10:30 - 82 SEC.
CONSTANT @ 100°C = 0.10477 cSt/SEC.
82 × .10477 = 8.59

Mike Lott
11/26/08

12/01/08

EVAL 1108-58.

THIS IS A SAMPLE OF GREEN EARTH - BIODIESEL "STUFF". LOOKS LIKE FATS IN A LIQUID. I RAN THE MATERIAL THRU A FILTER TO REMOVE FATS, AND WILL DISTILL LIQUOR.

%	POT	OH
IBP	75	66
10	82	72
20	86	74
	- ADDED EMULSION BREAKER - DUE TO FOAMING	
30	95	71
34	100	70
35	101	69.5
36	98	68

DENSITY OF OH PROD IS 0.817
@ 90% MeOH

FILTRATION OF THIS SAMPLE WORKS WITH GFA PAPER OR 100 um FILTER SOL. A 300 u IS TOO BIG TO FILTER OUT ALL FATS, BUT RETAINS SOME OF THEM.

Tyler Root

12/4/08

Na_2CO_3 Solubility

We want to determine concentration limits of Na_2CO_3 in H_2O @ ~130°F. Samples of Na_2CO_3 are weighed into centrifuge tube, diluted to 40 mL with water, shaken and heated in a hot H_2O bath at ~ 130°F. The following notes are made.

Gram Na_2CO_3	wt% Na_2CO_3 in H_2O	Soluble? @ 130°F
3.4	8.5	Yes
6.6	16.5	Yes
12.0	30	Yes
15.8	39.5	Yes
17.0	42.5	No
18.0	45	No
20.6	51.5	No

39.5 wt% Na_2CO_3 is 17.1 % as "Na_2"

EPAHO113000936

12/04/08

$NaHCO_3$ Solubility

THE SAME SOLUBILITY TESTING WILL BE DONE FOR $NaHCO_3$ AS WAS WITH Na_2CO_3 ON PREVIOUS PAGE. TEMPERATURE OF STUDY 15 ~ 130°F.

GRAM $NaHCO_3$	WT% $NaHCO_3$ IN H_2O	SOLUBLE? @ 130°F
10.0	25	NO
6.6	16.5	NO
5.5	13.75	NO
5.2	13.0	NO
4.8	12.0	YES

12.0 wt% $NaHCO_3$ is 3.3% AS "Na"

12/04/08

DISTILLATION - $MeCl_2$ / HEPTANE MIX

FOR KEN NOAKES -

SAMPLE IS TWO PHASE - I WILL RUN EACH PHASE SEPARATELY.

$MeCl_2$ BTM PHASE

%	POT	OH
IBP	40	38.5
10	44	40
20	46	40.5
30	47	41
40	49	42
50	52	42.5
60	57	43
70	68	43.5
75	95	47

POT BTMS CONTAINS SOME TYPE OF RESIN.

D - 1.292

PRODUCT IS H_2O WHITE

TOP PHASE

%	POT	OH
IBP	99	41
~1	100	62
5	101	100
10	101	100
20	101	100
40	101	100

—

POT BTMS CONTAINS RESIN. THE OVERHEAD IS SLOT WATER WITH A TAD OF $MeCl_2$.

12/08/08

TRL 249 - Base Oil Viscosity

Viscosity of Base Oil - TRL 249

40C - Time - 11:12:36 → 11:28:57 = 981 sec

981 × .10523 = 103 cSt

100C - Time - 12:20:23 → 12:22:20 = 117

117 × .1077 = 12 cSt.

Kyle Root

12/10/08

PPG TRL 476 - $MeCl_2$/MeOH

PPG TRAILER 476, PFI 2281, DOC# 77624

%	OH	POT	
IBP	40	58	
10	42	64	
20	44.5	76	
26	46	92	← $MeCl_2$
27	50	94	
28	68	95	
30	76	95	
40	77	96	
50	78	96	
60	82	94	
70	83	94	
80	83	95	
85	79	98	
96	86	99	← MeOH

RECOVERY - 87%

VERY SMALL AMOUNT OF SOLIDS, WHICH WASH OUT WITH H_2O.

Mike Lott 12/10/08

12/4/08

PPG TRAILER 7240 DIST.

PPG TRAILER 7240, DOC# 77623, PFI 2281

%	OH	POT	
IBP	40	49	
10	42.5	52	
20	44	57	
30	45	67	$MeCl_2$ + HEPTANE AZEO
35	44	83	
37	42	91	
38	43	93	
39	82	95	← MeOH STARTS - ? NOT MeOH-!
40	90	95	
55	94	96	HEPTANE
60	94	96	
80	95	97	
90	95.5	98	
91	94	101	

CUT OFF - POT IS DRY

D(OH) = 0.680 - THIS is HEPTANE!

Mike Book
12/4/08

12/15/08 DIST. UNIT Sx.

A LINE Sx. FROM THE FRONT DISTILLATION UNIT, WHICH IS CURRENTLY DOWN, IS TAKEN

%	OH	POT
IBP	~~68~~	940
5	~~90~~ 83	~~96~~ 93
7	90	94

NEW CYLINDER

%	OH	POT
5	94	97
20	99	100

D- 0.942
TOTALLY H_2O SOLUBLE.
∴ MeOH + H_2O

WHERE IS THE $MeCl_2$ IN THIS. THIS RUN IS TO CONTAIN PPG TRL 7240 + 476 FROM THE PRECEDING 2 PAGES.

12/16/08

$MeCl_2$ Distillation - PPG

THIS IS THE PPG STREAM -

SAMPLES FROM KEN NOAKES BROUGHT IN. A TOP, MID, BTM, FROM A LOADED TRAILER. DON'T KNOWS THE RATIOS OF EACH LAYER. WILL DISTILL EACH ONE TO SEE WHAT IT IS.

TOP			MIDDLE			BTM		
%	OH	BTM	%	OH	BTM	%	OH	BTM
IBP	37	67	IBP	38	60	IBP	38	40
~4	50	74	~3	55	72	10	38.5	42
5	65	76	~5	67	75	20	39	43
10	71	78	10	71	78	40	43	47
20	74	82	20	75	80	65	56	58
40	80	86	30	77	83	70	52	64
			40	80	86			

(LAST 20 mL)

D~ 0.835

I'VE RUN ENOUGH OF THIS TO KNOWS IT'S MeOH

D- 0.828

ON ENTIRE DIST. TO 40 mL

D- 1.184

ON ENTIRE SX.

THIS RECEIPT SHOULD BE TYPICAL $MeCl_2$/MeOH

Mike Root

12/17/08

DISTILLATION UNIT -

FRONT DISTILLATION UNIT SAMPLE. TRY TO DETERMINE WHAT IT IS. A TOC ON THIS SAMPLE, WITHOUT THE WHITE SLUDGE LAYER - IS 0.00

%	OH	POT
IBP	97	98

THIS IS ALL JUST WATER. WHERE IS THE PLANTS TOC ON "BTMS" OF DIST UNIT #2 is 2400 ppm.

TRAILER 4/4 - THE "IN BETWEEN" -

%	OH	POT
IBP	38	39
10	39	41
20	39	42
30	40	43
40	40	44
50	41	47
60	42	51
65	45	52
70	47	63
75	50	74
77	84	90
80	94	94
95	96	97
97	96	97

12/12/08

Dist. Unit - Continued

To see where all of the $MeCl_2$ and Heptane went, A Dist. of $MeCl_2$ 2/3 is done.

%	OH	Pot
IBP	37.5	36
10	38	38
20	38	38
30	38	39
40	38	39
50	38.5	39.5
60	39	40
70	39.5	40.5
80	40.5	42
90	42.5	48
93	43	66

Julie Root
12/17/08

12/22/08 EVALCA MeOH DISTILLATION

EVALCA MeOH, TRL 238, DOC# 78260;
PFI 2616

%	OH
IBP	65
10	68
20	69
30	69
40	70
50	70
60	71
70	72
80	75
88	89

89% RECOVERY.

Mike Bott

12/22/08

12/29/08 DISTILLATION - ZACH STREAM 3

DOC # 78709; TRL 8247 PFI · 2852

%	POT	OH
IBP	97	90
10	100	96
—	~~105~~	—
60	110	105
70	111	106
80	113	109

— SHUT THIS ONE DOWN AS IT HAS NO HEPTANES OR TOLUENE TO SPEAK OF?

TOLUENE BP - 110

HEPTANE - 98.4

[signature]
12/29/08

12/31/08

OPTIMA DISTILLATION

OPTIMA - DOC # 78854 TRL - IND PFI - 3131

%	POT	OH	
IBP	83	79	
5	87	79	
9	95	78.+	
10	96	79	> NON STOP PROGRESSION
13	105	98	
14	105	99	
15	106	99.5	
20	107	100	
25	108	100	
40	112	100	
50	113	100	
60	114	100	
70	114	100	
78	114	100.5	
80	114.5	100.5	
87	145	98	
EC- 88%	← POT IS DRY WITH SALTS -		

SALTS ARE NOT TYPICAL CRYSTALS, BUT RATHER FINE FLAKES.

Mike Root
12-31-08

01/05/09 EVAL 0109-07

SHANNON LEARD
KINDER MORGAN -
THIS SX. IS SUPPOSED TO CONTAIN SOME TYPE OF RECOVERABLE PRODUCT - GASOLINE OR DIESEL. WHEN MIXED WITH WATER I SEE NO/TR ORGANICS.

%	OH	
IBP	98	POT HAS LOTS OF FOAMING.
10	99	
20	99.5	FOAMING HAS CALMED DOWN.
30	99.5	
40	99.5	
50	100	
60	100	
70	100	
80	100	
90	100	
95	100	CUT OFF

LESS THAN 1% ORGANICS IS USED. DIST. DOES HAVE A HYDROCARBON ODOR.

Mike Lott 1/5/09

1/13/09

PPG MeCl$_2$/MeOH

PPG TRL. 15817, DOC# 79279; PFI 2281

IBP	38
10	38
20	38
30	38
40	38.5 ← MeCl$_2$
50	70
60	73
70	77 ← MeOH
73	98

Mike Root
01/13/08

01/13/09

EVAL 0109-36

TOC (NEAT) 2,791

SOLIDS FROM TREAT - ~ 50%

Pb - (AA) - NEAT - 1,333 ppm

TOC (H_2O_2 TREAT) - 1792 ppm

SOLIDS, NEAT, 1%

01/15/09

0109-34

SOUTHCOAST - DANA CARTER

BLENDS WITH BLACK OIL -
ORIGINALLY ONE PHASE, IT HAS PHASE SEPARATED THE BETTER OIL TO THE TOP.
CHLOR-D-TECT - 1100 ppm
OIL H_2O - 0.26 %
ORIGINALLY IT WAS 11.4% BUT HAS SINCE PHASE SEPARATED.

ATTEMPTED TO BREAK OUT H_2O BY HEAT/ACID

01/22/09 KMTEX - PORT ARTHUR

TRL 235, DOC # 80004, PFI 3034
THIS IS MEK/H_2O

%	OH	POT	
IBP	72.5	73	
10	73	75.5	
20	73	82	
29	75	96	← MEK - 28% (WET)
30	99	96	
35	100	100	

28% WET MEK RECOVERY.

Mike Scott

01/22/09

01/23/09

EVAL 0109-45/46

SOUTHCOAST TERMINALS

DANA CARTER

THIS IS ANOTHEL SX., SIMILAR TO 0109-34, THE SAME TANK, IN FACT

0109-45 IS THE TOP. - AND IT'S ALL OIL.

CHLOR-D-TECT IS 1000 ppm.

0109-46 IS TANK BTM - IT'S OIL/H_2O.

A 50:50 BLEND OF BLACK OIL AND 0109-45 WAS MIXED ON FRIDAY, 01/23/09 AND ALLOWED TO SIT. THE SX WAS NOTED TO CONTAIN A COUPLE OF "OIL CHUNKS", SO THIS WILL NOT BE THOUGHT TO BE FORMED ON MONDAY.

01/28/09 TRL 271 DIST.

THIS IS A LOAD OF MEK? FROM TRL 271.
SEE WHAT IT IS.

%	OH	POT	
IBP	73	72	
10	73	76	
20	73	80	
27	73.5	95	← MEK
28	90	97	

99% RECOVERY OF MEK

Mike Cook
01/29/09

02/02/09 EVAL 0109-69 (A, B, C)

ENVIROSOLUTIONS + PETROLEUM EXPRESS
JOY + SHANNON

	A BASE OIL QPM 2025	B (QPM 2026) MINERAL OIL	C (QPM 2027) LINE FLUSH
API	33	29	30
VISCOSITY @ 40°C	45	9	80
COLOR	1	2	6
H_2O, ppm	0	0	23
OSC.			
TIME START	201:14	12:20:202:01:14	2:53:27
TIME END	2:08:21	12:21:452:08:21	3:06:08
TOTAL SEC.	427	85 427	761
TUBE FACTOR	.10523	.10523	.10523

EPAHO113000956

2/9/09

EUALCA TRL 235

TRL 235, DOC#80994 ; PFI 2&6

%	OH
IBP	65
10	67
20	67
30	68
40	68
50	69
60	69
70	70
80	73
85	83

← MeOH Recovery.

Mike Scott
02/09/09

02/12/09

EVALCA DISTILLATION

TRAILER 270, DOC # 81260, PFI 2616 ; 2/4/09

%	OH
IBP	65
10	67
20	68
30	69
40	70
50	70
60	71
70	72
80	75
85	89

Mike Root
02/12/09

02/24/09 EVAL 0209-31 -

EVALCA -
DANA CARTER

EXTRACTION 1&1 WITH WATER SHOWS 44 mL OF H_2O INSOLUBLE MATERIAL. THE VINYL ACETATE SEAL TOP - VINYL ACETATE PHASE - OUT FOR % ISOMERS BY GC -
CONTAINS - VINYL ACETATE; METHANOL?; OTHERS

A SAMPLE OF WATER EXTRACTED MATERIAL IS BEING SENT OUT TO A&B LABS FOR VINYL ACETATE QUANTIFICATION.

02/24/09 EUALCA TRL 6731

TRL 6731 DOC # 81479 PFI 2616

%	OH
IBP	66
10	67
20	68
30	68
40	68.5
50	69
60	69.5
70	70
80	80
81	88-

81% RECOVERY.

Mike Rost
02/24/09

02/25/09 EVALCA TRL 235

EVALCA TRL 235; Doc# 81986; PFI 2616

%	OH
IBP	65
10	68
20	69.5
30	70.5
40	71.5
50	72
60	72
70	74
78	87

81% RECOVERY.

Mike Rost
02/25/09

3/2/09

EVAL 0209-68

LTS, HOUSTON

GARY BRAUCKMAN

CAUSTIC OIL SLUDGE - DOES NOT PHASE SEPARATE WITH HEAT ALONE.

HEAT & CENTRIFUGE WILL BREAK OUT OIL, CAUSTIC AND SLUDGE.

Mike Rat
03/02/09

3/2/09

EVAL 0209-69

LITS, HOUSTON

GARY BRALICKMAN

CAUSTIC AND SOLIDS/SLUDGE.

pH OF SLUDGE IS 11.8

CAUSTIC - 0.7 g sx - 67.5 ml of 0.1 N HCl

$$\% \, NaOH = \frac{67.5 \times 4 \times 0.1}{.7} = 386\ \%$$

30% OF SAMPLE IS LIQUID.

Mike Root

03/02/09

3/9/09

EVALCA TBL 7253

TBL 7253; DOC # 82510 PFI-2616

%	OH
IBP	68
10	69
20	70
30	70.5
40	71
50	71
60	73
70	76
75	90

% RECOVERY = ~~87%~~ 77%

Mike Rost
3/09/09

3/16/09

FLUKA TRL 221

TRL 221, Doc# 82764 PFL 2616

%	OH
TBP	67
10	72
20	73
30	75
40	77
50	79
60	83
65	90

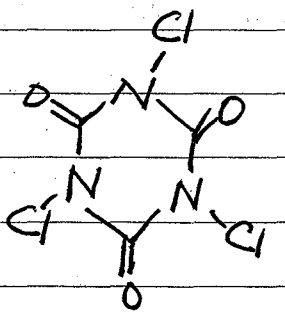
% RECOVERY = 66%

Mike Lott
3/16/09

3/27/09

TCCA WORK

TRICHLOROISOCYANURIC ACID



A 22% BY WT MIXTURE IS PREPARED IN A 1L BOTTLE. MIXED W/ STIR BAR.

A 1000 ppm CA STD USING 98% 2,4/2,5 XYL IS MADE FOR PREPPING 100 ppm SOLN.

ROUTINE 10 ml/100 DILUTIONS ARE MADE AND VARIOUS % OF TCCA ADDED TO SEE WHEN CA OXIDIZED.

3/27/09

TCCA Work
100 ppm CA

% TCCA	Phenols, ppm (98% 2,4/2,5 XYL)
10	0
5	0
2	~ 0.5
1	5
0.5	~ 10 (off hue)

From the above we can use 2% of a 5000 gal trailer, or 100 gal, to eliminate 100 ppm phenol, or: 1 gal / Phenol ppm

With constant mixing, the TCCA solution has a foam layer on top in addition to the solids.

3/30/09

TCCA WORK

AFTER THE 22% SOLUTION HAD SAT OVER THE WEEKEND, IT TURNED THE BOTTLE AND ITSELF, YELLOW. A 100 ppm CA SOLUTION WAS REDUCED TO ~ 10 ppm WITH 2% TCCA SOLUTION. WHEN SHAKEN, A 2% SOLUTION REDUCED CA TO ND. - BEST TO MIX TCCA BEFORE USE IF IT HAS BEEN SITTING.

A 5% TCCA SOLUTION WAS ONLY ABLE TO REDUCE 100ppm CA DOWN TO ~ 12 ppm USING 2%.

THE 22% TCCA WAS DECANTED AND WATER ADDED BACK. WELL SHAKEN, 100 ppm CA IS REDUCED TO 38 ppm. ↑ LETTING THE SOLUTION SIT LONGER REDUCES CA TO <1 ppm.
THE WATER DECANTED REDUCES 100ppm TO ~ 6 pp

THE 22% TCCA, ON ITS 3RD BATCH OF WATER (DECANTED 2 TIMES) REDUCES 100 ppm CA TO <1 ppm. TCCA SOLUTION WAS SHAKEN BEFORE USED.

TCCA Work

THE 10% TCCA SOLUTION, WHEN WELL SHAKEN, REDUCES 100 ppm CA TO ~1 ppm.

3/30 AT THE END OF TODAY, 3/30, THE DECANTED H_2O FROM 22% TCCA STILL REDUCES 100 ppm CA TO ~6 ppm.

3/31 ↓ AT THE START OF NEXT DAY, DECANTED H_2O FROM 22% TCCA REDUCES 100 ppm CA TO ~8 ppm

THE WELL SHAKEN 10% TCCA SOLUTION REDUCES 100 ppm CA TO ~8 ppm TODAY. IT REDUCES DOWN TO 4 ppm WHEN THE CHLORINE IS ALLOWED TO REACT FOR A WHILE BEFORE TESTING.
THE WATER DECANTED FROM THE 22% TCCA STILL REDUCES 100 ppm CA TO ~6 ppm, WHEN ALLOWED TO SIT AND REACT.

ANOTHER OBSERVATION IS THAT THE SAMPLE OF TRICHLOR CONTINUE TO HAVE LIQUID COME OUT OF THEM AS THEY SIT, EVEN THOUGH THEY ARE NOT FULL BOTTLES. LIQUID RUNS DOWN THEIR SIDES AND PUDDLES AT THE BOTTOM OF THE BOTTLES

(ALL TCCA ADDITIONS ARE AT 2%)

EPAHO113000969

4/1/09

TCCA Work

Retest of 22% TCCA solution. Reduces, after shaking, 100 ppm CA to 6 ppm, with ~5 min Rx. time; <1 ppm with ~15 min sit time. The decanted 22% TCCA water reduces 100 ppm CA to ~12 ppm. The 10% TCCA reduces 100 ppm CA to 4 ppm. Allowed to sit, it is reduced to <1 ppm.

The 22% decanted H_2O reduces 100 ppm CA to 4 ppm when allowed to sit ~30 min.

4/3

The 22% decanted H_2O reduces 100 ppm CA to ~4 ppm when allowed to sit ~30 min.

The 10% TCCA solution reduces 100 ppm to 8 ppm with mixing and then allowing treated H_2O to sit ~15 min.

The 22% TCCA mixed solution reduces 100 ppm CA to 6 ppm CA in ~15 min sit time. After 30 min sit time, 100 ppm reduced to <1 ppm.

(All TCCA additions are at 2%)

TCCA Work

4/6 22% TCCA Solution reduces 100 ppm CA to <1 ppm when allowed to sit. 2% addition

Decanted 22% H_2O reduces 100ppm CA to ~ 12 ppm

10% TCCA reduces 100ppm to 8 ppm.

A fresh batch of 22% TCCA was prepared by decanting the water and adding more. Mixed for ~ 3 hrs, it reduced 100 ppm CA to 2 ppm.

3/31/09

EVALCA TRL 210

TRL 210, DOC 83433 PPI 2616

%	OH
IBP	71
10	73
20	75
30	77
40	81
48	89

49% RECOVERY OF WET METHANOL.

Myles Root
3/31/09

LAB
T-48
8/4/09 CC