Hercules Inc

Master AI ID: 2022

Agency Interest Type: Chemical Branch

SIC 1: 2861

County: Forrest

AI Basin: Pascagoula River Basin

Start Date: 6/11/1991

End Date:

File Copy

Alternate/Historic AI Identifiers

Alt/Hist ID	Alternate/Historic Name	User Group	Start	End
2022	Hercules, Inc.	Official Site Name	6/11/1991	
03500001	Hercules, Inc.	Air-AIRS AFS	6/11/1991	
MSD008182081	Hercules, Inc.	Hazardous Waste-EPA ID	10/12/2000	
080000001	Hercules, Inc.	Air-Title V Operating	11/13/1998	11/12/2003
080000001	Hercules, Inc.	Air-State Operating	6/11/1991	6/1/1994
MSR110153	Hercules, Inc.	GP-Sara Title III	10/17/1997	1/29/2001
MS0001830	Hercules, Inc.	Water-NPDES	10/22/1991	10/21/1996
MS0001830	Hercules, Inc.	Water-NPDES	9/29/1986	9/28/1991
MSP091286	Hercules, Inc.	Water-Pretreatment	3/12/1999	2/28/2004
MS0001830	Hercules, Inc.	Water-NPDES	9/30/1997	9/29/2002
MSR110153	Hercules, Inc.	GP-Baseline	1/29/2001	
MS0001830	Hercules, Inc.	Water-NPDES	10/31/2002	9/30/2007

Regulatory Programs

Program	Sub-Program
Air	Title V - major
Hazardous Waste	Large Quantity Generator
Water	Baseline Stormwater
Water	NPDES Minor Industrial
Water	PT CIU
Water	PT CIU - Gum and Wood Chemical Mfg (Subpart 454)
Water	PT SIU

AI Location and Mailing Information

Physical Address (Primary)	Mailing Address
613 West 7th Street Hattiesburg, MS 39401	613 West 7th Street Hattiesburg, MS 39401

Location Information (TerraServer | SWIMS)

Latitude: 31° 20' 18.0" **Longitude:** -89° 18' 16.0"

Method: Unknown

Datum:

Type:

Section - Township - Range: - -

Telecommunications

Type	Address or Phone
Work phone number	(601) 545-3450

Staff to AI Assignments

Person Name	Assignment
Sumrall, Rick	Compliance, Management
Patton, Jan	Compliance, Staff
Patton, Jan	Enforcement
Cook, Toby	Permitting, Branch Manager
Brown, Carla	Permitting, Permit Writer
Sharp, Loyd	Regional Office, Management

Related People

Person	Relationship	Start	End
Jordan, Charles	Is Contact For	1/1/1980	
Langhans, Walter	Is General Permit Contact For	1/29/2001	
Langhans, Walter	Is Application Signatory for	3/28/2001	
Langhans, Walter	Is Title V Fee Assessment Contact For	7/1/2001	
Jordan, Charles	Is Air Permit Contact For	7/18/2001	
Langhans, Walter	Is Water Permit Contact For	3/27/2002	
Patterson, Kendall	Is Air Permit Contact For	3/28/2002	
Patterson, Kendall	Is Application Signatory for	3/28/2002	
Langhans, Walter	Is Air Permit Contact For	5/1/2003	

Related Organizations

Organization	Relationship	Start	End
enSearch			MDEQ OPC

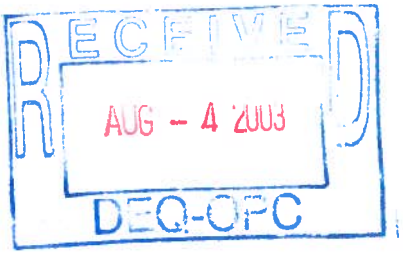
HERCULES

Jar

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39403
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

July 31, 2003

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. #: 7002 0860 0003 3882 8599



Mr. Rick Sumrall, Branch Chief
Environmental Compliance & Enforcement Division
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Hercules Incorporated
Facility No. 0800-00001
Title V Semi-Annual Report
1/01/03-6/30/03

Dear Mr. Sumrall:

As required by Title V Operating Permit Conditions 5.A.4. [ref.: APC-S-6, Section III.A.3.c.(1)], 5.C.1.(b) [40 CFR 63.182 (ref.: 40 CFR 63.528(b))], 5.C.4(b)(6), 5.C.4.(b)(7) [40CFR63.1439(e)(6) and 40CFR63.182(d)], 5.B.6, 5.B.7, 5.B.8, 5.B.9, 5.B.10, 5.B.11, 5.B.13, 5.B.14, 5.B.31, and 5.C.3, attached is the required summary data for the semi-annual reporting period ending June 30, 2003. Deviations from the Title V Permit requirements are identified and included in this report. The required summary data is included in the attached semi-annual report from January 1, 2003, to June 30, 2003.

In accordance with 40CFR63.1423(b), *Storage vessel*(2), for the regulated equipment, AF005(EO), Storage vessels do not include: pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

In accordance with 40 CFR 63.160(a) and 40 CFR 63.180(d)(1), the regulated equipment associated with the re-circulating line in the Kymene process area is projected to operate less than 300 hours in organic HAP service for calendar year 2003; and therefore, this equipment is not subject to the above referenced semi-annual reporting period.

As Responsible Official for Hercules Incorporated, I certify that based on information and belief formed after reasonable inquiry, the statements and information in the attached document are true, accurate, and complete.

If you have any questions or need further information, please contact Mr. Charles Jordan at (601) 584-3360.

Sincerely,

Walter D. Langhans
Plant Manager

WDL/vrf

Attachments:

Contents of Report

The Title V Operating Permit requires a semi-annual report by January 31 and July 31 of each year. This report, for the semi-annual reporting period of January 1, 2003 through June 30, 2003, contains the following sections:

1. Fuel Burning Equipment
2. Kymene Process Area
3. AKD Process Area
4. HRA Process Area
5. Poly-Pale Process Area
6. RAD Process Area
7. Neuphor Process Area
8. Kymene LDAR Monitoring
9. Polyether Polyols Production LDAR Monitoring
10. Deviations from Permit Requirements

Fuel Burning Equipment

FUEL BURNING REPORT SUMMARY

As required by 5.A.4, 5.B.6, 5.B.7, and 5.C.3, monthly records of the type, quality, and quantity of fuel combusted are provided in this section. Only natural gas was combusted during this semi-annual reporting period.

MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS 5.A.4

YEAR 2003

GAS USAGE - MCF

EMISSION POINT	DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Totals
AC001	Poly-pale nat. gas Dowtherm boiler	1944	533	0	2346	2043	0							6866
AF001	RAD nat. gas Dowtherm boiler	0	1006	0	0	1149	1624							3779
AG001	HRA nat. gas Dowtherm boiler	1440	1106	1197	1082	1060	1123							7008
AJ001	Rosin dist. nat. gas Dowtherm boiler	358	159	82	113	185	90							987
AM001	No. 5 package boiler	46105	44249	32631	33533	31012	31744							219274
AM002	No. 6 package boiler													0
AN001	Carbon Reg.nat. gas Furnace													0
														0
T5ngas		49847	47053	33910	37074	35449	34581	0	0	0	0	0	0	237914

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Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 01/03

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 01/01/03 Lab ID: 00041012
Analyzed Date: 01/31/03 Analysis ID: 171403
Sample Date On: 12/17/02

Sample Date Off: 01/23/03

Sample Type: C

Component	Mol %	GPM	
H2S	0.0000		
CO2	1.1670		
N2	0.6390		
Methane	95.1430		
Ethane	2.1110	0.564	
Propane	0.4930	0.136	
I-butane	0.1150	0.038	

Sample Pressure(psig): 180.0
Line Pressure(psig): 109.0
Line Temp (deg F): 43.0
Ideal Gravity: 0.5912
Sample Gravity: 0.5925
Compress. Factor: 1.0020

N-butane	0.1320	0.042	
I-pentane	0.0530	0.019	LBs of H2O: 1.2
N-pentane	0.0440	0.016	
Hexanes+(C6+)	0.1030	0.046	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.861	PPM H2S: 0.0
Pentane+		0.081	

Dry BTU @ 14.730: 1032.8000 Dry BTU @ 14.730 w/o H2S: 1032.8000
Wet BTU @ 14.730: 1014.8000 Wet BTU @ 14.730 w/o H2S: 1014.8000
AWC BTU @ 14.730: 1032.8000 AWC BTU @ 14.730 w/o H2S: 1032.8000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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□E□&k2G□&100□&11X□&160F□&16D□(8U□(s16.66h3T□(10U

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Houston, Texas

PAGE 1

CHROMATOGRAPH REPORT

for 01/03

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.1382	0.2955	0.5823	1021.5356	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	1.1382	0.2955	0.5823	1021.5356	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	1.0543	0.5291	0.5909	1035.5104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.4112	0.9805	0.5957	1026.3588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.7636	0.4051	0.5828	1031.6359	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.7219	0.3707	0.5821	1032.2152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.7226	0.3715	0.5821	1032.2136	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	0.8990	0.4832	0.5858	1031.3508	0.0000	0.0000	0.0000	0.				

0000	0.0000	0.0000	0.0000	0.0000				
15	0.7985	0.3978	0.5848	1034.4437	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	0.9478	0.5425	0.5890	1035.1605	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	0.7705	0.3530	0.5838	1034.6573	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	0.7135	0.3344	0.5821	1032.7437	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	0.7383	0.3403	0.5825	1033.0160	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	0.7366	0.3428	0.5827	1033.7610	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	0.7161	0.3369	0.5823	1032.7495	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	0.6819	0.3451	0.5814	1032.4199	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	0.6626	0.3431	0.5798	1032.0686	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	0.7333	0.3392	0.5825	1033.9819	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	0.7722	0.3466	0.5843	1034.4452	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	0.7938	0.3488	0.5850	1034.7216	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	0.8070	0.3541	0.5854	1035.0275	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	0.8100	0.3808	0.5853	1034.2019	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	0.7308	0.3764	0.5825	1032.5359	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	0.6833	0.3542	0.5813	1032.5483	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
31	0.9949	0.5054	0.5917	1038.5977	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	0.8958	0.3821	0.5840	1030.2790

Remarks:

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Houston, Texas

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CERTIFICATE OF ANALYSIS

for 02/03

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 02/01/03 Lab ID:
00041541
Analyzed Date: 03/04/03 Analysis ID:
172006
Sample Date On: 01/23/03

Sample Date Off: 02/24/03

Sample Type: C

Component	Mol %	GPM	Sample Pressure(psig): 35.0
H2S	0.0000		Line Pressure(psig): 119.0
CO2	0.8080		Line Temp (deg F): 64.0
N2	0.4100		
Methane	95.9910		Ideal Gravity: 0.5843
Ethane	2.1000	0.561	Sample Gravity: 0.5856
Propane	0.3340	0.092	
I-butane	0.0670	0.022	Compress. Factor: 1.0020

N-butane	0.0780	0.025	
I-pentane	0.0380	0.014	LBs of H2O: 2.0
N-pentane	0.0280	0.010	
Hexanes+(C6+)	0.1460	0.065	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.789	PPM H2S: 0.0
Pentane+		0.089	

Dry BTU @ 14.730: 1034.8000 Dry BTU @ 14.730 w/o H2S: 1034.8000

Wet BTU @ 14.730: 1016.8000 Wet BTU @ 14.730 w/o H2S: 1016.8000

AWC BTU @ 14.730: 1034.8000 AWC BTU @ 14.730 w/o H2S: 1034.8000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S

Remark: 0

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Gulf South Pipeline Company, LP

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Houston, Texas

PAGE 1

CHROMATOGRAPH REPORT

for 02/03

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	0.8992	0.4467	0.5916	1041.7161	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.9619	0.4370	0.5896	1037.1454	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.0792	0.6353	0.5924	1035.2097	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.9782	0.4996	0.5904	1036.7626	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.6052	0.3197	0.5786	1032.2972	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.7086	0.3748	0.5831	1035.0973	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.7214	0.3742	0.5824	1032.7422	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.9908	0.6499	0.5872	1029.4548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

9	1.3506	0.9363	0.5940	1025.7823	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.6553	1.1312	0.6008	1025.8385	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.9402	1.4234	0.6020	1015.1859	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.9663	1.5020	0.6008	1011.2744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.9119	1.4508	0.6021	1016.1207	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.5049	1.1887	0.5972	1022.7261	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	1.1765	0.7275	0.5924	1031.6931	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	0.7223	0.4355	0.5779	1024.9979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	0.6785	0.3437	0.5800	1029.9467	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	0.7885	0.4046	0.5838	1033.2090	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	0.8497	0.4091	0.5853	1034.0220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	1.2284	0.8626	0.5955	1031.8169	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	1.3150	0.9066	0.5940	1027.3834	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	1.2643	0.6178	0.5949	1035.1331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.5268	0.3208	0.5710	1020.1937	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.4485	0.2812	0.5682	1019.0218	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.4872	0.2932	0.5702	1021.8399	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	0.4798	0.2995	0.5697	1020.9321	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	0.4778	0.2953	0.5704	1022.2594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

0.0000 0.0000
 28   0.5152 0.2885 0.5807 1036.9253 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000

Avg: 1.0083 0.6377 0.5867 1028.0974

Remarks:

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Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 03/03

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 03/01/03 Lab ID:
00041975
Analyzed Date: 03/31/03 Analysis ID:
172542
Sample Date On: 02/24/03

Sample Date Off: 03/24/03

Sample Type: C

Component	Mol %	GPM
H2S	0.0000	
CO2	0.5270	
N2	0.3280	
Methane	96.3490	
Ethane	2.1300	0.569
Propane	0.4560	0.126
I-butane	0.0550	0.018

Sample Pressure(psig): 190.0

Line Pressure(psig): 111.0

Line Temp (deg F): 51.0

Ideal Gravity: 0.5789

Sample Gravity: 0.5801

Compress. Factor: 1.0020

N-butane	0.0820	0.026	
I-pentane	0.0230	0.008	LBs of H2O: 0.5
N-pentane	0.0130	0.005	
Hexanes+(C6+)	0.0370	0.017	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.769	PPM H2S: 0.0
Pentane+		0.030	

Dry BTU @ 14.730: 1034.7000 Dry BTU @ 14.730 w/o H2S: 1034.7000
Wet BTU @ 14.730: 1016.7000 Wet BTU @ 14.730 w/o H2S: 1016.7000
AWC BTU @ 14.730: 1034.7000 AWC BTU @ 14.730 w/o H2S: 1034.7000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U Gulf
South Pipeline Company, LP 04/01/03 12:22:01

Houston, Texas

PAGE 1

CHROMATOGRAPH REPORT

for 03/03

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	0.5329	0.2831	0.5897	1049.7067	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.5098	0.2822	0.5935	1056.7524	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.5244	0.2995	0.5880	1048.5098	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.4830	0.2815	0.5922	1055.9741	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.4825	0.2852	0.5921	1055.8558	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.5262	0.3042	0.5878	1048.5049	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.5375	0.3062	0.5889	1048.3213	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.4801	0.2826	0.5928	1056.5652	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

9	0.4610	0.2785	0.5957	1063.0219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.5376	0.2986	0.5847	1043.6456	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.5753	0.3091	0.5794	1034.2219	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.6288	1.0023	0.5841	1028.7898	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.6260	0.8491	0.5833	1029.9327	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	0.5736	0.3133	0.5808	1034.2595	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	0.5392	0.2954	0.5842	1042.3068	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	0.4632	0.2926	0.5755	1029.4955	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	0.4977	0.2959	0.5757	1029.9081	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	0.6933	0.2992	0.5832	1036.8853	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	0.4350	0.2993	0.5705	1023.1306	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.4644	0.3001	0.5714	1024.0087	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	0.5245	0.3006	0.5767	1029.6882	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	0.5154	0.3005	0.5749	1028.7960	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.4938	0.3008	0.5739	1025.4608	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.4840	0.3028	0.5729	1024.6232	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.6611	1.3246	0.5856	1023.3104	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	0.7793	1.2501	0.5877	1025.2545	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	0.4360	0.3043	0.5695	1021.5750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

```
0.0000 0.0000
 28    0.4344  0.2985 0.5690 1020.8117  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 29    0.4473  0.2954 0.5690 1019.8634  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 30    0.4729  0.3264 0.5718 1023.8688  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 31    0.7631  0.3740 0.5802 1028.9529  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000


Avg:  0.5349  0.4044 0.5814 1035.8710


Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U
```

```
0.0000 0.0000
 28    0.4344  0.2985 0.5690 1020.8117  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 29    0.4473  0.2954 0.5690 1019.8634  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 30    0.4729  0.3264 0.5718 1023.8688  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000
 31    0.7631  0.3740 0.5802 1028.9529  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000
0.0000 0.0000


Avg:  0.5349  0.4044 0.5814 1035.8710


Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U
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Gulf South Pipeline Company, LP 05/02/03 08:00:55
Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 04/03

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 04/01/03 Lab ID:
00042353
Analyzed Date: 04/29/03 Analysis ID:
173060
Sample Date On: 03/24/03

Sample Date Off: 04/21/03

Sample Type: C

Component	Mol %	GPM	
H2S	0.0000		
CO2	0.8580		
N2	0.9300		
Methane	96.0330		
Ethane	1.3220	0.353	
Propane	0.3830	0.105	
I-butane	0.0810	0.026	

Sample Pressure(psig): 180.0

Line Pressure(psig): 111.0

Line Temp (deg F): 52.0

Ideal Gravity: 0.5859

Sample Gravity: 0.5872

Compress. Factor: 1.0020

N-butane	0.1160	0.037	
I-pentane	0.0490	0.018	LBs of H2O: 5.6
N-pentane	0.0460	0.017	
Hexanes+(C6+)	0.1820	0.081	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.637	PPM H2S: 0.0
Pentane+		0.116	

Dry BTU @ 14.730: 1027.4000 Dry BTU @ 14.730 w/o H2S: 1027.4000
Wet BTU @ 14.730: 1009.5000 Wet BTU @ 14.730 w/o H2S: 1009.5000
AWC BTU @ 14.730: 1027.3000 AWC BTU @ 14.730 w/o H2S: 1027.3000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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Gulf South Pipeline Company, LP 0
5/02/03 08:01:20
Houston, Texas
PAGE 1
CHROMATOGRAPH REPORT
for 04/03

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.1687	0.6619	0.5893	1027.5435	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.9706	0.7803	0.5884	1029.1510	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.3860	0.3037	0.5672	1019.0486	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.8076	0.7689	0.5816	1023.1108	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.2406	0.9628	0.5931	1026.5919	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.1886	1.0669	0.5947	1029.2599	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.9209	0.7734	0.5958	1041.7809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.9261	0.8014	0.5979	1045.0710	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.6492	0.4955	0.5988	1058.4692	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.5714	1.2213	0.5956	1018.0440	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.4091	1.1188	0.5946	1022.1367	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.7522	1.1940	0.6060	1030.5707	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.5569	0.8723	0.6122	1050.0574	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.4300	0.8596	0.6155	1058.4559	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

0000	0.0000	0.0000	0.0000	0.0000				
15	1.7011	1.2920	0.6079	1033.1913	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	1.6724	1.2198	0.6091	1036.4769	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	1.5333	1.1307	0.6048	1034.8389	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.3035	1.0205	0.5980	1031.7084	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	1.1595	1.1773	0.5964	1030.6777	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	0.4654	1.2864	0.6299	1066.7264	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	0.4635	1.2541	0.6325	1091.3273	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	1.1363	1.0918	0.5991	1036.1630	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	0.5188	0.3157	0.5866	1045.4783	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	0.4905	0.2972	0.5929	1056.7340	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	0.4828	0.2955	0.5939	1057.4672	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	1.3749	0.9087	0.5993	1033.5592	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	1.6703	0.8314	0.6191	1058.4702	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	1.6668	0.8565	0.6217	1062.5680	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	1.6165	0.3262	0.5984	1026.3586	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	1.5332	0.9743	0.6110	1046.0583	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.1589	0.8720	0.6010	1040.9032

Remarks:

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Gulf South Pipeline Company, LP 06/03/03 08:41:15 □
Houston, Texas PAGE 1 □
CERTIFICATE OF ANALYSIS
□ for 05/03
□
□ Station ID: 002520
□ Station Name: HATTIESBURG C G #1
□ Analysis Source:
□
□ Effective Date: 05/01/03 Lab ID: 00042839 □
Analyzed Date: 05/30/03 Analysis ID: 173599 □ Sample Date On: 04/21/03
□ Sample Date Off: 05/21/03
□ Sample Type: C
□

□ Component	Mol %	GPM
Sample Pressure(psig): 160.0 □		
Line Pressure(psig): 110.0 □		
H2S	0.0000	
□ CO2	0.8270	
Line Temp (deg F): 60.0 □ N2	1.0400	
□ Methane	94.5620	
Ideal Gravity: 0.5968 □ Ethane	2.1380	0.571
Sample Gravity: 0.5981 □ Propane	0.7670	0.211
□ I-butane	0.1560	0.051
Compress. Factor: 1.0020 □ N-butane	0.1960	0.062
□ I-pentane	0.0720	0.026
LBs of H2O: 6.2 □ N-pentane	0.0570	0.021
□ Hexanes+(C6+)	0.1850	0.083
Grains H2S/100 CF: 0.00 □ TOTAL	100.0000	1.025
PPM H2S: 0.0 □ Pentane+	0.130	

□
□ Dry BTU @ 14.730: 1043.3000 Dry BTU @ 14.730 w/o H2S: 1043.3000 □ Wet BTU @ 14.730: 1025.2000 Wet BTU @ 14.730 w/o H2S: 1025.2000 □ AWC BTU @ 14.730: 1043.2000 AWC BTU @ 14.730 w/o H2S: 1043.2000 □
□ Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F □

□ Grains/PPM H2S equal to 0.

00 does not indicate testing for H2S □ Remark: 0 □

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□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U Gulf South Pipeline Company, LP 06/03/03 08:41:40
□ Houston, Texas
PAGE 1 □
CHROMATOGRAPH REPORT
□ for 05/03
□

□ Chromatograph ID: 002672
□ Chromatograph Name: PETAL WEST
□

□ Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan
Npentan	C6									
□ 1	1.4599	1.0730	0.6093	1043.7434	0.0000	0.0000	0.0000	0.0000	0.0000	0
.0000	0.0000	0.0000								
□ 2	1.4087	1.1314	0.6055	1039.0						
411	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
□ 3	1.8580	1.4478	0.6077	1025.5497	0.0000	0.0000	0.0000	0.0000	0.00	
00	0.0000	0.0000	0.0000							
□ 4	0.4581	0.2837	0.5979	1						
064.8165	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
□ 5	0.4923	0.2911	0.5920	1055.6060	0.0000	0.0000	0.0000	0.0000		
0.0000	0.0000	0.0000	0.0000							
□ 6										
0.5589	0.3155	0.5832	1040.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00
00	0.0000									
□ 7	0.8840	0.4957	0.5926	1042.6360	0.0000					
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				□
8	0.5679	0.3221	0.5850	1042.8060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000									
□ 9	0.5516	0.3126	0.5824	1039.8568	0					
.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
□ 10	0.5685	0.3204	0.5830	1039.8499	0.0000	0.0000	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000								
□ 11	0.5550	0.3136	0.5827	1039.85						
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
□ 12	0.5732	0.3223	0.5833	1039.9532	0.0000	0.0000	0.0000	0.0000	0.000	
0	0.0000	0.0000	0.0000							
□ 13	1.2377	0.6380	0.5981	10						
40.2345	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0		
000										
□ 14	1.2064	0.6689	0.6021	1046.7555	0.0000	0.00				

00 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 15
1.2489 0.6258 0.6047 1049.7687 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000
0 0.0000 16 1.2240 0.6285 0.6018 1046.6094 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
17 0.6012 0.3240 0.5917 1052.6443 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 18 0.5094 0.2837 0.5892 1050.3883 0.
0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
19 0.6141 0.3342 0.5866 1042.3525 0.0000 0.0000 0.0000 0.0000 0.0000 0.0
000 0.0000 0.0000 20 0.9467 0.6867 0.5906 1035.215
5 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
21 0.9203 0.4773 0.5833 1024.1355 0.0000 0.0000 0.
0000 0.0000 0.0000 0.0000 0.0000 0.0000 22 0.882
0 0.3340 0.5793 1019.0098 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00
00 23 0.8820 0.3340 0.5793 1019.0098 0.0000 0.000
0 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 24
0.8820 0.3340 0.5793 1019.0097 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 25 0.8820 0.3340 0.5793 1019.0098 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
26 0.8820 0.3340 0.5793 1019.0098 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0
.0000 0.0000 27 0.8820 0.3340 0.5793 1019.0098 0.0
000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
28 0.8891 0.3390 0.5796 1019.2895 0.0000 0.0000 0.0000 0.0000 0.0000 0.00
00 0.0000 0.0000 29 1.3715 0.9
181 0.6021 1037.2642 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
30 1.1187 0.7138 0.5983 1042.8429 0.0000 0.0000 0.0
000 0.0000 0.0000 0.0000 0.0000 0.0000 31 1.3219
0.8751 0.5972 1033.1344 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000
0

Avg: 0
.9174 0.5208 0.5905 1037.0569

Re
marks:

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CERTIFICATE OF ANALYSIS
for 06/03

Station ID: 002520
Station Name: HATTIESBURG C G #1
Analysis Source:

Effective Date: 05/01/03 Lab ID: 00042839
Analyzed Date: 05/30/03 Analysis ID: 173599
Sample Date On: 04/21/03
Sample Date Off: 05/21/03
Sample Type: C

Component	Mol %	GPM
H2S	0.0000	
CO2	0.8270	
N2	1.0400	
Methane	94.5620	
Ethane	2.1380	0.571
Propane	0.7670	0.211
I-butane	0.1560	0.051
N-butane	0.1960	0.062
I-pentane	0.0720	0.026
N-pentane	0.0570	0.021
Hexanes+(C6+)	0.1850	0.083
TOTAL	100.0000	1.025
Pentane+		0.130

Sample Pressure(psig): 160.0
Line Pressure(psig): 110.0
Line Temp (deg F): 60.0
Ideal Gravity: 0.5968
Sample Gravity: 0.5981
Compress. Factor: 1.0020
LBs of H2O: 6.2
Grains H2S/100 CF: 0.00
PPM H2S: 0.0

Dry BTU @ 14.730: 1043.3000 Dry BTU @ 14.730 w/o H2S: 1043.3000
Wet BTU @ 14.730: 1025.2000 Wet BTU @ 14.730 w/o H2S: 1025.2000
AWC BTU @ 14.730: 1043.2000 AWC BTU @ 14.730 w/o H2S: 1043.2000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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Gulf South Pipeline Company, LP 07/02/03 09:27:52

Houston, Texas

CHROMATOGRAPH REPORT
for 06/03

Chromatograph ID: 002672
Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.3134	1.0494	0.6000	1033.1854	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.4607	1.0289	0.6027	1035.1970	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.8557	1.2118	0.5937	1033.2424	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.7581	1.4255	0.5913	1028.3417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.7648	1.4992	0.5924	1027.3351	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.7711	1.4462	0.5909	1027.2941	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.8058	1.5562	0.5933	1027.9149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.7984	1.5614	0.5940	1028.8784	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.7238	1.5073	0.5921	1029.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.8042	1.4782	0.5921	1026.5044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.7887	1.5007	0.5925	1027.4846	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.8231	1.5152	0.5933	1027.6775	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.9651	1.5761	0.5947	1025.4744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.0977	1.6245	0.5956	1024.2203	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	1.0081	1.5985	0.5942	1024.1820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	1.0072	1.5506	0.5954	1026.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	1.1140	1.2422	0.5956	1025.3805	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

24	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
25	1.1369	1.0626	0.5952	1025.4224	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
26	1.1598	0.8830	0.5947	1025.4642	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
27	0.7997	1.4267	0.5922	1027.9117	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
28	1.2383	1.3047	0.5995	1030.9907	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
29	1.3094	0.8892	0.6045	1044.3618	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							
30	1.3412	0.9292	0.6032	1040.1986	0.0000	0.0000	0.0000	0.0000	0.0000
0.0000	0.0000	0.0000							

Avg:	1.0268	1.2769	0.5953	1028.3340

Remarks:

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

Kymene Reactor Scrubber (AA-001)

As required by 5.B.14, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.14, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.8 (and 5.A.4 data reporting), the amounts of raw material processed and hours operated were recorded daily, and the records are included in this section.

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
12/24/02	8:00 pm	195	50	6	12030	7.2	D.B.	
12/26/02	6:15AM	196	55	6	12030	6.6	D.B.	
12/30/02	1:30AM	197	60	6	12030	6.0	E.P.	
12/31/02	10:10AM	198	50	6	12,030	7.2	JR	
1/1/02	3:30pm	199	55	6	12,030	6.6	D.B.	
1/1/03	11:45 PM	200	45	6	12030	8.0	BA	
1/2/03	9:30A	201	50	6	12030	7.2	JR	
1-2-03	4:55AM	202	60	6	12030	6.0	JL	
1-3-03	6:25 PM	203	55	6	12030	6.6	BA	
1-6-03	6:55Pm	204	55	6	12030	6.6	JL	
1-7-03	8:30Pm	205	60	6	12030	6.0	JL	
1-8-03	5:15 AM	206	50	6	12030	7.2	BA	
1-9-03	4:55 PM	207	70	6	12030	5.2	E.P.	
1-9-03	2:00AM	208	60	6	12030	6.0	D.B.	
1-10-03	5:55PM	209	70	6	12030	5.2	E.P.	
1-10-03	1:40AM	210	60	6	12030	6.0	D.B.	
1-11-03	4:25PM	211	70	6	12030	5.2	E.P.	
1/12/03	2:00pm	212	45	6	12030	8.0	JM	
1/14/03	2:15 PM	213	55	6	12030	6.6	D.B.	
1/15/03	2:20Am	214	60	6	12030	6.0	D.B.	
1/15/03	9:40PM	215	60	6	12030	6.0	D.B.	
1/16/03	11:40Am	216	50	6	12030	7.2	JM	
1/17/03	9:00pm	217	55	6	12030	6.6	D.B.	
1/18/03	3:50pm	218	60	6	12030	6.0	JM	
1/21/03	6:10AM	219	60	6	12030	6.0	E.P.	
1/22/03	3:25AM	220	70	6	12030	5.2	E.P.	
1/23/03	5:10Am	221	60	6	12030	6.0	D.B.	
1/24/03	12:45pm	222	111	6	12030	3.3	D.B.	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
1/25/03	11:11Pm	223	50	6	12,030	7.2	D.B.	
1/24/03	7:00A.m	224	50	6	12030	7.2	JM	
1/26/03	3:15pm	225	50	6	12,030	7.2	D.B.	
1/24/03	11:54PM	225 JB	51	6	12030	7.1	L.S.	DUAL ENTRY FOR SAME BATCH 225 JB
1/26/03	11:54pm	226	51	6	12030	7.1	D.B.	
1/27/03	2:05pm	227	53	6	12030	6.8	D.B.	
1/29/03	12:10AM	228	70	6	12030	5.2	E.P.	
1-29-03	11:PM	229	70	6	12030	5.2	E.P.	
1-30-03	12:10AM	230	60	6	12030	6.0	E.P.	
1-31-03	1:10pm	231	65	6	12030	5.6	JB	
2/1/03	5:12AM	232	61	6	12030	5.9	L.S.	
2/1/03	8:55PM	233	60	6	12030	6.0	L.S.	
2/2/03	8:45AM	234	55	6	12030	6.6	L.S.	
2/2/03	9:05pm	235	60	6	12030	6.0	JM	
2/3/03	10:15AM	236	60	6	12030	6.0	BA	
02/05/03	5:59AM	237	60	6	12030	6.0	L.S.	
02/06/03	10:16AM	238	60	6	12030	6.0	L.S.	
02/07/03	1:34PM	239	70	6	12030	5.2	L.S.	
02/08/03	12:12PM	240	60	6	12030	6.0	L.S.	
2/08/03	7:40PM	241	60	6	12030	6.0	E.P.	
2/9/03	7:25Am	242	60	6	12030	6.0	D.B.	
2/10/03	12:25AM	243	60	6	12030	6.0	L.S.	
2/11/03	9:40pm	244	60	6	12030	6.0	L.S.	
2/12/03	12:15pm	245	60	6	12030	6.0	JM	
2/12/03	7:45pm	246	60	6	12030	6.0	JM	
2/13/03	11:40PM	247	60	6	12030	6.0	JB	
2/13/03	9:45PM	248	50	6	12030	7.2	L.S.	
2/14/03	1:10pm	249	60	6	12030	6.0	JB	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
2/14/03	11:15pm	250	55	6	12030	6.6	D.B.	
2/17/03	6:20Am	251	60	6	12030	6.0	L.S.	
2/18/03	3:15Am	252	60	6	12030	6.0	JB	
2/19/03	2:35PM	253	70	6	12030	5.2	L.S.	
2/20/03	8:00Am	254	60	6	12030	6.0	JB	
2/20/03	11:25pm	255	~~60~~ 55	6	12030	6.6	D.B.	
2/21/03	10:33	256	85	6	12030	4.2	L.S.	
2/22/03	8:00Am	257	60	6	12030	6.0	E.P.	
2/24/03	1:30pm	258	60	6	12030	6.0	BA	
2/25/03	7:00PM	259	60	6	12030	6.0	L.S.	
2/26/03	5:05Am	260	60	6	12030	6.0	Jm	
2/26/03	11:25PM	261	60	6	12030	6.0	E.P.	
2/27/03	4:50pm	262	60	6	12030	6.0	Jm	
2/28/03	9:44Am	263	60	6	12030	6.0	JB	
2/28/03	6:45pm	264	60	6	12030	6.0	E.P.	
3/4/03	11:30Am	265	60	6	12030	6.0	L.S.	
3/4/03	9:22pm	266	60	6	12030	6.0	Jm	
3/5/03	9:45Am	267	55	6	12030	6.6	JB	
3/5/03	8:50pm	268	60	6	12030	6.0	Jm	
3/6/03	4:20Am	269	60	6	12030	6.0	JB	
3/6/03	5:40PM	270	60	6	12030	6.0	L.S.	
3/7/03	3:25AM	271	60	6	12030	6.0	E.P.	
3/9/03	7:55PM	272	60	6	12030	6.0	L.S.	
3/12/03	8:00pm	273	60	6	12030	6.0	L.S.	
3/12/03	5:35Am	274	60	6	12030	6.0	JB	
3/12/03	10:35PM	275	60	6	12030	6.0	L.S.	
3/13/03	12:45pm	276	60	6	12030	6.0	JB	
3/13/03	11:45PM	277	~~60~~ 50	6	12030	~~6.0~~ 7.2	L.S.	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
3/15/03	11:15pm	278	60	6	12,030	6.0	D.B.	
3/16/03	7:10AM	279	60	6	12030	6.0	K.P.	
3/16/03	3:20pm	280	60	6	12030	6.0	JM	
3/16/03	11:20pm	281	60	6	12,030	6.0	D.B.	
3/17/03	6:15pm	282	60	6	12,030	6.0	D.B.	
3/18/03	11:45pm	283	60	6	12,030	6.0	D.B.	
3/19/03	6:09pm	284	60	6	12,030	6.0	JTB	
3/20/03	9:40Am	285	60	6	12,000	6.0	K.P.	
3/21/03	9:45pm	286	60	6	12,030	6.0	D.B.	
3/22/03	11:15pm	287	60	6	12,030	6.0	D.B.	
3/24/03	9:45Am	288	50	6	12030	7.2	K.P.	
3/25/03	8:30pm	289	60	6	12030	6.0	JTB	
3/26/03	9:05AM	290	60	6	12030	6.0	JM	
3/27/03	8:55pm	291	60	6	12030	6.0	JTB	
3/27	3:58pm	292	60	6	12030	6.0	JTB	
3/29/03	3:10PM	293	60	6	12030	6.0	K.P.	
3/30/03	3:00PM	294	60	6	12030	6.0	K.P.	
3/31/03	10:25Am	295	65	6	12030	5.4	K.P.	
4/1/03	3:30pm	296	65	6	12030	5.4	K.P.	
4/2/03	8:50p	297	60	6	12030	6.0	JM	
4/3/03	8:26Am	298	60	6	12030	6.0	K.P.	
4/4/03	11:50pm	299	60	6	12030	6.0	JTB	
4/5/03	11:20pm	300	60	6	12030	6.0	JTB	
4/7/03	10:50pm	301	60	6	12030	6.0	JTB	
4/8/03	3:55pm	302	60	6	12030	6.0	K.P.	
4/8/03	11:25pm	303	60	6	12030	6.0	JTB	
4/10/03	7:12pm	304	60	6	12030	6.0	JTB	
4/11/03	1:25Am	305	60	6	12030	6.0	K.P.	

(1) Determined from the start/stop charge time on the Polymer batch sheet

Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th

0.03 Factor = 60 min/hr / 2000 lbs/ton

04/12/03	7:10A	306	60	6	12030	6.0	JM

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
4/13/03	9:35Am	307	50	6	12000	7.3	L.S	
4/14/03	2:00Am	308	60	6	12030	6.0	E.P.	
4/14/03	10:33Am	309	60	6	12030	6.0	L.S.	
4/15/03	11:55AM	310	70	6	12030	5.2	L.S.	
4/15/03	11:20pm	311	50	6	12030	7.3	D.B.	
4/16/03	10:10	312	60	6	12030	6.0	L.S.	
4/17/03	6:15Pm	313	60	6	12030	6.0	BA	
4/20/03	10:pm	314	60	6	12030	6.0	K.B.	
4/21/03	9:30Am	315	60	6	12030	6.0	L.S.	
4/22/03	8:45Am	316	55	6	12030	6.6	L.S.	
4/22/03	5:50PM	317	60	6	12030	6.0	L.S.	
4/23/03	9:05AM	318	70	6	12030	5.2	L.S.	
4/23/03	6:10PM	319	70	6	12030	5.2	L.S.	
4/24/03	11:50Am	320	60	6	12030	6.0	D.B.	
4/25/03	8:45Am	321	80	6	12030	4.5	L.S.	
4/25/03	9:35pm	322	60	6	12030	6.0	m	
4/28/03	8:25Am	323	55	6	12030	6.6	L.S.	
4/29/03	6:40pm	324	60	6	12030	6.0	m	
4/29/03	4:24Am	325	60	6	12030	6.0	JB	
4/26/03	12:30pm	326	60	6	12030	6.0	L.S.	
5/2/03	10:00Am	327	70	6	12030	5.2	L.S.	
5/4/03	1:53Am	328	60	6	12030	6.0	JB	
5/5/03	7:12AM	329	60	6	12030	6.0	L.S.	
5/5/03	9:40pm	330	60	6	12030	6.0	JB	
5/6/03	7:15PM	331	75	6	12030	4.8	L.S.	
5/7/03	8:38PM	332	50	6	12030	7.2	L.S.	
5/9/03	7:50Pm	333	60	6	12030	6.0	D.B.	
5/10/03	9:50pm	334	60	6	12030	6.0	D.B.	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
5/1/03	7 AM	335	60	6	12030	6.0	JB	
5/12/03	1:05 AM	336	60	6	12030	6.0	E.P.	
5/13/03	9:20 AM	337	40	6	12030	6.0	JB	
5/16/03	4:00 AM	338	50	6	12,000	7.2	JM	
5/16/03	12:30 PM	339	55	6	12,000	6.6	JM	
5/17/03	5:00 AM	340	60	6	12,000	6.0	JM	
LS 5/18/03	5:00 PM	341	60	6	12000	6.0	L.S.	
5/18/03	8:20 AM	342	58	6	12000	6.2	L.S.	
5/18/03	6:30 PM	343	60	6	12000	6.0	E.P.	
5/22/03	5:55 PM	344	55	6	12000	6.6	L.S.	
5/23/03	6:15 AM	345	60	6	12000	6.0	L.S.	
5/24/03	9:40 PM	346	50	6	12,000	7.2	JM	
5/25/03	5:05 AM	347	60	6	12000	6.0	JB	
5/26/03	12:51 AM	348	51	6	12,000	7.1	JB	
5/27/03	12:59 AM	349	43	6	12000	8.4	JB	
5/28/03	4:17 AM	350	47	6	12000	7.7	JB	
5/29/03	7:42 AM	351	55	6	12000	6.6	L.S.	
5/30/03	10:37 AM	352	55	6	12000	6.6	L.S.	
5/31/03	10:05 AM	353	50	6	12000	7.2	JM	
6/1/03	5:24 PM	354	47	6	12000	7.7	JB	
6/01/03	7:24 PM	355	60	6	12000	6.0	JM	
6/3/03	9:21 PM	356	47	6	12000	7.7	JB	
6/5/03	5:55 PM	357	45	6	12000	8.0	JB	
6/7/03	11:21 A.M.	358	42	6	12,000	8.6		
6/7/03	8:03 PM	359	70	6	12,000	5.2	L.S.	
6/8/03	4:05 AM	360	60	6	12000	6.0	E.P.	
6/8/03	3:30 PM	361	51	6	12000	7.1	L.S.	
6/9/03	3:45 AM	362	60	6	12000	6.0	E.P.	

(1) Determined from the start/stop charge time on the Polymer batch sheet

Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th

0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002
Adipic Acid Handling system with a Dust Collector

Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
6/10/03	1:48 P	363	55	6	12,000	6.5	L.S.	
6/10/03	9:36P	364	61	6	12,000	5.9	D.B.	
6/17/03	9:01A	365	71	6	12,000	5.1	James James	
6/18/03	11:38 AM	366	53	6	12,000	6.8	L.S.	
6/18/03	8:53PM	367	55	6	12,000	6.5	L.S.	
6/19/03	1:24pm	368	61	6	12,000	5.9	D.B.	
6/19/03	10:25pm	369	85	6	12,000	4.2	JB	
6/[illegible]/03	6:24Am	370	40	6	12,000	~~4.0~~ 9.0	JB	
6/24/03	7:15PM	371	55	6	12,000	6.5	JM	
6/24/03	3:50pm	372 ~~44~~ 43		6	12,000	~~8.2~~ 8.4	JB	
6/25/03	3:45pm	373	90	6	12,000	4.0	JM	
6-27-03	5:31pm	374	69	6	12,000	5.2	JL	
6/27/03	7:00pm	375	60	6	12,000	6.0	EP	
6/28/03	7:12pm	376	42	6	12,000	8.6	JB	
6/[illegible]/03	7:20pm	377	50	6	12,000	7.2	JB	
6/30/03	2:20pm	378	90 BA	6	12000	4.0	BA	
[illegible]-1-03	12:20pm	379	50	6	12,000	7.2	JL	
7/1/03	10:16pm	380	45	6	12,000	8.0	JB	
7/1/03	8:44Pm	381	60	6	12,000	6.0	JL	
7/2/03	10:15PM	382	60	6	12,000	6.0	JB	
7-3-03	10:10Am	383	50	6	12,000	7.2	JL	
7/4/03	12:15AM	384	114	6	12000	3.0	L.S.	
7/4/03	9:05 Am	385	60	6	12000	6.0	L.S.	
7/5/03	9:18pm	386	68	6	12000	5.3	D.B.	
7-7-03	12:05 Pm	387	65	6	12,000	5.5	JL	
7/8/03	7:46pm	388	51	6	12000	7.1	D.B.	
7-10-03	1:35 Pm	389	55	6	12,000	6.5	JL	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.14, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.B.9, water flow rate through the scrubber was recorded on a weekly basis. See explanation in Deviations from Permit Requirements Section.

Silica Furnace Dust Collector (AL-002)

The Silica Furnace Dust Collector (AL-002) did not operate during this semi-annual reporting period; therefore, the weekly maintenance checks, required by 5.B.14, only noted that the unit was not operating.

As required by 5.B.11 (and 5.A.4 data reporting), the silica processed and the hours operated were not recorded since the unit did not operate.

Title V -- Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
10-24-02	JL	✓		5.1		✓	←		NOT operating					→
10-29-02	JR.	·	✓	4.2		✓	←		NOT operating					→
11-4-02	JR.	✓		5.8		✓	←		NOT operating					→
11-13-02	BA	✓		5.4		✓	←		Not operating					→
11-19-02	JL	✓		6.0		✓	←		Not operating					→
11-28-02	JR	✓		5.1		✓	←		Not operating					→
12-4-02	JR.	✓		5.8		✓	←		NOT operating					→
12-11-02	JL	✓		5.4		✓	←		Not operating					→
12-20-02	JR		✓	5.2		✓	←		NOT operating					→
12-27-02	JR	✓		5.8		✓	←		NOT operating					→
1-10-03	JR	✓		4.3		✓	←		NOT operating					→
1-15-03	JR	✓	✓	6.0		✓	←		NOT operating					→

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Title V – Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1-22-03	BA	✓		5.1		✓	←		Not operating →					
1-28-03	JL	✓		5.0		✓	←		not operating →					
1-29-03	BA	✓		5.2		✓	←		not operating →					
2-7-03	BA	✓		5.0		✓	←		not operating →					
2-12-03	JR.	✓		5.2		✓	←		NOT OPERATING →					
2-17-03	JL	✓		5.5		✓	←		Not operating →					
2-25-03	JL	✓		5.6		✓	←		Not operating →					
2-28-03	JL	✓		5.4		✓	←		Not operating →					
3-5-03	JR.	✓		5.5		✓	←		NOT OPERATING →					

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Title V -- Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
3.10.03	JL		✓	0		✓	←	not operating					→	
3-11-03	JL		✓	0		✓	←	Not operating					→	
3-13-03	BA	✓		5.1		✓	←	Not operating					→	
3-14-03	JL	✓		5.5		✓	←	Not operating					→	
3-18-03	JL	✓		5.3		✓	←	Not operating					→	
3-25-03	JL	✓		5.7		✓	←	Not operating					→	
4-3-03	JR.	✓		5.5		✓	←	NOT OPERATING					→	
4-10-03	JL	✓		5.4		✓	←	Not operating					→	
4-14-03	JR.	✓		5.3		✓	←	NOT OPERATING					→	
4-25-03	JR.	✓		5.2		✓	←	NOT OPERATING					→	
11-29-03	JL	✓		5.5		✓	←	not operating					→	
5-8-03	JR.	✓		5.2		✓	←	NOT OPERATING					→	

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Title V -- Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
5-14-03	BA		–	5.3		–	←		Not operating				→	
5-21-03	JL.	✓		5.2		✓	←		NOT OPERATING				→	
5-28-03	JL	✓		5.6		✓	←		Not operating				→	
6-4-03	BA	✓		5.1		✓	←		Not operating				→	
6-10-03	BA	✓		5.1		✓	←		Not operating				→	
6-16-03	BA		✓	5.0		✓	←		NOT OPER,				→	
6-17-03	JL	✓		5.2		✓	←		Not operating				→	
6-23-03	JL	✓		5.5		✓	←		Not operating				→	
7-2-03	JL	✓		0			←		Not running hold week				→	
7-7-03	BA	–		5.7			←		Not operating				→	

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HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.14, weekly operator maintenance checks were performed on the HRA Water Scrubber (AG-003). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

HRA Flaking Belt Dust Collector (AG-005)

As required by 5.B.14, weekly maintenance checks were performed on the HRA Flaking Belt Dust Collector (AG-005). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

As required by 5.B.10, the pressure drop across the baghouse was recorded weekly (or more frequent) while the area is operating.

Hydrogen Generation Process (AK-000)

The Hydrogen Generation Process (AK-000) did not operate during this semi-annual reporting period; therefore, the weekly maintenance checks, required by 5.B.14, only noted that the unit was not operating.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Water Scrubber #1 (AC-002)

As required by 5.B.14, weekly maintenance checks were performed on Poly-Pale Water Scrubber #1 (AC-002). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

Poly-Pale Water Scrubber #2 (AC-003)

As required by 5.B.14, weekly maintenance checks were performed on Poly-Pale Water Scrubber #2 (AC-003). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

Poly-Pale Process Melter (AC-004)

As required by 5.B.13 (and 5.A.4 data reporting), the amounts of raw material processed and hours operated were recorded daily, and the records are included in this section.

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: Jan. - June, 2003

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
01/06/2003	8	60	29762	1.860
01/07/2003	8	60	29762	1.860
01/08/2003	8	32	15873	0.992
01/09/2003	8	60	29762	1.860
01/10/2003	8	62	30754	1.922
01/13/2003	16	120	59524	1.860
01/14/2003	16	108	53572	1.674
01/15/2003	16	120	59524	1.860
01/16/2003	16	88	43651	1.364
01/17/2003	16	120	59524	1.860
01/18/2003	16	120	59524	1.860
01/19/2003	16	120	59524	1.860
01/20/2003	16	100	49604	1.550
01/21/2003	16	121	60020	1.876
01/22/2003	16	120	59524	1.860
01/23/2003	8	40	19841	1.240
01/24/2003	8	50	24802	1.550
01/25/2003	16	100	49604	1.550
01/28/2003	8	10	4960	0.310
02/17/2003	8	40	19841	1.240
03/18/2003	8	44	21826	1.364
03/19/2003	8	48	23810	1.488
03/20/2003	8	26	12897	0.806
03/24/2003	8	14	6944	0.434
03/25/2003	8	14	6944	0.434

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: Jan. - June, 2003

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
03/31/2003	8	52	25794	1.612
04/01/2003	8	60	29762	1.860
04/02/2003	16	111	55060	1.721
04/03/2003	16	84	41667	1.302
04/04/2003	16	108	53572	1.674
04/07/2003	16	66	32738	1.023
04/08/2003	8	60	29762	1.860
04/09/2003	16	91	45139	1.411
04/10/2003	8	60	29762	1.860
	Material addition on April 10th above was on day shift.			
04/10/2003	8	52	25794	1.612
04/10/2003	8	50	2500	0.156
	Material addition on April 10th above was on evening shift for a total of 1.768 tons/hr.			
04/11/2003	8	51	25298	1.581
04/11/2003	8	50	2500	0.156
	Material addition on April 11th above was on day shift for a total of 1.737 tons/hr.			
04/11/2003	8	20	9921	0.620
04/11/2003	8	50	2500	0.156
	Material addition on April 11th above was on evening shift for a total of 0.776 tons/hr.			
04/14/2003	8	52	25794	1.612
04/14/2003	8	50	2500	0.156
	Material addition on April 14th above was on day shift for a total of 1.768 tons/hr.			
04/14/2003	8	52	25794	1.612
04/14/2003	8	50	2500	0.156
	Material addition on April 14th above was on evening shift for a total of 1.768 tons/hr.			
04/15/2003	8	52	25794	1.612
04/15/2003	8	50	2500	0.156
	Material addition on April 15th above was on day shift for a total of 1.768 tons/hr.			
04/15/2003	8	60	29762	1.860
	Material addition on April 15th above was on evening shift.			

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: Jan. - June, 2003

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
04/16/2003	16	101	50100	1.566
04/17/2003	8	40	19841	1.240
04/18/2003	16	121	60020	1.876
04/21/2003	16	88	43651	1.364
04/22/2003	16	120	59524	1.860
04/23/2003	16	121	60020	1.876
04/24/2003	8	28	13889	0.868
04/25/2003	16	90	44643	1.395
04/26/2003	8	62	30754	1.922
04/28/2003	16	120	59524	1.860
04/29/2003	16	120	59524	1.860
04/30/2003	16	120	59524	1.860
05/01/2003	16	120	59524	1.860
05/02/2003	16	120	59524	1.860
05/03/2003	16	124	61508	1.922
05/04/2003	8	63	31250	1.953
05/05/2003	16	123	61012	1.907
05/06/2003	16	57	28274	0.884
05/07/2003	16	121	60020	1.876
05/08/2003	16	120	59524	1.860
05/12/2003	8	24	11905	0.744
06/04/2003	8	17	8433	0.527
06/11/2003	8	30	14881	0.930
06/13/2003	16	64	31746	0.992

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: Jan. - June, 2003

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
06/16/2003	8	30	14881	0.930
06/17/2003	8	36	17857	1.116
06/18/2003	8	80	39683	2.480
06/19/2003	8	52	25794	1.612
06/20/2003	16	68	33730	1.054
06/21/2003	8	32	15873	0.992
06/23/2003	8	64	31746	1.984
06/24/2003	8	37	18353	1.147
06/26/2003	8	60	29762	1.860
06/27/2003	8	60	29762	1.860
06/30/2003	8	37	18353	1.147

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
11-16-02	1 1CN	50 Bags Polyrex IMS-7073	*
11-16-02	1 1CN	83 drums Gum to T-119	
11-17-02	1 1CN	50 bags polyrex IMS-7073	
11-17-02	1 1CN	90 drums Gum to T-119	
11-18-02	1 1CN	50 bags Polyrex IMS-7073	
11-18-02	1 1CN	60 drums Gum to T-119	
11-18-02	2 1JH	61 drums Gum to T-119	
11-19-02	1 1CN	41 drums Gum to T-119	
11-19-02	2 1JH	50 Bags Polyrex IMS-7073	
11-19-02	2 1JH	60 drums Gum to T-119	
11-20-02	1 1CN	75 bags polyrex IMS-7073-59	
	1		IMS-7070-16
11-20-02	1 1CN	41 drums Gum to T-119	
11-20-02	2 1JH	50 Bags PolyRex IMS 7070	
11-20-02	2 1JH	40 drums Gum T-119	
11-21-02	1 1CN	40 drums Gum to T-119	
11-21-02	2 1JH	62 drums Gum to T-119	
11-23-02	1 1CN	60 drums Gum to T-119	
11-23-02	2 1JH	60 drums Gum to T-119	
11-24-02	1 1CN	60 DRUMS Gum to T-119	*
	1		
01-06-03	1 1CN/JH	60 drums Gum to T-119	
01-07-03	1 1CN/JH	60 drums Gum to T-119	
01-08-03	1 1CN/JH	32 drums Gum to T-119 Pump Broke down	
01-09-03	1 1CN/JH	60 drums Gum to T-119	
1-10-03	1 1CN/JH	62 drums Gum to T-119	
1-13-03	1 1J.H	60 drums Gum to T-119	
1-13-03	2 1CN	60 drums Gum to T-119	
1-14-03	1 1CN	48 drums Gum to T-119	
1-14-03	2 1JH	60 drums Gum to T-119	
1-15-03	1 1CN	60 DRUMS Gum to T-119	

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
1-15-03	2 / JH	60 drums to T-119 - gum	
1-16-03	1 / CN	48 drums Gum to T-119	
1-16-03	2 / JH	40 drums Gum to T-119 - Truck Brake down	
1-17-03	1 / CN	60 drums gum to T-119	
1-17-03	2 / JH	60 drums Gum to T-119	
1-18-03	1 / CN	60 drums Gum to T-119	
1-18-03	2 / JH	60 drums gum to T-119	
1-19-03	1 / CN	60 drums gum to T-119	
1-19-03	2 / JH	60 drums Gum to T-119	
1-20-03	1 / JH	40 drums Gum to T-119	
1-20-03	2 / CN	60 drums Gum to T-119	
1-21-03	1 / JH	61 drums Gum to T-119	
1-21-03	2 / CN	60 drums Gum to T-119	
1-22-03	1 / JH	60 drums Gum to T-119	
1-22-03	2 / CN	60 drums Gum to T-119	
1-23-03	2 / CN	40 drums Gum to T-119	
1-24-03	2 / CN	50 drums gum to T-119	
1-25-03	1 / JH	60 drums Gum to T-119	
1-25-03	2 / CN	40 drums gum to T-119	
1-28-03	1 / CN	10 drums Gum to T-120	
3-17-03	1 / CN/JH	40 drums Gum for RAD	
3-18-03	1 / CN	44 drums 861 to T-119 IRR-0038	
3-19-03	1 / CN	48 drums 861 to T-119 IRR-0038	
3-20-03	1 / CN	26 drums 861 to T-119 IRR-0038	
3-24-03	1 / CN	14 drums 861 to T-119 IRR-0048	
3-25-03	1 / CN	14 drums 861 to T-119 IRR-0048	
3-31-03	1 / CN	52 drums Gum to T-119	
4-1-03	1 / CN	60 Drums gum to T-119	
4-2-03	1 / CN	60 drums Gum to T-119	
4-2-03	2 / JH	51 drums gum to T-119	
4-3-03	1 / CN	44 drums Gum to T-119	

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
4-3-03	2 1JH	40 Gum	T-119
4-4-03	1 1CN	60 drums Gum to T-119	
4-4-03	2 1JH	48 drums Gum to T-119	
4-7-03	1 1JH	31 drums Gum to T-119 →	RAIN
4-7-03	2 1CN	35 drums Gum to T-119	
4-8-03	2 1CN	60 Drums Gum to T-119	
4-9-03	1 1JH	51 Drums Gum Truck Brok down for while	
4-9-03	2 1CN	40 drums Gum to T-119 (Pumping T-119)	
4-10-03	1 1JH	60 drums Gum to T-119	
4-10-03	2 1CN *	50 bags polyrex IMX-7085	
4-10-03	2 1CN	52 drums Gum to T-119	
4-11-03	1 1JH	50 Bags PolyRex imx-7085	
4-11-03	1 1JH	51 drums Gum to T-119	
4-11-03	2 1CN	50 bags Polyrex IMX-7085	
4-11-03	2 1CN	20 drums Gum to T-119	
4-14-03	1 1JH	50 Bags polyRex Imx-7085	
4-14-03	1 1JH	52 drums Gum Imx-to 119	
4-14-03	2 1CN	52 drums Gum to T-119	
4-14-03	2 1CN	50 Bags Polyrex IMX-7085	
4-15-03	1 1CN	52 drums Gum to T-119	
4-15-03	1 1CN	50 bags Polyrex IMX-7085	
4-15-03	2 1JH	60 drums Gum to T-119	
4-16-03	1 1CN	60 drums Gum to T-119	
4-16-03	2 1JH	41 drums Gum to T-119 TANK FULL	
4-17-03	1 1JH	40 drums Gum to T-119 Makeing	Blend
4-18-03	1 1CN	61 drums Gum to T-119	
4-18-03	2 1JH	60 Drums Gum to T-119	
4-21-03	1 1JH	28 drums Gum to T-119 Line plugs to T-190	
4-21-03	2 1CN	60 Drums Gum to T-119.	
4-22-03	1 1JH	60 drums Gum to T-119	
4-22-03	2 1CN	60 drums Gum to T-119	

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
4-23-03	1 1JH	61 drums to T-119	
4-23-03	2 1 CN	60 Drums Gum to T-119	
4-24-03	1 1JH	28 drums Gum to T-119	TANK FULL
4-25-03	1 1JH	30 drums Gum to T-119	
4-25-03	2 1CN	60 Drums Gum to T-119	
4-26-03	1 1CN	62 drums Gum to T-119	
4-28-03	1 1CN	60 drums Gum to T-119	
4-28-03	3 * 1JH	60 drums Gum to T-119	"Last"
4-29-03	1 1CN	60 drums Gum to T-119	*
4-29-03	2 1JH	60 drums Gum to T-119	
4-30-03	1 1CN	60 drums Gum to T-119	
4-30-03	2 1JH	60 drums Gum to T-119	
5-1-03	1 1CN	60 drums Gum to T-119	
5-1-03	2 1JH	60 drums Gum to T-119	
5-2-03	1 1CN	60 drums Gum to T-119	
5-2-03	2 1JH	60 drums Gum to T-119	
5-3-03	1 1CN	63 drums Gum to T-119	
5-3-03	2 1JH	61 drums Gum to T-119	
5-4-03	1 1JH	63 drums Gum to T-119	
5-5-03	1 1JH	63 drums Gum to T-119	
5-5-03	1 1CN	60 Drums Gum to T-119	
5-6-03	1 1JH	40 Drums Gum to T-119	
5-6-03	2 1CN	17 drums Gum to T-119	(melter hung up)
5-7-03	1 1JH	61 drums Gum to T-119	
5-7-03	2 1CN	60 drums Gum to T-119	
5-8-03	1 1JH	60 drums Gum to T-119	
5-8-03	2 1CN	60 DRums Gum to T-119	
5-9-03	1 1JH/CN	61 drums Gum to T-119	
5-12-03	1 1JH/CN	24 drums Gum to T-119	
6-4-03	1 1CN	17 drums 861 to T-119	IRR-0048
6-11-03	1 1CN/1JH	38 drums 861 to T-119	IRR-0048

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
6-13-03	1 ICN+JH	32 drums 861	to T-119 ISR-0004
6-13-03	1 ICN-JH	32 drums 861	to T-119 ISR-0004
6-16-03	1 ICN-JH	30 drums 861	to T-119 ISR-0004
6-17-03	1 ICN-JH	24 drums 861	IRR-0048 to T-119
	1 "	4 drums 861	ISR-0004 to T-119
	1 "	8 drums 861	ISR-0006 to T-119
6-18-03	1 ICN-JH	48 drums 861	ISR-0006 to T-119
	1 "	32 drums 861	ISR-0006 to T-119
6-19-03	1 ICN	32 drums 861	ISR-0006 to T-119
	1	20 drums 861	ISR-0037 to T-119
6-20-03	1 1	32 drums 861	ISR-0001 to T-119
6-20-03	2 1-JH	36 drums 861	ISR-0001 to T-119
6-21-03	1 ICN	32 drums 861	ISR-0001 to T-119
6-23-03	1 ICN	32 drums 861	ISR-0001 to T-119
	1	32 drums 861	ISR-0001 to T-119
6-24-03	1 ICN	37 drums	Gum to RAD
6-26-03	1 ICN/JH	60 drums	Gum to T-119
6-27-03	1 ICN/JH	60 drums	Gum to T-119
6-30-03	1 ICN	37 drums	Gum to T-119 (Pump repair)
7-1-03	1 ICN	60 drums	Gum to T-119
7-3-03	1 ICN	60 drums	Gum to T-119
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		

RAD Process Area

RAD PROCESS AREA REPORT SUMMARY

Ammonia Packed Bed Scrubber (AF-002)

As required by 5.B.14, weekly maintenance checks were performed on the Ammonia Packed Bed Scrubber (AF-002). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

EO Packed Bed Scrubber (AF-004(EO))

As required by 5.B.14, weekly maintenance checks were performed on the EO Packed Bed Scrubber (AF-004). The operator visual inspections, were performed weekly (or more frequent) while the area was operating. See explanation in Deviations from Permit Requirements Section.

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

As required by 5.B.14, weekly operator and mechanic maintenance checks were performed on the Adduct Reactor Scrubber (AD-001).

Dresinol Water Eductor (AD-002)

As required by 5.B.14, weekly operator maintenance checks were performed on the Dresinol Water Eductor (AD-002); however, the unit did not operate during the semi-annual reporting period.

Kymene LDAR Monitoring

KYMENE LDAR MONITORING

In Accordance with 40 CFR 63, Subpart W, Subpart H, and Permit Conditions 5.B.1, 5.B.2, 5.B.3, 5.B.4, and 5.C.1, Hercules Incorporated is providing the following required information:

- Report required by 40 CFR 63.182(d)(2);
- Summary report of actual monitoring data; and
- Recordkeeping and reporting of Startup, Shutdown, and Malfunctions per SSM Plan.
  - Form A: SSM Plan Conformance
  - Form B: Nonconformance to SSM Plan (no nonconformance incidents)

No problems or deviations from the permit were noted during the routine monthly LDAR monitoring.

On 6/18/03 evidence of a leak(non-drip) was noted in a pipe weld. The pipe weld was repaired on 6/18/03 and tested on 6/20/03.

PERIODIC LEAK MONITORING REPORT

January 1, 2003 through June 30, 2003

Hercules Incorporated
Hattiesburg, Mississippi

KYMENE PROCESS AREA (AA-000)

1. **Number of affected *valves* in HAP service for which leaks were detected as described in § 63.168(b), the percent leakers, and the total number monitored:**

   - One (1) affected valve was discovered leaking (V_L=0) during the referenced reporting period (>500 ppm);
   - $[V_L/V_T] * 100 = 0.00\%$ of total valves monitored were leaking; and
   - 115 total valves (V_T=110) were monitored.

2. **Number of *valves* for which leaks were not repaired per § 63.168(f), identifying the number of those that are determined non-repairable:**

   - None.

3. **Number of affected *pumps* in HAP service for which leaks were detected as described in § 63.163(b), the percent leakers, and the total number monitored:**

   - No affected pumps were discovered leaking (P_L=0) during the required monthly monitoring (>1,000 ppm);
   - $[P_L/P_T] * 100 = 0.00\%$ of total pumps monitored on a monthly basis were leaking as determined by § 63.163(d)(4); and
   - 3 affected pumps monitored 6 times for a total of 18 pumps (P_T=18) monitored.

4. **Number of *pumps* for which leaks were not repaired per § 63.163(c):**

   - None.

5. **Number of affected *agitators* in HAP service for which leaks were detected as described in § 63.173(a) & (b):**

   - The affected agitator did not leak during the referenced reporting period (>10,000 ppm);

6. **Number of *agitators* for which leaks were not repaired per § 63.173(c):**

   - None.

7. **Number of affected *connectors* in HAP service for which leaks were detected as described in § 63.174(a), the percent leaking, and the total number monitored:**

   - No affected connectors were measured at or above 500 ppm (C_L=0) during the referenced reporting period;
   - [C_L/C_T] * 100 = 0.00% of total connectors monitored were leaking; and
   - 0 total connectors (C_T=0) were monitored.

8. **Number of *connectors* for which leaks were not repaired per § 63.174(d), identifying the number of those that are determined non-repairable:**

   - None.

9. **Explain any *delay of repairs*:**

   - All applicable repairs were made in a timely fashion.

10. **Results of all monitoring within semi-annual reporting period to show compliance with § 63.165(a), *pressure relief device* releases:**

    - None.

11. **Notification of a change in *connector monitoring alternatives* as described in §63.174(c)(1):**

    - As allowed in §63.174(c)(1)(ii), Hercules Incorporated changed connector monitoring alternatives during the July 1 - December 31, 2000, semi-annual reporting period. Instead of monitoring opened or broken connectors for leaks within three (3) months of being returned to organic HAP service, Hercules chooses **not** to monitor connectors that have been opened or had the seal broken. It is realized that nonrepairable connectors can not be counted while complying with this alternative; therefore, in the percent leaking calculations C_{AN} will be set to zero.

12. ***Monitoring results and component summary report* during the semi-annual reporting period:**

    - Summary information from the referenced semi-annual reporting period is attached.

TABLE 2

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
KYMENE	0	53	2	0	55	0	110
Total	0	53	2	0	55	0	**110**
Valves Leaking:							
KYMENE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	**0**
Valves Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Pumps Monitored:							
KYMENE	3	3	3	3	3	3	18
Total	3	3	3	3	3	3	**18**
Pumps Leaking:							
KYMENE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	**0**
Pumps Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Connectors Monitored:							
Total	0	0	0	0	0	0	**0**
Connectors Leaking:							
Total	0	0	0	0	0	0	**0**
Connectors Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Screwed Connectors							
Total	0	0	0	0	0	0	**0**
Screwed Connectors							
Total	0	0	0	0	0	0	**0**
Screwed Connectors Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

TABLE 2 (cont'd)

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Agitator Monitored:							
KYMENE	1	1	1	1	1	1	6
Total	1	1	1	1	1	1	**6**
Agitator Leaking:							
KYMENE	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	**0**
Agitator Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Pressure Relief Device							
Total	0	0	0	0	0	0	**0**
Pressure Relief Device							
Total	0	0	0	0	0	0	**0**
Pressure Relief Device Leak	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
					Yes	No	Yes	No	Yes	No	
		3/18/03	7:30pm	D.B.	✓			✓		✓	Power on, started up scrubber H2O flow 12.48 G.P.m
3/25/03	1:45 pm			JB	✓			✓		✓	Planned shut down.
		3/25/03	6:00pm	E.P.	✓			✓		✓	Starting Scrubber water flow rate 15.80 gpm.
4/2/03	7:30AM			E.P.	✓			✓		✓	Plan Shut down)
		4/2/03	5:26pm		✓			✓		✓	Started Scrubber Water flow rate 15 & 16 gpm.
6/18/03	7:00AM			L.S.	✓			✓		✓	shut down R-401 Caught a leak in the weld on R-401 recirculating line.
~~L.S. 6/18/03~~		6/18/03	1:10 PM	L.S.	✓			✓		✓	Started R-401 Scrubber flow rate 1710 GPM
6/21/03	2:00pm			E.P.	✓			✓		✓	Plan Shut down)
~~6/21/03~~ JB	10:15pm	6/21/03	10:15pm	JB	✓			✓		✓	Plan JB Shut down — Start up scrubber water flow 13.96

For a malfunction, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
					Yes	No	Yes	No	Yes	No	
1/7/03	5:45AM			L.B.	✓			✓		✓	Planned shut down
1/15/03	11:30A			JL	✓			✓		✓	Planned Shut down
		1/15/03	5:50 PM		✓			✓		✓	started scrubber H_2O flow rate 14.52Gpm
2/15/03	5:48PM			D.B.	✓			✓	✓		Power failure / Bad storm!
		2/15/03	8:40PM	DB	✓			✓		✓	Power on, started Scrubber water flow rate 12.80
2/17/03	10:27AM			L.B	✓			—	✓		Shut down Vent fan motor
		2/17/03	11:3AM	L.B	✓			✓	✓		replace broken fan belt
2/21/03	6:54AM			L.B	✓			✓	✓		Power failure
		2/21/03	7:01AM	L.B.	✓			✓	✓		Power on started scrubber H_2O flow rate 15.87Gp
2/25/03	10:8AM			L.B	✓			✓	✓BB	X	Power failure Plan shut down
		2/25/03	10:13AM	L.B	✓			✓	✓BB	X	started scrubber H_2O flow rate 14.14GPM.
3/11/03	2:08AM			JB	✓			✓		✓	plan shutdown for repairs
		3/11/03	5:30 PM	L.B	✓			✓		✓	started scrubber H_2O flow 18.32GPM
3/18/03	9:00AM			D.B	✓			✓		✓	Shut down scrubber, Computer to be replace
~~3/18/03~~ D.B 3/18/03		3/18/03	4:30PM	D.B.	✓			✓		✓	Started up scrubber, H20 flow 14.21 gpm
3/18/03	6:20PM			D.B	✓			✓		✓	Power off for repairs, Everything was down

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed? Yes	SSM Plan Properly Followed? No	Was Form B Completed? Yes	Was Form B Completed? No	Was There A Malfunction? Yes	Was There A Malfunction? No	Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
10/13/02	8:37 Am			Jm	✓			✓	[initials]	✓	Planed shut down.
		10/14/02	7:00 AM	E.P.	✓			✓		✓	Scrubber water flowrate 14.01 GPM
10/20/02	6:18 Am				✓			✓		✓	Planed shut down
		10/21/02	8:31 Am	Jm	✓			✓		✓	Scrubber water flow rate 15.94 gpm.
10/27/02	6:Am			E.P.	✓			✓		✓	Plan shut down.
		10/28/02	7:53 Am	D.B	✓			✓		✓	Started scrubber, water flow 14.30 GPm
11/17/02	12:25 pm			Jm	✓			✓		✓	Planed shut down.
		11-18-02	11:40 Am	L.S	✓			✓		✓	Started scrubber water flow rate 14.52 GPM
12/08/02	6:40 AM			L.S	✓			✓		✓	Plan shut down.
		12/9/02	8:30 AM	L.S	✓			✓		✓	started scrubber water flow rate 15.54 GPM
12/18/02	11:55 Am			D.B.	✓			✓	✓		Power failure
		12/18/02	11:56 Pm		✓			✓		✓	Started scrubber (Power on) water flow rate 17.69 G[PM]
12/28/02	5:20 AM			L.S	✓			✓		✓	Planned shut down.
		12/30/02	6:42 AM	D.B.	✓			✓		✓	Started scrubber, water flow rate 15.45 GPM
		1/7/02									
		1/7/02	7:00 pm	Jm	✓			✓		✓	Started scrubber water flow rate 14.46 GPM

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Polyether Polyols Production LDAR Monitoring

RAD LDAR MONITORING

In Accordance with 40 CFR 63, Subpart PPP, Subpart H, and Permit Conditions 5.B.31 and 5C4(b)(7), Hercules Incorporated is providing the following required information:

- Report required by 40 CFR 63.182(d)(2);

- Summary report of actual monitoring data; and

- Recordkeeping and reporting of Startup, Shutdown, and Malfunctions per SSM Plan.

  - Form A: SSM Plan Conformance
  - Form B: Nonconformance to SSM Plan (no nonconformance incidents)

No problems or deviations from the permit were noted during the routine monthly LDAR monitoring.

PERIODIC LEAK MONITORING REPORT

January 1, 2003 through June 30, 2003

Hercules Incorporated
Hattiesburg, Mississippi

POLYRAD PROCESS AREA (AF-000)

1. **Number of affected *valves* in HAP service for which leaks were detected as described in § 63.168(b), the percent leakers, and the total number monitored:**

   - No affected valves were discovered leaking (V_L=0) during the referenced reporting period (>500 ppm);
   - [V_L/V_T] * 100 = 0.00% of total valves monitored were leaking; and
   - 203 total valves (V_T=183) were monitored.

2. **Number of *valves* for which leaks were not repaired per § 63.168(f), identifying the number of those that are determined non-repairable:**

   - None.

3. **Number of affected *pumps* in HAP service for which leaks were detected as described in § 63.163(b), the percent leakers, and the total number monitored:**

   - No affected pumps were discovered leaking (P_L=0) during the referenced reporting period (>5,000 ppm);
   - [P_L/P_T] * 100 = 0.00% of total pumps monitored were leaking; and
   - 3 affected pumps monitored 6 times for a total of 18 pumps (P_T=18) were monitored.

4. **Number of *pumps* for which leaks were not repaired per § 63.163(c):**

   - None.

5. **Number of affected *connectors* in HAP service for which leaks were detected as described in § 63.174(a), the percent leaking, and the total number monitored:**

   - No affected connectors were discovered leaking (C_L=0) during the referenced reporting period (>500 ppm);
   - [C_L/C_T] * 100 = 0.00% of total connectors were leaking; and
   - 0 connectors (C_T=0) were monitored.

6. **Number of *connectors* for which leaks were not repaired per § 63.174(d), identifying the number of those that are determined non-repairable:**

   - None.

7. **Explain any *delay of repairs*:**

   - None.

8. **Results of all monitoring within semi-annual reporting period to show compliance with § 63.165(a), *pressure relief devices*:**

   - No releases during the semi-annual reporting period.

9. **Notification of a change in *connector monitoring alternatives* as described in §63.174(c)(1):**

   - As allowed in §63.174(c)(1)(ii), Hercules Incorporated changed connector monitoring alternatives during the July 1 - December 31, 2000, semi-annual reporting period. Instead of monitoring opened or broken connectors for leaks within three (3) months of being returned to organic HAP service, Hercules chooses **not** to monitor connectors that have been opened or had the seal broken. It is realized that nonrepairable connectors can not be counted while complying with this alternative; therefore, in the percent leaking calculations C_{AN} will be set to zero.

10. ***Monitoring results and component summary report* during the semi-annual reporting period:**

    - Summary information from the referenced semi-annual reporting period is attached.

TABLE 2

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
RAD	0	0	98	0	0	85	183
Total	0	0	98	0	0	85	**183**
Valves Leaking:							
RAD	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	**0**
Valves Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Pumps Monitored:							
RAD	3	3	3	3	3	3	18
Total	3	3	3	3	3	3	**18**
Pumps Leaking:							
RAD	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	**0**
Pumps Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Connectors Monitored:							
Total	0	0	0	0	0	0	**0**
Connectors Leaking:							
Total	0	0	0	0	0	0	**0**
Connectors Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Screwed Connectors							
Total	0	0	0	0	0	0	**0**
Screwed Connectors							
Total	0	0	0	0	0	0	**0**
Screwed Connectors Leak rate:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

TABLE 2 (cont'd)

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Pressure Relief Device							
Total	0	0	0	0	0	0	**0**
Pressure Relief Device							
Total	0	0	0	0	0	0	**0**
Pressure Relief Device Leak	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	**0.00%**

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A
--PolyRAD/Surfactant Unit--

Startup or Malf. Start Date	Startup or Malf. Start Time (AM or PM)	Shutdown or Malf. Ending Date	Shutdown or Malf. End Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or action(s) taken during the startup, shutdown or malfunction. (See Sections 6.2, 6.3, and 6.4 of the SSM Plan.)
					Yes	No	Yes	No	Yes	No	
		5/17/02	5:00 PM	LRD	✓			✓		✓	Shut down E.O Scrubber
5/28/02	11:00 AM			J.R.B.	✓			✓		✓	Started up E.O. scrubber.
		5/31/02	11:00 AM	J.R.B.	✓			✓		✓	Shut the Polyrad and E.O. scrubber down.
		2/22/03	7:15 AM	J.P.	✓			✓	✓		0200 pump [illegible] pump (not LDAR related) LMH
2/22/03			1:35 PM	J.P.	✓			✓		✓	Started AR-150 [illegible]
2/24/03 (LMH)	7:00 AM (LMH)			J.R.B.	✓			✓	✓		Leaking check on E.O. unit pump (Scrubber OK)
		2/24/03 (LMH)	1:00 pm (LMH)	J.R.B.	✓			✓		✓	Started the AR-150 unit up (E.O. pump ok)
2/22/03	12:30 AM			LRD	✓			✓		✓	Started up E.O. scrubber
		3/1/03	10:30 AM	J.R.B.	✓			✓		✓	Shut the E.O. scrubber & Process Unit down @10:39 AM
3/6/03	3:00 PM			J.P.	✓			✓		✓	Started up E.O. Scrubber @ 3: P.M.
		3/11/03	10: [illegible]	J.P.	✓			✓	✓		Shut the Polyrad [illegible] Scrubber down
											Water leak on Scrubber.
3/11/03	12:50 PM			J.P.	✓			✓		✓	Start up!
		3/13/03	5:00 PM	J.R.B.	✓			✓		✓	Shut down Polyrad unit and E.O scrubber.
4/4/03	3:00 PM			L.R.D.	✓			✓	✓		Started up E.O. Scrubber High pressure on E.O. tank

Not relevant to LDAR LMH 2-24-03

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A
--PolyRAD/Surfactant Unit--

Startup or Malf. Start Date	Startup or Malf. Start Time (AM or PM)	Shutdown or Malf. Ending Date	Shutdown or Malf. End Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or action(s) taken during the startup, shutdown or malfunction. (See Sections 6.2, 6.3, and 6.4 of the SSM Plan.)
					Yes	No	Yes	No	Yes	No	
		4/4/03	9:40 pm	LRD	✓			✓		✓	Shut down E.O. Scrubber
JMH 5/20/03	3:00 pm				✓			✓		✓	Started up E.O. Scrubber
JMH	5/22/03	3:02 pm			LRD	✓			✓	✓		acid Water leak on E.O. Scrubber / Shut down Scrubber JMH
JMH			5/22/03	5:35 pm	LRD	✓			✓	✓		started up E.O scrubber leak fixed
			6/7/03	5:40 pm	L.R.B	✓			✓		✓	Cut off power to E.O. Scrubber. Put water on jet.
JMH	6/23/03	8 am			JMH	✓			✓		✓	Started up E.O. Scrubber
JMH	6/24/03	6:00 pm			(illegible)	✓			✓	✓		E.O. Scrubber power problems.
			6/25/03	4:00 am	LRD (JMH)	✓			✓	✓		started up E.O Scrubber
			7/1/03	11:30	LRB	✓			✓		✓	Shut the E.O. Scrubber down @ 11:30 am

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A
--PolyRAD/Surfactant Unit--

Startup or Malf. Start Date	Startup or Malf. Start Time (AM or PM)	Shutdown or Malf. Ending Date	Shutdown or Malf. End Time (AM or PM)	Initials	SSM Plan Properly Followed? Yes	SSM Plan Properly Followed? No	Was Form B Completed? Yes	Was Form B Completed? No	Was There A Malfunction? Yes	Was There A Malfunction? No	Identify the event as a startup, shutdown, or malfuction and provide comments or action(s) taken during the startup, shutdown or malfunction. (See Sections 6.2, 6.3, and 6.4 of the SSM Plan.)
		5/17/02	5:00 PM	LRD	✓			✓		✓	Shut down E.O Scrubber
5/28/02	11:00 AM			J.R.B.	✓			✓		✓	Started up E.O. scrubber.
		5/31/02	11:00 AM	J.R.B	✓			✓		✓	Shut the Polyrad and E.O. scrubber down
		2/22/03	7:15 AM	J.P.	✓			✓	✓		0200 Pump [illegible] pump — (not LDAR related) JMH
2/22/03			1:35 pm	J.P.	✓			✓		✓	S[illegible] AR-150 pump
2/24/03 JMH	7:00 AM JMH			J.R.B.	✓			✓	✓		Leaking check on E.O. unit pump (Scrubber OK)
		2/24/03 JMH	1:00 pm JMH	J.R.B.	✓			✓		✓	Started the AR-150 unit up (E.O. pump OK)
2/22/03	12:30 AM			LRD	✓			✓		✓	Started up E.O. scrubber.
		3/1/03	10:30 AM	J.R.B.	✓			✓		✓	Shut the E.O. scrubber & Process Unit down @ 10:39 AM
3/1/03	3:00 PM			J.J.	✓			✓		✓	Started up E.O. Scrubber @ 3: P.M.
		3/[illegible]/03	10:[illegible]	J.J.	✓			✓	✓		Shut the [illegible] down
											Water [illegible] on Scrubber.
3/[illegible]	12:50 PM			J.P.	✓			✓		✓	Start up[illegible]
		3/13/03	5:00 PM	J.R.B	✓			✓		✓	Shut down Polyrad unit and E.O scrubber.
4/4/03	3:00 PM			L.R.D.	✓			✓	✓		Started up E.O. Scrubber High Pressure on E.O. tank

Not relevant to LDAR JMH 2-24-03

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A
--PolyRAD/Surfactant Unit--

Startup or Malf. Start Date	Startup or Malf. Start Time (AM or PM)	Shutdown or Malf. Ending Date	Shutdown or Malf. End Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or action(s) taken during the startup, shutdown or malfunction. (See Sections 6.2, 6.3, and 6.4 of the SSM Plan.)
					Yes	No	Yes	No	Yes	No	
		4/4/03	9:40 pm	LRD	✓			✓		✓	Shut down E.O. Scrubber
JmH 5/20/03	3:00 pm				✓			✓		✓	Started up E.O. Scrubber
JmH	5/22/03 3:02 pm			LRD	✓			✓	✓		acid Water leak on E.O. Scrubber / Shut down Scrubber JmH
JmH		5/22/03	5:35pm	LRD	✓			✓	✓		started up E.O scrubber leak fixed
		6/7/03	5:40 pm	LRB	✓			✓		✓	Cut off power to E.O. Scrubber. Put water jet.
JmH	6/23/03 8 am			JmH	✓			✓		✓	Started up E.O. Scrubber
JmH	6/24/03 6:00 pm			(illegible)	✓			✓	✓		E.O. Scrubber power problems.
		6/25/03	4:00am	LRD (JmH)	✓			✓	✓		started up E.O Scrubber
		7/1/03	11:00	LRB	✓			✓		✓	Shut the E.O. Scrubber down @ 11:00

For a **malfunction**, use the startup/shutdown date and time columns to record the duration of the event.

Deviations from Permit Requirements

DEVIATIONS FROM PERMIT REQUIREMENTS

January 1, 2003 through June 30, 2003

Hercules Incorporated
Hattiesburg, Mississippi

1. As required by 5.A.4 of the Title V Operating Permit, deviations from permit requirements must be clearly identified and reported. Deviations from permit requirements are detailed below:

   During the week of 12/30/02-1/5/03, Paracol Water Scrubber (AB-001), the water flowrate was not recorded on the weekly log sheet.

   On 1/10/03, Paracol Water Scrubber (AB-001), the water flowrate was noted as 4.3GPM.

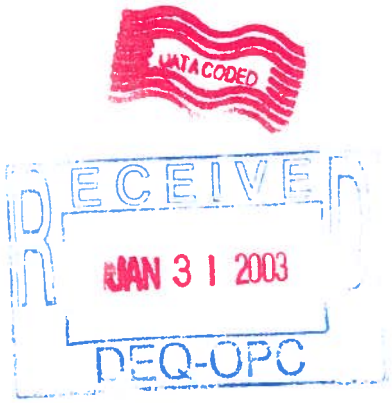
   A Demolition Notification was not timely submitted for the replacement of a damaged pipe rack on 1/2/30-1/9/03. Oral notification was made on 1/16/03, with a written notification follow-up on 1/27/03.

   For AF-004(EO), for upsets on 2/21/03, 2/27/03, 4/4/03, and maintenance on 2/24/03, follow-up notifications were submitted in letters on 3/18/03 and 4/8/03.

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39403
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

January 31, 2003



CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. #:7001-2510-0008-8523-7311

Mr. Rick Sumrall, Branch Chief
Environmental Compliance & Enforcement Division
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Hercules Incorporated
Facility No. 0800-00001
Title V Semi-Annual Report
7/01/02-12/31/02

Dear Mr. Sumrall:

As required by Title V Operating Permit Conditions 5.A.4. [ref.: APC-S-6, Section III.A.3.c.(1)], 5.C.1.(b) [40 CFR 63.182 (ref.: 40 CFR 63.528(b))], 5.C.4(b)(6), 5.C.4.(b)(7) [40CFR63.1439(e)(6) and 40CFR63.182(d)], 5.B.6, 5.B.7, 5.B.8, 5.B.9, 5.B.10, 5.B.11, 5.B.13, 5.B.14, 5.B.31, and 5.C.3, attached is the required summary data for the semi-annual reporting period ending December 31, 2002. Deviations from the Title V Permit requirements are identified and included in this report. The required summary data is included in the attached semi-annual report from July 1, 2002, to December 31, 2002.

During the period of July 1, 2002, through December 31, 2002, the Polyether Polyol production unit did not operate.

In accordance with Permit condition 5.C.4(a), 40CFR63.1439(e)(5), *Notification of Compliance Status,* the Notification of Compliance Status Report was submitted on October 21, 2002.

In accordance with 40CFR63.1423(b), *Storage vessel*(2), for the regulated equipment, AF005(EO), Storage vessels do not include: pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

In accordance with 40 CFR 63.160(a) and 40 CFR 63.180(d)(i), the regulated equipment associated with the re-circulating line in the Kymene process area operated less than 300 hours for calendar year 2002; and therefore, this equipment is not subject to the above referenced semi-annual reporting period.

As Responsible Official for Hercules Incorporated, I certify that based on information and belief formed after reasonable inquiry, the statements and information in the attached document are true, accurate, and complete.

If you have any questions or need further information, please contact Mr. Charles Jordan at (601) 584-3360.

Sincerely,

HERCULES INCORPORATED

Walter D. Langhans
Plant Manager

WDL/vrf

Attachment(s)

Contents of Report

The Title V Operating Permit requires a semi-annual report by January 31 and July 31 of each year. This report, for the semi-annual reporting period of January 1, 2002 through June 30, 2002, contains the following sections:

Fuel Burning Equipment

FUEL BURNING REPORT SUMMARY

As required by 5.A.4, 5.B.6, 5.B.7, and 5.C.3, monthly records of the type, quality, and quantity of fuel combusted are provided in this section. Only natural gas was combusted during this semi-annual reporting period.

YEAR

GAS USAGE - MCF

EMISSION POINT	DESCRIPTION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Totals
AC001	Poly-pale nat. gas Dowtherm boiler	3216	1061	0	2015	600	0	2095	0	0	0	3314	234	12535
AF001	RAD nat. gas Dowtherm boiler	0	472	3461	1007	0	0	0	0	0	0		0	4940
AG001	HRA nat. gas Dowtherm boiler	847	1365	1149	1310	945	625	925	1168	1296	1118	1296	1440	13484
AJ001	Rosin dist. nat. gas Dowtherm boiler	500	216	63	122	35	821	96	70	375	34	41	518	2891
AM001	No. 5 package boiler	43538	41205	39271	38900	38031	32576	35423	33623	24166	0	27153	41840	395726
AM002	No. 6 package boiler	0	3176	0	0	0	0	0	0	3438	20727	8871	0	36212
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0	0	0	0	0			0
														0
T5ngas		48101	47495	43944	43354	39611	34022	38539	34861	29275	21879	40675	44032	465788

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CERTIFICATE OF ANALYSIS

for 07/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 07/01/02 Lab ID:
00038419
Analyzed Date: 07/31/02 Analysis ID:
168340
Sample Date On: 06/20/02

Sample Date Off: 07/24/02

Sample Type: C

Component	Mol %	GPM	Sample Pressure(psig): 60.0
H2S	0.0000		Line Pressure(psig): 110.0
CO2	1.3770		Line Temp (deg F): 75.0
N2	0.9950		
Methane	95.1390		Ideal Gravity: 0.5948
Ethane	1.4750	0.394	Sample Gravity: 0.5961
Propane	0.4320	0.119	
I-butane	0.0870	0.028	Compress. Factor: 1.0020

N-butane	0.1340	0.042	
I-pentane	0.0660	0.024	LBs of H2O: 3.0
N-pentane	0.0610	0.022	
Hexanes+(C6+)	0.2340	0.105	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.734	PPM H2S: 0.0
Pentane+		0.151	

Dry BTU @ 14.730: 1027.2000 Dry BTU @ 14.730 w/o H2S: 1027.2000
Wet BTU @ 14.730: 1009.3000 Wet BTU @ 14.730 w/o H2S: 1009.3000
AWC BTU @ 14.730: 1027.1000 AWC BTU @ 14.730 w/o H2S: 1027.1000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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Houston, Texas

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CHROMATOGRAPH REPORT

for 07/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.4149	0.9631	0.5998	1032.5383	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.3927	1.0637	0.6010	1033.5088	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.3674	1.0462	0.6016	1035.3582	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	1.4463	1.0510	0.6012	1033.1365	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.3340	0.9163	0.6026	1039.8729	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.4099	0.9326	0.6031	1038.2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.4969	0.9969	0.6026	1034.3427	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.2190	0.8039	0.5991	1039.3633	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	1.3222	0.8508	0.6003	1037.8820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.0784	0.5593	0.5958	1041.5641	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.4387	0.9367	0.6000	1032.3556	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.6568	1.1693	0.6042	1030.2557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.4095	0.9186	0.6001	1033.5734	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.6450	1.1961	0.6047	1031.2563	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

0000	0.0000	0.0000	0.0000	0.0000				
15	1.8695	1.4257	0.6099	1029.5704	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	1.0103	0.5172	0.5886	1032.8280	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	1.3169	0.8298	0.5936	1027.6061	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.4872	0.9524	0.5979	1028.5795	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	1.6511	1.0360	0.6012	1027.9287	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	1.2214	0.7018	0.5969	1038.1660	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	0.9787	0.5488	0.5903	1036.5836	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	0.7902	0.4749	0.5873	1038.1232	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	0.9187	0.5422	0.5892	1035.2926	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	1.0291	0.5765	0.5901	1034.0249	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	1.1911	0.7549	0.5922	1030.3915	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	1.0047	0.5307	0.5888	1032.9677	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	1.0038	0.5771	0.5904	1034.6348	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	1.1272	0.6664	0.5910	1031.4244	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	1.1994	0.6644	0.5917	1031.2502	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	1.1247	0.5697	0.5911	1033.1467	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
31	0.9459	1.0226	0.5912	1030.6074	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.2742	0.8321	0.5967	1033.7528

Remarks:

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Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 08/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 08/01/02 Lab ID:
00038780
Analyzed Date: 08/28/02 Analysis ID:
168774
Sample Date On: 07/24/02

Sample Date Off: 08/22/02

Sample Type: C

Component	Mol %	GPM	
			Sample Pressure(psig): 50.0
			Line Pressure(psig): 104.0
H2S	0.0000		
CO2	1.0700		Line Temp (deg F): 72.0
N2	0.6560		
Methane	95.4720		Ideal Gravity: 0.5883
Ethane	2.0500	0.548	Sample Gravity: 0.5896
Propane	0.3730	0.103	
I-butane	0.0650	0.021	Compress. Factor: 1.0020

N-butane	0.0870	0.027	
I-pentane	0.0400	0.015	LBs of H2O: 1.2
N-pentane	0.0410	0.015	
Hexanes+(C6+)	0.1460	0.065	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.794	PPM H2S: 0.0
Pentane+		0.095	

Dry BTU @ 14.730: 1030.5000 Dry BTU @ 14.730 w/o H2S: 1030.5000
Wet BTU @ 14.730: 1012.6000 Wet BTU @ 14.730 w/o H2S: 1012.6000
AWC BTU @ 14.730: 1030.5000 AWC BTU @ 14.730 w/o H2S: 1030.5000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

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Gulf South Pipeline Company, LP

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Houston, Texas

PAGE 1

CHROMATOGRAPH REPORT

for 08/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	0.9898	0.8227	0.5918	1032.6865	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.0859	0.6095	0.5918	1034.1809	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.5735	1.0355	0.6000	1028.0953	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	1.3282	0.7406	0.5952	1031.1826	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.3025	0.6825	0.5942	1032.5553	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.3715	0.7392	0.5949	1030.5225	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.3931	0.6721	0.5970	1034.1615	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.8136	0.4160	0.5844	1033.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.5342	0.2924	0.5770	1031.2225	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.7568	0.4734	0.5842	1032.9836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.0440	0.4812	0.5873	1027.3302	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

0000	0.0000	0.0000	0.0000	0.0000				
15	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	1.3600	0.8484	0.5967	1027.7259	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	1.2978	0.6103	0.5934	1028.1215	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	1.2816	0.7573	0.5955	1032.4507	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	1.3600	0.8484	0.5968	1031.6637	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	1.4443	0.8748	0.5975	1030.2700	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	1.4365	0.9109	0.5979	1029.8112	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	1.6154	1.0989	0.6011	1027.0913	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	1.5034	0.8358	0.6014	1035.0858	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	1.9165	1.5306	0.6039	1016.4135	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	1.7250	1.2581	0.6030	1024.8879	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	1.4368	0.9316	0.5980	1030.0339	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
31	1.5148	1.0358	0.5984	1027.5903	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.3215	0.8159	0.5953	1029.3832

Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U
Gulf South Pipeline Company, LP 10/04/02 09:56:40
Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 09/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 09/01/02 Lab ID:
00039346
Analyzed Date: 10/03/02 Analysis ID:
169459
Sample Date On: 08/22/02

Sample Date Off: 09/27/02

Sample Type: C

Component	Mol %	GPM	
			Sample Pressure(psig): 120.0
			Line Pressure(psig): 100.0
H2S	0.0000		
CO2	1.8280		Line Temp (deg F): 65.0
N2	1.2880		
Methane	94.4850		Ideal Gravity: 0.6017
Ethane	1.2120	0.324	Sample Gravity: 0.6030
Propane	0.4540	0.125	
I-butane	0.1100	0.036	Compress. Factor: 1.0020

N-butane	0.2040	0.064	
I-pentane	0.0970	0.035	LBs of H2O: 3.2
N-pentane	0.0910	0.033	
Hexanes+(C6+)	0.2310	0.103	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.720	PPM H2S: 0.0
Pentane+		0.172	

Dry BTU @ 14.730: 1021.8000 Dry BTU @ 14.730 w/o H2S: 1021.8000
Wet BTU @ 14.730: 1004.0000 Wet BTU @ 14.730 w/o H2S: 1004.0000
AWC BTU @ 14.730: 1021.7000 AWC BTU @ 14.730 w/o H2S: 1021.7000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U
Gulf South Pipeline Company, LP 1
0/04/02 09:57:45

Houston, Texas

PAGE 1

CHROMATOGRAPH REPORT

for 09/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibu
tane	Nbutane	Ipentan	Npentan	C6				
1	1.9773	1.5261	0.6064	1019.7047	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
2	1.7693	1.3450	0.6034	1023.4318	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
3	1.7465	1.3507	0.6021	1022.0134	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
4	1.9774	1.5586	0.6069	1020.3555	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
5	2.0232	1.5919	0.6092	1021.3740	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
6	2.0483	1.5874	0.6104	1022.6488	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
7	2.0164	1.5935	0.6092	1022.1940	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
8	2.0461	1.5758	0.6072	1017.3629	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
9	2.0320	1.5874	0.6094	1020.9528	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
10	2.0173	1.5530	0.6075	1020.2470	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
11	1.9636	1.5627	0.6092	1023.9843	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
12	1.9571	1.5310	0.6077	1021.6270	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
13	2.0577	1.5622	0.6067	1017.4420	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
14	2.0719	1.5679	0.6065	1016.0992	0.0000	0.0000	0.0000	0.

0000	0.0000	0.0000	0.0000	0.0000				
15	2.0495	1.5759	0.6073	1017.2657	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	2.0370	1.5829	0.6132	1027.6334	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	2.0188	1.5646	0.6129	1028.9626	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.5790	1.1951	0.6007	1026.4790	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	2.0005	1.5777	0.6123	1027.1882	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	1.5869	0.9861	0.5971	1024.3573	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	1.2678	0.6336	0.5937	1032.6908	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	1.5084	0.9322	0.5988	1029.2832	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	2.0195	1.5668	0.6064	1017.3130	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	1.3869	0.9131	0.5975	1030.9237	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	0.6520	0.3623	0.5757	1025.0248	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	0.5575	0.3179	0.5729	1022.7051	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	0.5494	0.3143	0.5790	1032.5988	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	0.5482	0.3143	0.5791	1032.6105	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	0.5489	0.3143	0.5791	1032.7050	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	0.5586	0.3187	0.5793	1032.6194	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.6191	1.1988	0.6002	1024.3266

Remarks:

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Gulf South Pipeline Company, LP 11/06/02 15:34:08
Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 10/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 10/01/02 Lab ID: 00039648
Analyzed Date: 10/29/02 Analysis ID: 169858
Sample Date On: 09/27/02

Sample Date Off: 10/21/02

Sample Type: C

Component	Mol %	GPM	
			Sample Pressure(psig): 82.0
			Line Pressure(psig): 101.0
H2S	0.0000		
CO2	0.9680		Line Temp (deg F): 61.0
N2	0.4970		
Methane	95.5860		Ideal Gravity: 0.5868
Ethane	2.2090	0.590	Sample Gravity: 0.5881
Propane	0.3710	0.102	
I-butane	0.0710	0.023	Compress. Factor: 1.0020

N-butane	0.1010	0.032	
I-pentane	0.0440	0.016	LBs of H2O:
3.0			
N-pentane	0.0410	0.015	
Hexanes+(C6+)	0.1120	0.050	Grains H2S/100 CF:
0.00			
TOTAL	100.0000	0.828	PPM H2S:
0.0			
Pentane+		0.081	

Dry BTU @ 14.730: 1033.4000 Dry BTU @ 14.730 w/o H2S: 1033.4000
Wet BTU @ 14.730: 1015.4000 Wet BTU @ 14.730 w/o H2S: 1015.4000
AWC BTU @ 14.730: 1033.3000 AWC BTU @ 14.730 w/o H2S: 1033.3000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U
Gulf South Pipeline Company, LP 1
1/06/02 15:33:38
Houston, Texas
PAGE 1
CHROMATOGRAPH REPORT
for 10/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	0.6044	0.3461	0.5808	1032.9401	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.8482	0.4559	0.5882	1038.5640	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.9384	0.5003	0.5904	1039.3125	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.9801	0.5233	0.5925	1039.8848	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.7790	0.4404	0.5873	1038.6802	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.8801	0.7553	0.5932	1039.4210	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.7899	0.4353	0.5862	1036.2509	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.2540	0.6125	0.5947	1035.2533	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	1.1857	0.5475	0.6043	1052.2167	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.2239	0.5732	0.6047	1052.2711	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.2028	0.4969	0.5958	1038.8154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.6936	0.3482	0.5836	1036.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.5238	0.2974	0.5940	1056.8497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.1679	0.8212	0.6026	1045.5803	0.0000	0.0000	0.0000	0.				

0000	0.0000	0.0000	0.0000	0.0000					
15	1.4507	0.7642	0.5948	1026.8435	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
16	1.3314	0.6541	0.5912	1025.8013	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
17	1.2642	0.5701	0.5924	1031.2417	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
18	1.2949	0.5773	0.5939	1032.9066	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
19	1.2819	0.5758	0.5947	1035.0306	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
20	1.2807	0.5961	0.5940	1033.0819	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
21	1.2705	0.6137	0.5952	1034.8558	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
22	1.2615	0.6318	0.5913	1030.0710	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
23	1.2346	0.6657	0.5909	1029.2286	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
24	1.3430	0.8095	0.5952	1030.5175	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
25	1.3147	0.7284	0.5941	1030.7059	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
26	1.4024	0.7214	0.5946	1029.4276	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
27	1.1934	0.4336	0.5895	1031.6298	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
28	1.2158	0.4178	0.5905	1032.6807	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
29	1.2074	0.4393	0.5897	1030.7761	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
30	1.2252	0.5994	0.5906	1029.7444	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					
31	0.9817	0.4562	0.5864	1031.9318	0.0000	0.0000	0.0000	0.	
0000	0.0000	0.0000	0.0000	0.0000					

Avg:	1.1170	0.5615	0.5925	1035.7590

Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U
Gulf South Pipeline Company, LP 1
2/03/02 08:52:03
Houston, Texas
PAGE 1
CHROMATOGRAPH REPORT
for 11/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.1017	0.4331	0.5892	1032.4498	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.1068	0.4794	0.5900	1033.1183	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.5511	1.0114	0.5966	1023.9551	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	1.7749	1.2637	0.5999	1018.5801	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	1.7373	1.2500	0.5983	1017.8071	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.8132	1.3615	0.5996	1015.9451	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.3729	0.8579	0.5944	1027.3674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.6195	1.0999	0.5966	1019.8430	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	1.4956	1.0671	0.5976	1025.4918	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	1.9630	1.4900	0.6022	1014.4196	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.9713	1.4893	0.6029	1015.6515	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.9794	1.5039	0.6043	1016.8684	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.7135	1.3225	0.5985	1017.0791	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.6402	1.1257	0.5974	1020.1295	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

0000	0.0000	0.0000	0.0000	0.0000				
15	1.8442	1.4365	0.6002	1014.3840	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	1.1841	0.5115	0.5902	1031.2916	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	1.1277	0.5423	0.5894	1031.0885	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.1523	0.5275	0.5894	1030.5774	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	1.1265	0.5911	0.5897	1030.9142	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	1.2257	0.6049	0.5919	1031.3748	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	1.3402	0.5369	0.5939	1033.0686	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	1.2522	0.5123	0.5959	1039.0692	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	1.3316	0.6894	0.5975	1036.0409	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	1.0591	0.5885	0.5912	1035.1906	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	0.8901	0.3999	0.5856	1033.4558	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	0.9551	0.4764	0.5868	1032.6636	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	1.1304	0.5186	0.5905	1032.5813	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	1.0927	0.4883	0.5903	1033.7260	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	1.0293	0.4688	0.5894	1034.7515	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	1.1105	0.5674	0.5909	1033.6270	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.3897	0.8405	0.5943	1027.0837

Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U
Gulf South Pipeline Company, LP 12/03/02 08:51:13
Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 11/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 11/01/02 Lab ID: 00040229
Analyzed Date: 12/02/02 Analysis ID: 170448
Sample Date On: 10/21/02

Sample Date Off: 11/21/02

Sample Type: C

Component	Mol %	GPM	
			Sample Pressure(psig): 150.0
			Line Pressure(psig): 115.0
H2S	0.0000		
CO2	1.4140		Line Temp (deg F): 65.0
N2	0.8620		
Methane	95.3510		Ideal Gravity: 0.5905
Ethane	1.6030	0.428	Sample Gravity: 0.5918
Propane	0.3500	0.096	
I-butane	0.0740	0.024	Compress. Factor: 1.0020

N-butane	0.1210	0.038	
I-pentane	0.0590	0.022	LBs of H2O: 2.0
N-pentane	0.0470	0.017	
Hexanes+(C6+)	0.1190	0.053	Grains H2S/100 CF: 0.00
TOTAL	100.0000	0.678	PPM H2S: 0.0
Pentane+		0.092	

Dry BTU @ 14.730: 1021.7000 Dry BTU @ 14.730 w/o H2S: 1021.7000
Wet BTU @ 14.730: 1003.9000 Wet BTU @ 14.730 w/o H2S: 1003.9000
AWC BTU @ 14.730: 1021.7000 AWC BTU @ 14.730 w/o H2S: 1021.7000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S
Remark: 0

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U Gulf South Pipeline Company, LP 01/07/03 08:46:42 Houston, Texas P

AGE 1

CHROMATOGRAPH REPORT

for 12/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.0562	0.4978	0.5887	1032.0594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.3162	0.8182	0.5917	1025.1780	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.0383	0.4912	0.5865	1030.3251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.8975	0.4906	0.5833	1028.5292	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.9585	0.4840	0.5860	1031.0472	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.4424	0.9017	0.5938	1023.8107	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.6382	1.0505	0.5973	1022.2744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.0871	0.5785	0.5889	1030.7284	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.7861	0.3502	0.5813	1031.6631	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

```
00 0.0000
  10   0.8302  0.3449 0.5854 1036.4481  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  11   1.2872  0.8265 0.5924 1026.4756  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  12   1.2442  0.6333 0.5904 1028.4725  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  13   1.4770  0.9919 0.5950 1023.3929  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  14   1.0936  0.5602 0.5908 1033.4181  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  15   1.4971  1.0045 0.5970 1025.6731  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  16   1.8161  1.3890 0.6022 1018.8155  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  17   1.8514  1.4260 0.6025 1018.3995  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  18   1.8596  1.4350 0.6033 1018.8210  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  19   1.5175  1.0466 0.5991 1027.8689  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  20   1.1853  0.4648 0.5967 1042.3053  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  21   1.2257  0.4317 0.6007 1047.6149  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  22   1.3409  0.6064 0.6017 1043.8901  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  23   1.3356  0.5086 0.6051 1051.3397  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  24   1.3491  0.5671 0.6020 1044.1608  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  25   1.1260  0.4532 0.6067 1059.2057  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  26   1.1184  0.4206 0.6073 1061.3401  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
  27   1.0930  0.4551 0.5953 1042.3699  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.00
00 0.0000
```

28	1.0513	0.4748	0.5984	1048.0475	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000 0.0000
29	1.1332	0.4806	0.6012	1049.7729	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000 0.0000
30	1.1639	0.4041	0.5894	1031.3495	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000 0.0000
31	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000 0.0000

Avg:	1.2566	0.6736	0.5949	1034.0752

Remarks:

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□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s16.66h3T□(10U
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Houston, Texas
PAGE 1
CHROMATOGRAPH REPORT
for 12/02

Chromatograph ID: 002672

Chromatograph Name: PETAL WEST

Day	CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
1	1.0562	0.4978	0.5887	1032.0594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	1.3162	0.8182	0.5917	1025.1780	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	1.0383	0.4912	0.5865	1030.3251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.8975	0.4906	0.5833	1028.5292	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.9585	0.4840	0.5860	1031.0472	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	1.4424	0.9017	0.5938	1023.8107	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	1.6382	1.0505	0.5973	1022.2744	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	1.0871	0.5785	0.5889	1030.7284	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.7861	0.3502	0.5813	1031.6631	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.8302	0.3449	0.5854	1036.4481	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	1.2872	0.8265	0.5924	1026.4756	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	1.2442	0.6333	0.5904	1028.4725	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	1.4770	0.9919	0.5950	1023.3929	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	1.0936	0.5602	0.5908	1033.4181	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

N-butane	0.1080	0.034	
I-pentane	0.0470	0.017	LBs of H2O:
1.6			
N-pentane	0.0340	0.012	
Hexanes+(C6+)	0.0920	0.041	Grains H2S/100 CF:
0.00			
TOTAL	100.0000	0.747	PPM H2S:
0.0			
Pentane+		0.071	

Dry BTU @ 14.730: 1026.5000 Dry BTU @ 14.730 w/o H2S: 1026.5000

Wet BTU @ 14.730: 1008.6000 Wet BTU @ 14.730 w/o H2S: 1008.6000

AWC BTU @ 14.730: 1026.5000 AWC BTU @ 14.730 w/o H2S: 1026.5000

Calculation Parameters: Pressure Base: 14.730 Temperature Base: 60 F

Grains/PPM H2S equal to 0.00 does not indicate testing for H2S

Remark: 0

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

□E□&k2G□&l0O□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U
Gulf South Pipeline Company, LP 01/07/03 08:47:22
Houston, Texas

PAGE 1

CERTIFICATE OF ANALYSIS

for 12/02

Station ID: 002520

Station Name: HATTIESBURG C G #1

Analysis Source:

Effective Date: 12/01/02 Lab ID:
00040617
Analyzed Date: 01/01/03 Analysis ID:
170918
Sample Date On: 11/21/02

Sample Date Off: 12/17/02

Sample Type: C

Component	Mol %	GPM
H2S	0.0000	
CO2	1.2600	
N2	0.6300	
Methane	95.4560	
Ethane	1.8920	0.506
Propane	0.3960	0.109
I-butane	0.0850	0.028

Sample Pressure(psig): 190.0

Line Pressure(psig): 111.0

Line Temp (deg F): 51.0

Ideal Gravity: 0.5886

Sample Gravity: 0.5899

Compress. Factor: 1.0020

0000	0.0000	0.0000	0.0000	0.0000				
15	1.4971	1.0045	0.5970	1025.6731	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
16	1.8161	1.3890	0.6022	1018.8155	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
17	1.8514	1.4260	0.6025	1018.3995	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
18	1.8596	1.4350	0.6033	1018.8210	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
19	1.5175	1.0466	0.5991	1027.8689	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
20	1.1853	0.4648	0.5967	1042.3053	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
21	1.2257	0.4317	0.6007	1047.6149	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
22	1.3409	0.6064	0.6017	1043.8901	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
23	1.3356	0.5086	0.6051	1051.3397	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
24	1.3491	0.5671	0.6020	1044.1608	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
25	1.1260	0.4532	0.6067	1059.2057	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
26	1.1184	0.4206	0.6073	1061.3401	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
27	1.0930	0.4551	0.5953	1042.3699	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
28	1.0513	0.4748	0.5984	1048.0475	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
29	1.1332	0.4806	0.6012	1049.7729	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
30	1.1639	0.4041	0.5894	1031.3495	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				
31	1.1382	0.2955	0.5823	1021.5355	0.0000	0.0000	0.0000	0.
0000	0.0000	0.0000	0.0000	0.0000				

Avg:	1.2566	0.6736	0.5949	1034.0752

Remarks:

□□&l1X□&l60F□&l6D□(8U□(s10h3T□(10U

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

Kymene Reactor Scrubber (AA-001)

As required by 5.B.14, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.14, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.8 (and 5.A.4 data reporting), the amounts of raw material processed and hours operated were recorded daily, and the records are included in this section.

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
5/16/02	10:Am	954	90	6	12030	4.0	E.P.	Delta Sulfuric unloaded acid TT.
5/17/02	10:Am	955	120	6	12030	3.0	E.P.	Unloaded EPI TT
5/18/02	8:15AM	956	60	6	12030	6.0	E.P.	
5/20/02	3:25PM	957	75	6	12030	4.8	L.S.	
5/21/02	12:15PM	958	60	6	12030	6.0	BA	
5/21/02	7:40PM	959	55	6	12030	6.6	D.B.	
5/22/02	9:45Am	960	55	6	12030	6.6	L.S.	
5/23/02	8:00PM	961	60	6	12030	6.0	E.P.	
5/24/02	8:45AM	962	50	6	12030	7.2	L.S.	
5/24/02	4:15AM	963	50	6	12030	7.2	L.S.	
5/25/02	9:15AM	964	60	6	12030	6.0	L.S.	
5/26/02	6:40AM	965	55	6	12030	6.6	L.S.	
5/27/02	9:00AM	966	60	6	12030	6.0	L.S.	
5/28/02	8:50AM	967	55	6	12030	6.6	L.S.	
5/28/02	5:05PM	968	60	6	12030	6.0	L.S.	
5/29/02	12:25A	969	60	6	12,030	6.0	JM	
5/29/02	10:35AM	970	80	6	12030	4.5	L.S.	
5/29/02	6:50PM	971	60	6	12030	6.0	L.S.	
5/30/02	9:15Am	972	60	6	12030	6.0	L.S.	
5/30/02	4:45PM	973	60	6	12030	6.0	E.P.	
5/31/02	10:55AM	974	75	6	12030	4.8	L.S.	
5/31/02	6:25PM	975	60	6	12030	6.0	E.P.	
6/3/02	9:45AM	976	60	6	12,030	6.0	BA	
6/3/02	4:00PM	977	60	6	12,030	6.0	JM	
6/4/02	12:50	978	240	6	12,030	9.0	BA	
6/4/02	11:15PM	979	60	6	12030	6.0	L.S.	
6/5/02	10:35A	980	60	6	12030	6.0	JM	
6/6/02	9:50AM	981	60	6	12030	6.0	E.P.	

(1) Determined from the start/stop charge time on the Polymer batch sheet

Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th

0.03 Factor =.60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
6/6/02	5:05pm	982	60	6	12,030	6.0	Jm	
6/7/02	12:45AM	983	55	6	12030	6.6	L.S.	
6/7/02	9:30AM	984	60	6	12030	6.0	E.P.	
6/7/02	5:35AM	985	55	6	12,030	6.6	Jm	
6/8/02	12:50Am	986	60	6	12030	6.0	L.S.	
6/8/02	9:00AM	987	60	6	12030	6.0	E.P.	
6/10/02	12:00PM	988	50	6	12030	7.2	BA	
6/11/02	12:30pm	989	60	6	12030	6.0	Jm	
6/12/02	8:50AM	990	60	6	12030	6.0	L.S.	
6/13/02	4:15AM	991	60	6	12030	6.0	E.P.	
6/13/02	1:50pm	992	60	6	12030	6.0	Jm	
6/13/02	9:30PM	993	60	6	12030	6.0	L.S.	
6/14/02	4:50AM	994	60	6	12030	6.0	E.P.	
6/14/02	2:40PM	~~995~~ 995	60	6	12030	6.0	L.S.	
6/15/02	1:30AM	996	90	6	12030	4.0	E.P.	unloading acid H2SO4 Sulfuric
6/15/02	9:55 Am	997	60	6	12030	6.0	L.S.	
6/16/02	12:50Am	998	60	6	12030	6.0	E.P.	
6/16/02	8:15 AM	999	60	6	12030	6.0	L.S.	
6/17/02	9:15AM	1000	55	6	12030	6.6	BA	
6/18/02	8:50AM	1	60	6	12030	6.0	BA	
6/19/02	9:15AM	2	45	6	12030	8.0	BA	
6/20/02	1:06PM	3	55	6	12030	6.6	BA	
6/22/02	1:05AM	4	60	6	12,030	6.0	L.S	
6/22/02	8:45AM	5	60	6	12030	6.0	Jm	
6/23/02	1:05AM	6	60	6	12030	6.0	L.S.	
6/24/02	2:05PM	7	55	6	12030	6.6	L.S.	
6/24/02	9:20PM	8	60	6	12030	6.0	Jm	
6/25/02	11:10AM	9	70	6	12030	5.2	BA	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
6/25/02	7:40 PM	0010	80	6	12,030	4.5	JM	4 lumpy bags
6/26/02	10:28 AM	0011	45	6	12,030	8.0	BA	
6/27/02	1:55 PM	0012	65	6	12,030	5.6	JL	
6/28/02	10:40 AM	0013	60	6	12,030	6.0	JL	
7/1/02	12:10 AM	0014	70	6	12,030	5.2	JL	2 hard bags
7/2/02	12:40 AM	0015	65	6	12030	5.6	JL	
7/2/02	8:30 PM	0016	75	6	12030	4.8	D.B.	4 lumpy bags
7/3/02	9:40 AM	0017	60	6	12030	6.0	JL	
7/4/02	10:20 AM	0018	60	6	12030	6.0	JL	
7/7/02	5:48 PM	19	60	6	12030	6.0	JL	
7/8/02	3:28 AM	20	60	6	12030	6.0	JM	
7/8/02	10:50 AM	0021	45	6	12030	8.0	D.B.	
7/9/02	12:45 PM	0022	45	6	12,030	8.0	D.B.	
7/10/02	1:35 PM	0023	105	6	12,030	3.4	D.B.	4 lumpy bags loading T/T
7/16/02	12:15 PM	0024	105	6	12,030	3.4	JR	1 LUMPY BAGS
7/16/02	11:00 PM	0025	60	6	12,030	6.0	JM	
7/18/02	10:45 AM	26	65	6	12030	5.6	K.S.	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
7/18/02	9:45 AM	27	60	6	12030	6.0	L.S.	
7/19/02	10:10 AM	28	60	6	12030	6.0	BA/DB	
7/19/02	7:55 pm	29	60	6	12030	6.0	jm	
7/20/02	3:35 AM	30	65	6	12030	5.6	L.S.	
7/20/02	10:55 AM	31	60	6	12,030	6.0	jm	
7/21/02	12:05 AM	32	60	6	12030	6.0	L.S.	
7/21/02	12:35 pm	33	50	6	12030	7.2	L.S.	
7/22/02	11:25 AM	34	70	6	12030	5.2	JL.	1 HARD SACK
7/23/02	12:00 N	35	70	6	12030	5.2	JR	4 hard sacks
7/24/02	7:30 pm	36	6.0	6	12030	6.0	D.J	
7/25/02	6: pm	37	60	6	12030	6.0	J.F.	
7/26/02	8:45 AM	38	45	6	12030	8.0	L.S.	
7/27/02	8:40 AM	39	50	6	12030	7.2	L.S.	
7/28/02	8:15 Am	40	60	6	12030	6.0	jm	
7/29/02	8:45 pm	41	60	6	12030	6.0	jm	
7/30/02	2:50 pm	42	60	6	12030	6.0	jm	
7/31/02	12:20 pm	43	100	6	12,030	3.6	E.P.	
8/1/02	2:00 Am	44	45	6	12,030	8.0	D.B.	
8/1/02	1:30 PM	45	65	6	12,030	5.6	L.S.	
8/1/02	8:40 AM	46	50	6	12030	7.2	L.S.	
8/2/02	11:00 Am	47	50	6	12,030	7.2	D.B.	
8/2/02	9:50 AM	48	65	6	12,030	5.6	L.S.	
8/3/02	11:05 Am	49	50	6	12,030	7.2	D.B.	
8/3/02	9:20 PM	50	60	6	12030	6.0	L.S.	
8/4/02	~~9:30 AM~~ 9:33 AM	51	55	6	12030	6.6	L.S.	
8/5/02	9:35 Am	52	60	6	12,030	6.0	D.B.	
8-6-02	9:05 AM	53	50	6	12,030	7.2	J.F.	
8-7-02	1:45 PM	54	40	6	12,030	9.0	JR	

(1) Determined from the start/stop charge time on the Polymer batch sheet

Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th

0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
8/[illegible]/02	10:55A	55	60	6	12030	6.0		
8/8/02	1:30P	56	60	6	12030	6.0		
8/12/02	9:05A.	57	50	6	12030	7.2		
8/14/02	9:14SA	58	45	6	12030	8.0		
8/14/02	8:25PM	59	60	6	12030	6.0		
8/15/02	1:30AM	60	70	6	12030	5.2		
8/15/02	2:00PM	61	75	6	12030	4.8		
8/16/02	8:40A	62	50	6	12030	7.2		
8-19-02	12:55 AM	63	55	6	12030	5.6		
8-20-02	9:55AM	64	55	6	12030	~~7.0~~ 6.6		
8-21-02	8:20 AM	65	60	6	12,030	6.0		
8-22-02	1:45AM	~~66~~ 66	60	6	12,030	6.0		
8-23-02	9:20AM	67	60	6	12,030	6.0		
8-23-02	9:00PM	68	70	6	12030	5.2		
8-26-02	9:16AM	69	70	6	12030	5.2		
8-27-02	12:N	70	60	6	12,030	6.0		
8-28-02	10:Am	71	55	6	12,030	6.6		
8-29-02	9:55Am	72	55	6	12,030	6.6		
8/29/02	5:35PM	73	55	6	12030	6.60		
8-30-02	9:20Am	74	60	6	12,030	6.0		
8/31/02	8:45Am	75	60	6	12,030	6.0		
8/31/02	5:10PM	76	60	6	12030	6.0		
9/01/02	8:45AM	77	60	6	12,030	6.0		
9/1/02	5:15	78	60	6	12030	6.0		
9/2/02	905 AM	79	60	6	12030	6.0		
9/3/02	1:50PM	80	70	6	12030	5.2		
9/5/02	11:50AM	81	60	6	12052	6.0		
9-6-02	4:55PM	82	55	6	12030	6.6		

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
9/7/02	8:55AM	83	70	6	12030	5.2	L.S.	
9/9/02	9:20AM	84	65	6	12030	5.6	L.S.	
9/9/02	10:30AM	85	60	6	12030	6.0	L.S.	
9/10/02	12:05PM	86	60	6	12030	6.0	L.S.	
9/11/02	10:00AM	87	60	6	12030	6.0	L.S.	
9/12/02	9:35AM	88	75	6	12030	4.8	L.S.	
9/12/02	7:50PM	89	50	6	12030	7.2	L.S.	
9/13/02	9:40AM	90	70	6	12030	5.2	L.S.	
9/14/02	10:35AM	9091	60	6	12030	6.0	L.S.	wrong batch No. I corrected D.B.
9/16/02	10:30AM	92	60	6	12030	6.0	J.R.	
9/16/02	7:20PM	93	50	6	12030	7.2	BA	
9/17/02	1:40PM	94	50	6	12030	7.2	D.B.	
9/18/02	10:40AM	95	60	6	12030	6.0	J.R.	
9/19/02	1:50PM	96	60	6	12,030	6.0	J.R.	
9/20/02	10:30AM	97	60	6	12,030	6.0	J.R.	
9/21/02	4:40AM	98	50	6	12030	7.2	L.S.	
9/21/02	11:25AM	99	60	6	12030	6.0	[illegible]	
9/22/02	12:05AM	100	60	6	12030	6.0	L.S.	
9/24/02	12:20PM	101	60	6	12030	6.0	L.S.	
9/27/02	9:40AM	102	60	6	12030	6.0	J.R.	
9/30/02	12:15pm	103	60	6	12030	6.0	L.S.	
10/1/02	11:20AM	104	60	6	12030	6.0	L.S.	
10/02/02	5:15pm	105	60	6	12,030	6.0	[illegible]	
10/02/02	5:15pm	106	55	6	12,030	6.6	[illegible]	
10/04/02	1:05pm	0107	60	6	12,030	6.0	E.P.	
10/7/02	5:15PM	108	60	6	12030	6.0	L.S.	
10/8/02	1:05PM	109	60	6	12030	6.0	L.S.	
10/9/02	9:30A	110	45	6	12030	8.0	[illegible]	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
10/10/02	12:15 AM	111	50	6	12030	7.2	JL	Conveyer plugged down 30 min
10/11/02	8:30 AM	112	60	6	12030	6.0	L.S.	
10/11/02	4:40 PM	113	60	6	12030	6.0	L.S.	
10/12/02	8:50 AM	114	65	6	12030	5.6	L.S.	
10/14/02	9:20 AM	115	90	6	12030	4.0	L.S.	
10/15/02	1:45 PM	116	55	6	12030	6.6	L.S.	
10/16/02	9:25 AM	117	50	6	12030	7.2	L.S.	
10/17/02	9:05 AM	118	55	6	12030	6.6	L.S.	
10/18/02	4:30 AM	119	50	6	12030	7.2	BA	
10/18/02	1:45 PM	120	45		12030	8.0	L.S.	
10/21/02	10:50 A	121	50	6	12030	7.2	JL	
10/21/02	4:25 AM	122	55	6	12030	6.6	BA	
10-22-02	2:10 PM	123	50	6	12030	7.2	JL	
10-23-02	1:50 P	124	50	6	12030	7.2	JL	
10/24/02	4:20 pm	125	60	6	12030	6.0	pm	
10/24/02	12:15 AM	126	45	6	12,030	8.0	DB	
10/25/02	9:45 AM	127	55	6	12,030	6.6	JL	
10/25/02	9:05 PM	128	60	6	12,030	6.0	JL	
10/28/02	1:55 PM	129	55	6	12,030	6.6	JL	
10/29/02	1:55 PM	130	55	6	12,030	6.6	JL	
10/30/02	2:05 AM	131	55	6	12,030	6.6	JL	
10/31/02	9:05 AM	132	50	6	12,030	7.2	JL	
11/1/02	1:45 AM	133	60	6	12030	6.0	L.S.	
11-1-02	9:40	134	50	6	12030	7.2	JL	
11-2-02	9:30 AM	135	60	6	12030	6.0	E.P.	
11-4-02	7:00 PM	136	45	6	12030	8.0	D.B.	
11/5/02	3:30 AM	137	55	6	12030	6.6	D.B.	
11-5-02	4:PM	138	60	6	12030	6.0	JL	

(1) Determined from the start/stop charge time on the Polymer batch sheet

Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th

0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002
Adipic Acid Handling system with a Dust Collector

Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
11-6-02	5:Pm	139	55	6	12030	6.6	JL	
11-8-02	12:15PM	140	60	6	12030	6.0	JA	
11/8/02	11:30	141	60	6	12,030	6.0	JM	
11/9/02	7:24Am	142	45	6	12,030	8.0	D.B.	
11/10/02	10:20A	143	30	6	12,030	7.2	JA	
11/11/02	5:30Am	144	50	6	12,030	7.2	D.B.	
11/11/02	1:35pm	145	60	6	12030	6.0	L.S.	
11/12/02	1:40PM	146	60	6	12030	6.0	L.S.	
11/14/02	9:00Am	147	50	6	12030	7.2	L.S.	
11/14/02	5:10PM	148	60	6	12030	6.0	L.S.	
11/15/02	2:45PM	149	56	6	12030	6.6	L.S.	
11/16/02	8:55AM	150	50	6	12030	7.2	L.S.	
11/18/02	5:25PM	151	70	6	12030	5.2	L.S.	
11/19/02	2:20Am	152	50	6	12030	7.2	D.B.	
11/19/02	11:00AM	153	50	6	12030	7.2	L.S.	
11/19/02	9:Pm	154	60	6	12030	6.0	BA	
11-20-02	2:30PM	155	50	6	12030	7.2	JA	
11/21/02	2:05PM	156	50	6	12030	7.2	P.R.	
11/22/02	6:45PM	157	60	6	12030	6.0	L.S.	
11/23/02	8:55Am	158	55	6	12030	6.6	JM	
11/24/02	3:15Am	159	60	6	12030	6.0	JM	
11/24/02	4:30PM	160	60	6	12030	6.0	L.S.	
11/25/02	10:55Am	161	60	6	12030	6.0	L.S.	
11/26/02	4:05PM	162	60	6	12030	6.0	L.S.	
11/27/02	10:45Am	163	60	6	12030	6.0	L.S.	
11/27/02	8:55PM	164	60	6	12030	6.0	L.S.	
11/28/02	8:35Am	165	45	6	12030	8.0	L.S.	
11/29/02	9:05Am	166	60	6	12030	6.0	L.S.	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
11/30/02	5:05AM	167	50	6	12030	7.2	L.S.	
12/02/02	12:50pm	168	60	6	12030	6.0	jm	
12/2/02	9:50pm	169	60	6	12030	6.0	D.B.	
12/3/02	1:30PM	170	65	6	12030	5.6	L.S.	
12/3/02	2:35AM	171	60	6	12030	6.0	JR.	
12/05/02	4:40pm	172	60	6	12,030	6.0	jm	
12/06/02	10:30AM	173	60	6	12,030	6.0	L.S.	
12/06/02	6:40pm	174	60	6	12,030	6.0	jm	
12/07/02	9:35AM	175	60	6	12030	6.0	L.S.	
12/09/02	3PM	176	60	6	12030	6.0	JR.	
12/09/02	10:35PM	177	60	6	12,030	6.0	JR	
12/11/02	9:20AM	178	60	6	12,030	6.0	jm	
12/11/02	9:30PM	179	60	6	12,030	6.0	BA	
12/11/02	5:05AM	180	55	6	12,030	6.6	L.S.	
12/13/02	1:35PM	181	60	6	12,030	6.0	L.S.	
12/14/02	7:55 Am	182	60	6	12,030	6.0	jm	
12/15/02	7:55Am	183	60	6	12,030	6.0	jm	
12/16/02	11:10Am	184	60	6	12030	6.0	L.S.	
12/18/02	4:15AM	185	60	6	12030	6.0	BA	
12/19/02	8:35PM	186	70	6	12030	5.2	E.P.	
12/20/02	4:35PM	187	70	6	12030	5.2	E.P.	
12/21/02	5:50AM	188	60	6	12030	6.0	L.S.	
12/21/02	12:45PM	189	60	6	12030	6.0	L.S.	
12/22/02	8:10AM	190	55	6	12030	6.6	L.S.	
12/23/02	6:30 Am	191	60	6	12030	6.0	D.B.	
12/25/02	2:50pm	192	85	6	12030	4.2	D.B.	Busy with T/T
12/25/02	9:50pm	193	50	6	12030	7.2	D.B.	
12/26/02	11:50Am	194	60	6	12030	6.0	jm	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

Emission Point – AA002 Adipic Acid Handling system with a Dust Collector								
Date	Time @ End of Charge	Polymer Batch #	Adipic Acid Charge Time (1)	Adipic Acid Total Charge		Adipic Acid Charge Rate	Initials	Comments
M-D-Y	A=AM P=PM		Minutes	S/S's	Pounds	Tons/Hr		
12/26/02	8:00 pm	195	50	6	12030	7.2	D.B.	
12/26/02	6:15AM	196	55	6	12030	6.6	[illegible]	
12/30/02	1:30AM	197	60	6	12030	6.0	E.P.	
12/3/02	10:10AM	198	50	6	12,030	7.2	[illegible]	
1/1/02	3:30pm	199	55	6	12,030	6.6	D.B.	
1/1/03	11:45 PM	200	45	6	12030	8.0	BA	
1/2/03	9:30A	201	50	6	12030	7.2	[illegible]	
1-2-03	4:55AM	202	60	6	12030	6.0	[illegible]	
1-3-03	6:25 PM	203	55	6	12030	6.6	BA	
1-6-03	6:55Pm	204	55	6	12030	6.6	[illegible]	
1-7-03	8:30Pm	205	60	6	12030	6.0	[illegible]	
1-8-03	5:15 AM	206	50	6	12030	7.2	BA	
1-9-03	4:55 PM	207	70	6	12030	5.2	E.P.	
1-9-03	2:00AM	208	60	6	12030	6.0	[illegible]	
1-10-03	5:55PM	209	70	6	12030	5.2	E.P.	
1-10-03	1:40AM	210	60	6	12030	6.0	[illegible]	
1-11-03	4:25PM	211	70	6	12030	5.2	E.P.	
1/12/03	2:00pm	212	45	6	12030	8.0	[illegible]	
1/14/03	2:15 PM	213	55	6	12030	6.6	[illegible]	
1/15/03	2:20Am	214	60	6	12030	6.0	D.B.	
1/15/03	9:40PM	215	60	6	12030	6.0	[illegible]	
1/16/03	11:40Am	216	50	6	12030	7.2	[illegible]	

(1) Determined from the start/stop charge time on the Polymer batch sheet
Tons/Hr AA Charge Rate = (Total lbs. AA Charged/Minutes of Charge Time) X 0.03 ; Record to nearest 1/10th
0.03 Factor = 60 min/hr / 2000 lbs/ton

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.14, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.B.9, water flow rate through the scrubber was recorded on a weekly basis. See explanation in Deviations from Permit Requirements Section.

Silica Furnace Dust Collector (AL-002)

The Silica Furnace Dust Collector (AL-002) did not operate during this semi-annual reporting period; therefore, the weekly maintenance checks, required by 5.B.14, only noted that the unit was not operating.

As required by 5.B.11 (and 5.A.4 data reporting), the silica processed and the hours operated were not recorded since the unit did not operate.

Title V -- Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
6-29	JR	✓		5.5		✓	←			not operating				→
7-10	JR	✓		6.1		✓	←			not operating				→
7-16	JR	✓		5.7		✓	←			not operating				→

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Title V -- Maintenance Log
AKD Area

Date	Time, A = AM P = PM	Initials	Paracol® Wax Emulsion Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
			Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
			Yes	No		Yes	No	Yes	No	Yes	No	Yes	No.	Yes	No
7-22-02	1°°Pm	JK.	✓		5.8		✓	←	NOT OPERATING						→
7-29.02	4°°PM	BA	✓		5.2		✓	←	NOT operating						→
8-8-02	3:AM	JL	✓		5.9		✓	←	Not operating						→
8-13-02	7:AM	BA	✓		5.7		✓	←	not operating						→
8-19-02	6:PM	JK		✓	5.3		✓	←	NOT operating						→
8-2602	7:AM	JK.		✓	5.6		✓	←	NOT OPERATING						→
9-3-02	10:00A	JK	✓		5.0		✓	←	NOT operating						→
9-4-02	7:PM	JL	✓		5.5		✓	←	Not operating						→
9-9.02	1:Pm	JL	✓		5.4		✓	←	not operating						→
9-19-02	8:00A	JK	✓		5.8		✓	←	NOT operating						→
9-2602	7:00A	JK	✓		5.6		✓	←	NOT operating						→
10.3.02	8:30Am	JL	✓		5.3		✓	←	Not operating						→
10-9-02	9:15 Am	JK.	✓		5.8		✓	←	NOT OPERATING						→
10-1502	2:00PM	JK		✓	5.2		✓	←	Not operating						→

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(Formerly form 042-059 and 042-0017-003)

Title V -- Maintenance Log
AKD Area

Date	Initials	Paracol Vent Scrubber, AB001					Silica Furnace Dust Collector, AL002							
		Melter Operating		Water flow, gpm	Leaks		Furnace Running		Blower OK		Dust Collector OK		Leaks	
		Yes	No		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
10-24-02	JR	✓		5.1		✓	←		NOT operating					→
10-29-02	JR.		✓	4.2		✓	←		NOT operating					→
11-4-02	JR-	✓		5.8		✓	←		NOT operating					→
11-13-02	BA	✓		5.4		✓	←		Not operating					→
11-19-02	JL	✓		6.0		✓	←		Not operating					→
11-29-02	JR	✓		5.1		✓	←		Not operating					→
12-4-02	JR.	✓		5.8		✓	←		NOT operating					→
12-11-02	JL	✓		5.4		✓	←		Not operating					→
12-20-02	JR		✓	5.2		✓	←		NOT operating					→
12-24-02	JR	✓		5.8		✓	←		NOT operating					→
1-10-03	JR	✓		4.3		✓	←		NOT operating					→
1-15-03	JR	✓	✓	6.0		✓	←		NOT operating					→

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HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.14, weekly operator maintenance checks were performed on the HRA Water Scrubber (AG-003). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

HRA Flaking Belt Dust Collector (AG-005)

As required by 5.B.14, weekly maintenance checks were performed on the HRA Flaking Belt Dust Collector (AG-005). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

As required by 5.B.10, the pressure drop across the baghouse was recorded weekly (or more frequent) while the area is operating.

Hydrogen Generation Process (AK-000)

The Hydrogen Generation Process (AK-000) did not operate during this semi-annual reporting period; therefore, the weekly maintenance checks, required by 5.B.14, only noted that the unit was not operating.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Water Scrubber #1 (AC-002)

As required by 5.B.14, weekly maintenance checks were performed on Poly-Pale Water Scrubber #1 (AC-002). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

Poly-Pale Water Scrubber #2 (AC-003)

As required by 5.B.14, weekly maintenance checks were performed on Poly-Pale Water Scrubber #2 (AC-003). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

Poly-Pale Process Melter (AC-004)

As required by 5.B.13 (and 5.A.4 data reporting), the amounts of raw material processed and hours operated were recorded daily, and the records are included in this section.

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: July - Dec 2002

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
07/01/2002	8	60	29762	1.860
07/02/2002	8	60	29762	1.860
07/03/2002	8	40	19841	1.240
07/05/2002	8	20	9921	0.620
07/09/2002	8	60	3000	0.188
07/09/2002	8	60	29762	1.860
	Material addition on July 9th above was on day shift for a total of 2.048 tons/hr.			
07/10/2002	16	56	27778	0.868
07/11/2002	16	79	39187	1.225
07/12/2002	16	108	53572	1.674
07/13/2002	8	100	5000	0.313
	Material addition on July 13th above was on day shift.			
07/13/2002	8	60	29762	1.860
	Material addition on July 13th above was on evening shift.			
07/14/2002	8	32	15873	0.992
07/15/2002	16	104	51588	1.612
07/16/2002	16	112	55556	1.736
07/17/2002	16	100	49604	1.550
07/18/2002	16	104	51588	1.612
07/19/2002	8	32	15873	0.992
07/20/2002	16	102	50596	1.581
07/21/2002	8	25	12401	0.775
07/22/2002	8	60	29762	1.860
07/23/2002	8	60	29762	1.860
07/23/2002	8	50	2500	0.156
	Mat'l addition above on July 23rd above was on day shift for a total of 2.016 tons/hr.			
07/23/2002	8	52	2600	0.163
07/23/2002	8	52	25794	1.612
	Mat'l addit'n above on July 23rd above was on evening shift for a total of 1.775 tons/hr.			
07/24/2002	8	60	29762	1.860
07/24/2002	8	50	2500	0.156
	Mat'l addit'n above on July 24th above was on evening shift for a total of 2.016 tons/hr.			
07/25/2002	8	50	2500	0.156
07/25/2002	8	60	29762	1.860
	Mat'l addition above on July 25th above was on day shift for a total of 2.016 tons/hr.			
07/25/2002	8	11	5456	0.341

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: July - Dec 2002

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
07/25/2002	8	100	5000	0.313
	Mat'l addit'n above on July 25th above was on evening shift for a total of 0.654 tons/hr.			
07/26/2002	8	200	10000	0.625
	Material addition above on July 26th above was on day shift.			
07/26/2002	8	18	900	0.056
	Material addition above on July 26th above was on evening shift.			
07/27/2002	8	60	29762	1.860
10/22/2002	8	63	31250	1.953
10/23/2002	8	60	29762	1.860
10/25/2002	8	60	29762	1.860
10/30/2002	8	60	29762	1.860
10/31/2002	8	70	34722	2.170
11/01/2002	8	71	35218	2.201
11/02/2002	8	70	34722	2.170
11/03/2002	8	70	34722	2.170
11/04/2002	16	100	49604	1.550
11/05/2002	8	42	20833	1.302
11/07/2002	16	93	46131	1.442
11/08/2002	16	121	60020	1.876
11/09/2002	8	60	29762	1.860
11/09/2002	8	50	2500	0.156
	Mat'l addition above on Nov. 9th above was on day shift for a total of 2.016 tons/hr.			
11/09/2002	8	60	29762	1.860
	Material addition above on Nov. 9th above was on evening shift.			
11/10/2002	8	60	29762	1.860
11/10/2002	8	50	2500	0.156
	Mat'l addition above on Nov. 10th above was on day shift for a total of 2.016 tons/hr.			
11/10/2002	8	50	2500	0.156
11/10/2002	8	60	29762	1.860
	Mat'l addit'n above on Nov. 10th above was on evening shift for a total of 2.016 tons/hr.			
11/11/2002	8	46	22818	1.426
11/12/2002	8	50	2500	0.156
11/12/2002	8	94	46627	2.914
	Mat'l addition above on Nov. 12th above was on day shift for a total of 3.070 tons/hr.			

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

Report Period: July - Dec 2002

DATE	# HOURS	# DRUMS or BAGS	TOTAL LBS.	TONS/HR.
11/13/2002	8	50	2500	0.156
11/13/2002	8	100	49604	3.100
	Mat'l addition above on Nov. 13th above was on day shift for a total of 3.256 tons/hr.			
11/14/2002	8	50	2500	0.156
11/14/2002	8	67	33234	2.077
	Mat'l addition above on Nov. 14th above was on day shift for a total of 2.233 tons/hr.			
11/16/2002	8	50	2500	0.156
11/16/2002	8	83	41171	2.573
	Mat'l addition above on Nov. 16th above was on day shift for a total of 2.729 tons/hr.			
11/17/2002	8	50	2500	0.156
11/17/2002	8	70	34722	2.170
	Mat'l addition above on Nov. 17th above was on day shift for a total of 2.326 tons/hr.			
11/18/2002	8	50	2500	0.156
11/18/2002	8	60	29762	1.860
	Mat'l addition above on Nov. 18th above was on day shift for a total of 2.016 tons/hr.			
11/18/2002	8	61	30258	1.891
	Material addition above on Nov. 18th above was on evening shift.			
11/19/2002	8	41	20337	1.271
	Material addition above on Nov. 19th above was on day shift.			
11/19/2002	8	50	2500	0.156
11/19/2002	8	60	29762	1.860
	Mat'l addit'n above on Nov. 19th above was on evening shift for a total of 2.016 tons/hr.			
11/20/2002	8	75	3750	0.234
11/20/2002	8	41	20337	1.271
	Mat'l addition above on Nov. 20th above was on day shift for a total of 1.505 tons/hr.			
11/20/2002	8	50	2500	0.156
11/20/2002	8	40	19841	1.240
	Mat'l addit'n above on Nov. 20th above was on evening shift for a total of 1.396 tons/hr.			
11/21/2002	16	102	50596	1.581
11/23/2002	16	120	59524	1.860
11/24/2002	8	60	29762	1.860

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
4-28-02	2 1 J.H	12 drums	Broke Down at 4:1.m
5-2-02	1 1 J.H	64 drums	
5-2-02	2 1 CN	60 drums	Gum to T-119
5-4-02	1 1 9 N	61 drums	Gum to T-119
5-4-02	2 1 CN	60 drums	gum to T-119
5-5-02	1 1 9 N	60 drums	gum to T-119
5-5-02	2 1 CN	60 drums	Gum to T-119
5-6-02	1 1 CN	20 drums	Gum to T-119
	1		
5-28-02	1 1 CN-JH	12 drums	IKR-0051 melhi to T-106
5-30-02	1 1 CN	20 drums	melhi to T-106 IKR-0051
6-6-02	1 1 CN JH	20 drums	melhi to T-106 IKR-0051
6-15-02	1 1 CN	60 bags	Polyrex IMK-5087 T-120
6-17-02	1 1 CN JH	40 drums	Gum to T-119
6-18-02	1 1 CN, JH	60 drums	gum to T-119
6-19-02	1 1 CN-JH	47 drums	Gum to T-119 Jammed up
6-20-02	1 1 CN, JH	28 Drums	Gum to T-119
6-27-02	1 1 CN-JH	60 Drums	Gum T-119
6-28-02	1 1 CN JH	60 Drums	Gum to T-119
7-1-02	1 1 CN	60 drums	Gum to T-119
7-2-02	1 1 CN	60 drums	gum to T-119
7-3-02	1 1 CN	40 drums	Gum to T-119 - Jammed up
7-5-02	1 1 CN	20 drums	gum to T-119; repairing leak
7-9-02	1 1 CN, JH	60 bags	Polyrex IMS-7087 T-120
7-9-02	1 1 CN JH	60 drums	gum to T-119
7-10-02	1 1 JH	36 drums	Gum T-0 T-119 melter Broke down
7-10-02	2 1 CN	20 drums	Gum to T-119 - repairing Leak
7-11-02	1 1 9 N	39 drums	gum to T-119 had to unload Toluene T/
7-11-02	2 1 CN	40 drums	Gum to T-119 Plugged line
7-12-02	1 1 9 N	60 drums	Gum to T-119
7-12-02	2 1 CN	48 drums	Gum to T-119

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
7-13-02	1 1PH	100 Bags PolyRex IMS-7087 T-120	
7-13-02	2 1CN	60 drums Gum to T-119	
7-14-02	1 1PH	32 drums Gum to T-119	
7-15-02	1 1CN	60 Drums Gum → T-119	
7-15-02	2 1PH	44 Drums Gum T-119 hard Rain	
7-16-02	1 1CN	52 drums Gum to T-119	
7-16-02	2 1PH	60 drums Gum to T-119	
7-17-02	1 1CN	40 drums Gum to T-119 (Loaded T/T melted)	
7-17-02	2 1PH	60 drums Gum to T-119	
7-18-02	1 1CN	52 drums Gum to T-119	
7-18-02	2 1PH	52 drums Gum to T-119 Broke down for a while	
7-19-02	1 1CN	32 drums Gum to T-119	
7-20-02	1 1CN	60 drums Gum to T-119	
7-20-02	2 1PH	42 drums Gum to T-119 Lift Truck stop	
7-21-02	1 1CN	25 drums Gum to T-119 - Squeeze Truck down	
7-22-02	2 1CN	60 drums Gum to T-119	
7-23-02	1 1J.H	60 drums Gum to T-119	
7-23-02	1 1J.H	50 Bags polyrex IMS-7087 T-120	
7-23-02	2 1CN	52 Bags polyrex IMS-7087 T-120	
7-23-02	2 1CN	52 drums Gum to T-119	
7-24-02	2 1CN	60 Drums Gum to T-119	
7-24-02	2 1CN	50 Bags polyrex IMS-7087 to T-120	
7-25-02	1 1PH	50 Bags PolyRex IMS-7087 to T-120	
7-25-02	1 1PH	60 drums Gum to T-119	
7-25-02	2 1CN	11 drum Gum T-119 coupling broke on Hydraulic pump	
7-25-02	2 1CN	50 bags polyrex IMS-7087 → 100 total	
7-25-02	2 1CN	50 bags polyRex IMS-7071	
7-26-02	1 1PH	100 Bags PolyRex IMS-7071	
7-26-02	1 1PP	100 Bags PolyRex Ims.7071	
	1		
7-26-02	2 1CN	18 bags polyrex IMS-7071 to T-120	

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
7-27-02	1 1JH	60 Gum to T-119	
10-22-02	1 1 Training	63 Gum to T-119	*
	1 1		
10-23-02	1 1 Training CN	60 drums Gum to T-119	
10-25-02	Training Training JH	60 drums Gum to T-119	
10-30-02	1 1JH, CN	60 drums Gum to T-119	↓
10-31-02	1 JH/CN	70 drums Gum to T-119	
11-1-02	1 1CN JH	71 drums Gum to T-119	
11-2-02	1 1CN/JH	70 drums Gum T-119	
11-3-02	1 1CN/JH	70 drums Gum T-119	
11-4-02	1 1CN	40 drums Gum to T-119	
11-4-02	2 1JH	60 drums Gum to T-119	
11-5-02	2 1JH	42 drums Gum to T-119 TANK FULL	
11-7-02	1 1CN	32 drums Gum to T-119	
11-7-02	2 1JH	61 drums Gum to T-119	
11-8-02	1 1CN	61 Drums Gum to T-119	
11-8-02	2 1JH	60 Drums Gum to T-119	
11-9-02	1 1CN	60 drums Gum to T-119	
11-9-02	2 1JH	50 Bags Polyrex IMS-7070 - T-119	
11-9-02	2 1JH	60 drums Gum T-119	
11-10-02	1 1CN	60 drums Gum to T-119	
11-10-02	1 1CN	50 bags Polyrex IMX-7070	
11-10-02	2 1JH	50 Bags Polyrex IMS-7070	
11-10-02	2 1JH	60 drums Gum T-119	
11-11-02	1 1CN	96 drums Gum to T-119	
11-12-02	1 1CN	50 bags Polyrex IMS-7073	
11-12-02	1 1CN	94 drums Gum to T-119	Pump repacked
11-13-02	1 1CN	50 bags Polyrex IMS-7073	
11-13-02	1 1CN	100 drums Gum to T-119	
11-14-02	1 1CN	50 bags Polyrex IMS-7070	*
11-19-02	1 1CN	67 drums Gum to T-119	

EMISSION POINT AC-004 (MELTER)

Note: No activity on those dates not shown.

DATE	SHIFT/INITIALS	# DRUMS	COMMENTS
11-16-02	1 1CN	50 Bags Polyrex IMS-7073	*
11-16-02	1 1CN	83 drums Grem to T-119	
11-17-02	1 1CN	50 bags polyrex IMS-7073	
11-17-02	1 1CN	90 drums Grem to T-119	
11-18-02	1 1CN	50 bags Polyrex IMS-7073	
11-18-02	1 1CN	60 drums Grem to T-119	
11-18-02	2 19H	61 drums Grem to T-119	
11-19-02	1 1CN	41 drums Grem to T-119	
11-19-02	2 19H	50 Bags PolyRex IMS-7073	
11-19-02	2 19H	60 drums Grem to T-119	
11-20-02	1 1CN	75 bags polyrex IMS-7073-59	
	1	IMS-7070-16	
11-20-02	1 1CN	41 drums Grem to T-119	
11-20-02	2 19H	50 Bags PolyRex IMS 7070	
11-20-02	2 19A	40 Drums Grem T-119	
11-21-02	1 1CN	40 drums Grem to T-119	
11-21-02	2 19H	62 drums Grem to T-119	
11-23-02	1 1CN	60 drums Grem to T-119	
11-23-02	2 19H	60 drums Grem to T-119	
11-24-02	1 1CN	60 Drums Grem to T-119	*
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		
	1		

RAD Process Area

RAD PROCESS AREA REPORT SUMMARY

Ammonia Packed Bed Scrubber (AF-002)

As required by 5.B.14, weekly maintenance checks were performed on the Ammonia Packed Bed Scrubber (AF-002). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

EO Packed Bed Scrubber (AF-004(EO))

As required by 5.B.14, weekly maintenance checks were performed on the EO Packed Bed Scrubber (AF-004). The operator visual inspections, were performed weekly (or more frequent) while the area was operating.

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

As required by 5.B.14, weekly operator and mechanic maintenance checks were performed on the Adduct Reactor Scrubber (AD-001).

Dresinol Water Eductor (AD-002)

As required by 5.B.14, weekly operator maintenance checks were performed on the Dresinol Water Eductor (AD-002); however, the unit did not operate during the semi-annual reporting period.

Kymene LDAR Monitoring

KYMENE LDAR MONITORING

In Accordance with 40 CFR 63, Subpart W, Subpart H, and Permit Conditions 5.B.1, 5.B.2, 5.B.3, 5.B.4, and 5.C.1, Hercules Incorporated is providing the following required information:

- Report required by 40 CFR 63.182(d)(2);
- Summary report of actual monitoring data; and
- Recordkeeping and reporting of Startup, Shutdown, and Malfunctions per SSM Plan.
  - Form A: SSM Plan Conformance
  - Form B: Nonconformance to SSM Plan (no nonconformance incidents)

No problems or deviations from the permit were noted during the routine monthly LDAR monitoring.

PERIODIC LEAK MONITORING REPORT

July 1, 2002 through December 31, 2002

Hercules Incorporated
Hattiesburg, Mississippi

KYMENE PROCESS AREA (AA-000)

1. **Number of affected *valves* in HAP service for which leaks were detected as described in § 63.168(b), the percent leakers, and the total number monitored:**

   - One (1) affected valve was discovered leaking (V_L=1) during the referenced reporting period (>500 ppm);
   - [V_L/V_T] * 100 = 0.87% of total valves monitored were leaking; and
   - 115 total valves (V_T=115) were monitored.

2. **Number of *valves* for which leaks were not repaired per § 63.168(f), identifying the number of those that are determined non-repairable:**

   - None.

3. **Number of affected *pumps* in HAP service for which leaks were detected as described in § 63.163(b), the percent leakers, and the total number monitored:**

   - No affected pumps were discovered leaking (P_L=0) during the required monthly monitoring (>1,000 ppm);
   - [P_L/P_T] * 100 = 0.00% of total pumps monitored on a monthly basis were leaking as determined by § 63.163(d)(4); and
   - 3 affected pumps monitored 6 times for a total of 18 pumps (P_T=18) monitored.

4. **Number of *pumps* for which leaks were not repaired per § 63.163(c):**

   - None.

5. **Number of affected *agitators* in HAP service for which leaks were detected as described in § 63.173(a) & (b):**

   - The affected agitator did not leak during the referenced reporting period (>10,000 ppm);

6. **Number of *agitators* for which leaks were not repaired per § 63.173(c):**

   - None.

7. **Number of affected *connectors* in HAP service for which leaks were detected as described in § 63.174(a), the percent leaking, and the total number monitored:**

   - No affected connectors were measured at or above 500 ppm (C_L=0) during the referenced reporting period;
   - [C_L/C_T] * 100 = 0.00% of total connectors monitored were leaking; and
   - 0 total connectors (C_T=0) were monitored.

8. **Number of *connectors* for which leaks were not repaired per § 63.174(d), identifying the number of those that are determined non-repairable:**

   - None.

9. **Explain any *delay of repairs*:**

   - All applicable repairs were made in a timely fashion.

10. **Results of all monitoring within semi-annual reporting period to show compliance with § 63.165(a), *pressure relief device* releases:**

    - None.

11. **Notification of a change in *connector monitoring alternatives* as described in §63.174(c)(1):**

    - As allowed in §63.174(c)(1)(ii), Hercules Incorporated changed connector monitoring alternatives during the July 1 - December 31, 2000, semi-annual reporting period. Instead of monitoring opened or broken connectors for leaks within three (3) months of being returned to organic HAP service, Hercules chooses **not** to monitor connectors that have been opened or had the seal broken. It is realized that nonrepairable connectors can not be counted while complying with this alternative; therefore, in the percent leaking calculations C_{AN} will be set to zero.

12. ***Monitoring results and component summary report* during the semi-annual reporting period:**

    - Summary information from the referenced semi-annual reporting period is attached.

TABLE 2

SEMI-ANNUAL REPORT MONITORING RESULTS

Page 1
07/01/2002 - 12/31/2002

Report for Regulation EPAH

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Valves Monitored:										
KYMENE	Normal	0	0	55	0	55	0	55	55	110
	DTM	*0*	*0*	*0*	*0*	*5*	*0*	*5*	*5*	*5*
Sub Total	Normal	0	0	55	0	55	0	55	55	110
	DTM	*0*	*0*	*0*	*0*	*5*	*0*	*5*	*5*	*5*
Total		0	0	55	0	60	0	60	60	115

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		Tot Leaks
Valves Leaking:										
KYMENE	Normal	0	0	0	0	1	0			1
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	1	0			1
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	1	0			1
Valves Leak rate:		0.00%	0.00%	0.00%	0.00%	1.67%	0.00%			0.87%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Pumps Monitored:										
KYMENE	Normal	3	3	3	3	3	3	3	3	18
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Sub Total	Normal	3	3	3	3	3	3	3	3	18
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total		3	3	3	3	3	3	3	3	18

SEMI-ANNUAL REPORT MONITORING RESULTS

07/01/2002 - 12/31/2002

Report for Regulation EPAH

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
										Tot Leaks
Pumps Leaking:										
KYMENE	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Pumps Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
								Unit Cnt	Tested	Tot Tests
Connectors Monitored:										
KYMENE	Normal	0	0	0	0	282	1	283	283	283
	DTM	*0*	*0*	*0*	*0*	*23*	*0*	*23*	*23*	*23*
Sub Total	Normal	0	0	0	0	282	1	283	283	283
	DTM	*0*	*0*	*0*	*0*	*23*	*0*	*23*	*23*	*23*
Total		0	0	0	0	305	1	306	306	306

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
										Tot Leaks
Connectors Leaking:										
KYMENE	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Connectors Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

SEMI-ANNUAL REPORT MONITORING RESULTS

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Screwed Connectors										
KYMENE	Normal	0	0	0	0	1	0	1	1	1
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Sub Total	Normal	0	0	0	0	1	0	1	1	1
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total		0	0	0	0	1	0	1	1	1

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		Tot Leaks
Screwed Connectors										
KYMENE	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Screwed Connectors Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Agitator Monitored:										
KYMENE	Normal	1	1	1	1	1	1	1	1	6
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Sub Total	Normal	1	1	1	1	1	1	1	1	6
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total		1	1	1	1	1	1	1	1	6

SEMI-ANNUAL REPORT MONITORING RESULTS

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
										Tot Leaks
Agitator Leaking:										
KYMENE	**Normal**	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	**Normal**	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Agitator Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
								Unit Cnt	Tested	Tot Tests
Pressure Relief Device										
KYMENE	**Normal**	0	0	0	0	2	0	2	2	2
	DTM	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*1*	*1*
Sub Total	**Normal**	0	0	0	0	2	0	2	2	2
	DTM	*0*	*0*	*0*	*0*	*1*	*0*	*1*	*1*	*1*
Total		0	0	0	0	3	0	3	3	3

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
										Tot Leaks
Pressure Relief Device										
KYMENE	**Normal**	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	**Normal**	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Pressure Relief Device Leak		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
					Yes	No	Yes	No	Yes	No	
6/12/02	11:49AM			L.S	✓			✓	✓		Power failure
		6/12/02	1:15AM	L.S	✓			✓		✓	Power on started Scrubber water flow rate 15.7
6/12/02	12:21 PM			L.S	✓			✓	✓		Power failure
		6/12/02	12:23 PM	L.S	✓			✓		✓	Power on started scrubber water flow rate 16.04
6/19/02	7:15pm			jm	✓			✓	✓		Power failure
		6/19/02	7:52pm	jm	✓			✓		✓	Power on, Started Scrubber water flow rate 15.46 GPM,
6/15/02	4:00pm			E.P.	✓			✓	✓		Scrubber plug.
		6/15/02	6:30pm	E.P.	✓			✓		✓	Scrubber unplugged. Scrubber flow rate 16.02 gpm.
7/15/02	6:30pm			E.P.	✓			✓		✓	Plan Shut down
		7/15/02	2:50pm	jm	✓			✓		✓	Scrubber flow rate 12.72 gpm.
7/15/02	3:47pm			jm	✓			✓	✓		Power failure
		7/15/02	3:49pm	jm	✓			✓		✓	Power on Started Scrubber water flow rate 17.34 gpm

For a malfunction, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
					Yes	No	Yes	No	Yes	No	
8/18/02	5:34Am			D.B	✓			✓		✓	Planed Shutdown
		8/18/02	10:45AM	L.S	✓			✓		✓	Started up 15GPM SCRUB. H2O FLOW 15.6GPM
8/22/02	10:36Pm			D.B.	✓			✓	✓		The seal failed on the Sine Pump, CUT the pump off.
		8/23/02	5:45AM	E.P	✓			✓	✓		Replaced Seal on Sine Pump.
8/24/02	8:30AM			E.P.	✓			✓		✓	Plan Shut down.
		8/26/02	6:41Am	D.B	✓			✓		✓	Started up Scrubber, H20 flow 13.73 GPm
9/9/02	6:40A			D.B.	✓			✓		✓	Plan Shut down
		9/9/02	2:29pm	jm	✓			✓		✓	Started up Scrubber, H20 flow 10.30 GPm
9/15/02	5:30AM			E.P.	✓			✓		✓	Plan Shut down.
		9/16/02	7:00A	D.B.	✓			✓		✓	Started up Scrubber, water flow 15.03 GPm
9/22/02	7:30A			jm	✓			✓		✓	Plank, Shut down.
		9/24/02	11:00Pm	D.B.	✓			✓		✓	Started up Scrubber, water flow 14.23 Gpm
9/29/02	1:36Am			D.B.	✓			✓		✓	Planed Shut down,
		9/30/02	9:28A	jm	✓			✓		✓	Started up Scrubber, water flow 13.57GPm
10/5/02	7:30Pm			E.P.	✓			✓		✓	Plan Shut down
		10/7/02	1:20Pm	D.B	✓			✓		✓	Started up Scrubber, water flow 16.61

For a malfunction, use the startup/shutdown date and time columns to record the duration of the event.

Startup, Shutdown, and Malfunction Plan (SSM) Checklist -- Form A

Shutdown Date	Shutdown Time (AM or PM)	Startup Date	Startup Time (AM or PM)	Initials	SSM Plan Properly Followed?		Was Form B Completed?		Was There A Malfunction?		Identify the event as a startup, shutdown, or malfuction and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
					Yes	No	Yes	No	Yes	No	
10/13/02	8:37Am			Jm	✓			✓	✓	✓	Planned shut down.
		10/14/02	7:00 AM	E.P.	✓			✓		✓	Scrubber Water Flowrate 14.01 GPM
10/20/02	6:18Am				✓			✓		✓	Planned shut down
		10/21/02	8:31Am	Jm	✓			✓		✓	Scrubber water flow rate 15.94 gpm.
10/27/02	6:Am			E.P.	✓			✓		✓	Plan Shut down.
		10/28/02	7:53Am	D.B	✓			✓		✓	Started scrubber, water flow 14.30 GPM
11/7/02	12:25pm	11-13-02		Jm	✓			✓		✓	Planed shut down.
~~11/08/02~~		~~11-13-02~~	11:40 Am	L.S	✓			✓		✓	Started scrubber water flow rate 14.52 GPM
12/08/02	6:40 AM			L.S	✓			✓		✓	Plan shut down.
		12/9/02	8:30AM	L.S	✓			✓		✓	started scrubber water flow rate 15.54 GPM
12/18/02	11:55Am			D.B.	✓			✓	✓		Power failure
		12/18/02	11:56 Pm		✓			✓		✓	Started scrubber (Power on) water flow rate 17.69 GPM
12/28/02	5:20 AM			L.S	✓			✓		✓	Planned shut down.
		12/30/02	6:42AM	D.B.	✓			✓		✓	Started scrubber, water flow rate 15.45 GPM
		1/7/02									
		1/7/02	7:10pm	Jm	✓			✓		✓	Started scrubber water flow rate 14.46 GPM

For a malfunction, use the startup/shutdown date and time columns to record the duration of the event.

Polyether Polyols Production LDAR Monitoring

RAD LDAR MONITORING

In Accordance with 40 CFR 63, Subpart PPP, Subpart H, and Permit Conditions 5.B.31 and 5C4(b)(7), Hercules Incorporated is providing the following required information:

- Report required by 40 CFR 63.182(d)(2);
- Summary report of actual monitoring data; and
- Recordkeeping and reporting of Startup, Shutdown, and Malfunctions per SSM Plan.
  - Form A: SSM Plan Conformance
  - Form B: Nonconformance to SSM Plan (no nonconformance incidents)

No problems or deviations from the permit were noted during the routine monthly LDAR monitoring.

During the period of July 1, 2002, through December 31, 2002, the Polyether Polyol production unit did not operate. Therefore; there was no SSM Plan recordkeeping and reporting.

PERIODIC LEAK MONITORING REPORT

July 1, 2002 through December 31, 2002

Hercules Incorporated
Hattiesburg, Mississippi

POLYRAD PROCESS AREA (AF-000)

1. **Number of affected *valves* in HAP service for which leaks were detected as described in § 63.168(b), the percent leakers, and the total number monitored:**

   - No affected valves were discovered leaking (V_L=0) during the referenced reporting period (>500 ppm);
   - [V_L/V_T] * 100 = 0.00% of total valves monitored were leaking; and
   - 203 total valves (V_T=203) were monitored.

2. **Number of *valves* for which leaks were not repaired per § 63.168(f), identifying the number of those that are determined non-repairable:**

   - None.

3. **Number of affected *pumps* in HAP service for which leaks were detected as described in § 63.163(b), the percent leakers, and the total number monitored:**

   - No affected pumps were discovered leaking (P_L=0) during the referenced reporting period (>5,000 ppm);
   - [P_L/P_T] * 100 = 0.00% of total pumps monitored were leaking; and
   - 3 affected pumps monitored 6 times for a total of 18 pumps (P_T=18) were monitored.

4. **Number of *pumps* for which leaks were not repaired per § 63.163(c):**

   - None.

5. **Number of affected *connectors* in HAP service for which leaks were detected as described in § 63.174(a), the percent leaking, and the total number monitored:**

   - No affected connectors were discovered leaking (C_L=0) during the referenced reporting period (>500 ppm);
   - [C_L/C_T] * 100 = 0.00% of total connectors were leaking; and
   - 0 connectors (C_T=0) were monitored.

6. **Number of *connectors* for which leaks were not repaired per § 63.174(d), identifying the number of those that are determined non-repairable:**

   - None.

7. **Explain any *delay of repairs*:**

   - None.

8. **Results of all monitoring within semi-annual reporting period to show compliance with § 63.165(a), *pressure relief devices*:**

   - No releases during the semi-annual reporting period.

9. **Notification of a change in *connector monitoring alternatives* as described in §63.174(c)(1):**

   - As allowed in §63.174(c)(1)(ii), Hercules Incorporated changed connector monitoring alternatives during the July 1 - December 31, 2000, semi-annual reporting period. Instead of monitoring opened or broken connectors for leaks within three (3) months of being returned to organic HAP service, Hercules chooses **not** to monitor connectors that have been opened or had the seal broken. It is realized that nonrepairable connectors can not be counted while complying with this alternative; therefore, in the percent leaking calculations C_{AN} will be set to zero.

10. ***Monitoring results and component summary report* during the semi-annual reporting period:**

    - Summary information from the referenced semi-annual reporting period is attached.

TABLE 2

SEMI-ANNUAL REPORT MONITORING RESULTS

1. .0/2002
13:15:26

Report for Regulation EPAH

07/01/2002 - 12/31/2002

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Valves Monitored:										
RAD	Normal	0	0	97	0	97	0	97	97	194
	DTM	*0*	*0*	*0*	*0*	*9*	*0*	*10*	*9*	*9*
Sub Total	Normal	0	0	97	0	97	0	97	97	194
	DTM	*0*	*0*	*0*	*0*	*9*	*0*	*10*	*9*	*9*
Total		0	0	97	0	106	0	107	106	203

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		Tot Leaks
Valves Leaking:										
RAD	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Valves Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Pumps Monitored:										
RAD	Normal	3	3	3	3	3	3	3	3	18
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Sub Total	Normal	3	3	3	3	3	3	3	3	18
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total		3	3	3	3	3	3	3	3	18

SEMI-ANNUAL REPORT MONITORING RESULTS

Report for Regulation EPAH

07/01/2002 - 12/31/2002

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
Pumps Leaking:										Tot Leaks
RAD	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Pumps Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
Connectors Monitored:								Unit Cnt	Tested	Tot Tests
RAD	Normal	0	0	0	0	527	0	527	527	527
	DTM	*0*	*0*	*0*	*0*	*207*	*0*	*207*	*207*	*207*
Sub Total	Normal	0	0	0	0	527	0	527	527	527
	DTM	*0*	*0*	*0*	*0*	*207*	*0*	*207*	*207*	*207*
Total		0	0	0	0	734	0	734	734	734

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
Connectors Leaking:										Tot Leaks
RAD	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	Normal	0	0	0	0	0	0			0
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			0
Connectors Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Screwed Connectors										
Sub Total	**Normal**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	DTM	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total		0	0	0	0	0	0	**0**	**0**	**0**

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		Tot Leaks
Screwed Connectors										
Sub Total	**Normal**	**0**	**0**	**0**	**0**	**0**	**0**			**0**
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			**0**
Screwed Connectors Leak rate:		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			**0.00%**

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS Unit Cnt	Tested	Tot Tests
Pressure Relief Device										
RAD	**Normal**	**0**	**0**	**0**	**0**	**13**	**0**	**13**	**13**	**13**
	DTM	*0*	*0*	*0*	*0*	*5*	*0*	*5*	*5*	*5*
Sub Total	**Normal**	**0**	**0**	**0**	**0**	**13**	**0**	**13**	**13**	**13**
	DTM	*0*	*0*	*0*	*0*	*5*	*0*	*5*	*5*	*5*
Total		0	0	0	0	18	0	**18**	**18**	**18**

TABLE 2 (cor 1)

SEMI-ANNUAL REPORT MONITORING RESULTS

Report for Regulation EPAH

07/01/2002 - 12/31/2002

		JUL	AUG	SEPT	OCT	NOV	DEC	JUL - DEC TOTALS		
										Tot Leaks
Pressure Relief Device										
RAD	**Normal**	**0**	**0**	**0**	**0**	**0**	**0**			**0**
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Sub Total	**Normal**	**0**	**0**	**0**	**0**	**0**	**0**			**0**
	DTM	*0*	*0*	*0*	*0*	*0*	*0*			*0*
Total		0	0	0	0	0	0			**0**
Pressure Relief Device Leak		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			**0.00%**

Deviations from Permit Requirements

DEVIATIONS FROM PERMIT REQUIREMENTS

July 1, 2002 through December 31, 2002

Hercules Incorporated
Hattiesburg, Mississippi

1. As required by 5.A.4 of the Title V Operating Permit, deviations from permit requirements must be clearly identified and reported. Deviations from permit requirements are detailed below:

   On 10/29/02, Paracol Water Scrubber (AB-001), the water flowrate was noted as 4.2GPM. This occurred while the meltor was not operating.

   During the week of 12/28/02, Paracol Water Scrubber (AB-001), the water flowrate was not recorded on the weekly log sheet.