Hercules Inc

General Information

ID	Branch	SIC	County	Basin	Start	End
2022	Chemical	2821, 2861, 2899, 2899	Forrest	Pascagoula River	06/11/1991	

Address

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

Telecommunications

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

Alternate / Historic AI Identifiers

Alt ID	Alt Name	Alt Type	Start Date	End Date
2803500001	Hercules Inc	Air-AIRS AFS	06/11/1991	
080000001	Hercules, Inc.	Air-State Operating	06/11/1991	06/01/1994
080000001	Hercules, Inc.	Air-Title V Fee Customer	11/13/1998	
080000001	Hercules, Inc.	Air-Title V Operating	11/13/1998	11/12/2003
080000001	Hercules, Inc.	Air-Title V Operating	04/22/2004	03/31/2009
MSR110153	Hercules, Inc.	GP-Baseline	01/29/2001	12/16/2005
MSR110153	Hercules Inc	GP-Baseline	12/16/2005	09/30/2010
MSR103943	Hercules, Inc.	GP-Construction	01/03/2006	05/31/2010
MSR110153	Hercules, Inc.	GP-Sara Title III	10/17/1997	01/29/2001
MSD008182081	Hercules, Inc.	Hazardous Waste-EPA ID	01/20/1997	
2022	Hercules Powder Company	Historic Site Name	01/01/1912	09/01/1968
2022	Hercules, Inc.	Official Site Name	09/01/1968	
MS0001830	Hercules, Inc.	Water - NPDES	09/29/1986	09/28/1991
MS0001830	Hercules, Inc.	Water - NPDES	10/22/1991	10/21/1996
MS0001830	Hercules, Inc.	Water - NPDES	09/30/1997	09/29/2002
MS0001830	Hercules, Inc.	Water - NPDES	10/31/2002	05/04/2007
MS0001830	Hercules, Inc.	Water - NPDES	05/04/2007	04/30/2012
MSP091286	Hercules, Inc.	Water - Pretreatment	03/12/1999	02/28/2004
MSP091286	Hercules Inc	Water - Pretreatment	11/05/2004	10/31/2009

Regulatory Programs

Program	SubProgram	Start Date	End Date
Air	MACT Subpart PPP	06/01/1999	12/16/2005
Air	MACT Subpart W	03/08/1998	
Air	NSPS Subpart Dc	09/12/1990	
Air	Title V - major	06/01/1900	
Hazardous Waste	Conditional Exempt Small Quantity Generator	01/20/1997	11/21/2005
Hazardous Waste	Large Quantity Generator	01/20/1997	
Water	Baseline Stormwater	01/29/2001	
Water	Construction Stormwater	01/03/2006	
Water	NPDES Major Industrial	09/29/1986	03/12/1999

Water	NPDES Minor Industrial	09/29/1986	
Water	PT CIU	03/12/1999	
Water	PT CIU - Gum and Wood Chemical Mfg (Subpart 454)	03/12/1999	
Water	PT CIU - Organic Chemicals Mfg (Subpart 414)	03/12/1999	
Water	PT SIU	03/12/1999	

Locational Data

Latitude	Longitude	Metadata	S / T / R	Map Links
31 ° 20 ' 9 .02 (031.335839)	89 ° 18 ' 26 .04 (089.307233)	**Point Desc:** PG- Plant Entrance (General). Data collected by J. Dewayne Headrick on 11/2/2005. **Method:** GPS Code (Psuedo Range) Standard Position (SA Off) **Datum:** NAD83 **Type:** MDEQ	Section: Township: Range:	SWIMS TerraServer Map It

12/4/2007 9:02:09 AM

forrest Co 2

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

DATA CODED

RECEIVED
AUG - 2 2007
ECED

July 31, 2007

CERTIFIED MAIL # 7005 0390 0000 1703 8847

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
1/01/07-6/30/07

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.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending June 30, 2006. 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, 2007, to June 30, 2007.

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,

RS Bolton

Rodney S. Bolton
Plant Manager

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, 2007 through June 30, 2007, contains the following sections:

1. Fuel Burning Equipment
2. Kymene Process Area
3. AKD Process Area
4. HRA Process Area
5. Neuphor Process Area
6. Kymene LDAR Monitoring
7. Deviations from Permit Requirements

Fuel Burning Equipment

FUEL BURNING REPORT SUMMARY

As required by 5.A.4, 5.B18, and 5.C.3, monthly records of the type 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 2007

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	0	0	0	0	0	0	0	0	0	0	0	0	0
AF001	RAD nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM001	No. 5 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM002	No. 6 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM003	No. 7 package boiler	11,410	9,691	11,157	9,795	9,568	8,259							59,879
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0	0	0	0	0	0	0	0
T5ngas		11,410	9,691	11,157	9,795	9,568	8,259							59,879

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.4, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

Deviations:
LDAR Tag #'s 6096, 6010, and 6010, were identified as leaking on 6/12, 6/13, and 6/20, respectively. All three events were monitored within 5 days of repair.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.194	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.136	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
Jul-05	0.000	2.170	0.178	2.195	0.178	4.365
Aug-05		2.113	0.181	2.190	0.181	4.303
Sep-05		2.056	0.178	2.183	0.178	4.239
Oct-05		1.999	0.184	2.181	0.184	4.180
Nov-05		1.412	0.182	2.180	0.182	3.592
Dec-05		0.888	0.183	2.181	0.183	3.069
Jan-06		0.677	0.182	2.169	0.182	2.846
Feb-06		0.490	0.180	2.165	0.180	2.655
Mar-06		0.354	0.179	2.163	0.179	2.517
Apr-06		0.112	0.182	2.167	0.182	2.279
May-06		0.056	0.178	2.166	0.178	2.222
Jun-06		0.000	0.188	2.175	0.188	2.175
Jul-06		0.000	0.187	2.184	0.187	2.184
Aug-06		0.000	0.187	2.190	0.187	2.190
Sep-06		0.000	0.186	2.198	0.186	2.198
Oct-06		0.000	0.183	2.197	0.183	2.197
Nov-06		0.000	0.181	2.196	0.181	2.196
Dec-06		0.000	0.177	2.190	0.177	2.190
Jan-07		0.000	0.183	2.191	0.183	2.191
Feb-07		0.000	0.179	2.190	0.179	2.190
Mar-07		0.000	0.180	2.191	0.180	2.191
Apr-07		0.000	0.187	2.196	0.187	2.196
May-07		0.000	0.180	2.198	0.180	2.198
Jun-07		0.000	0.184	2.194	0.184	2.194
Jul-07		0.000		2.007	0.000	2.007
Aug-07		0.000		1.820	0.000	1.820
Sep-07		0.000		1.634	0.000	1.634
Oct-07		0.000		1.451	0.000	1.451
Nov-07		0.000		1.270	0.000	1.270
Dec-07		0.000		1.093	0.000	1.093
				0.910		0.910
				0.731		0.731
				0.551		0.551
				0.364		0.364
				0.184		0.184
				0.000		0.000

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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. The area did not operate.

HRA Flaking Belt Dust Collector (AG-005)

As required by 5.B.4, 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. The area did not operate.

A 502B10 notification was submitted on June 18, 2007, for the removal of emission points AG-003 and AG-005

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

Operator and mechanic maintenance checks were performed on the Adduct reactor scrubber

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, 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

January 1, 2007 through June 30, 2007

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:**

   - No 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
   - 98 total valves (V_T=98) 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
   - 2 affected pumps monitored 6 times, and 1 affected pump monitored 4 times for a total of 16 pumps (P_T=16) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
KYMENE	0	0	49	0	0	49	98
Total	0	0	49	0	0	49	**98**
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	
5/24/07	1:30 AM			GRC	✓			✓		✓	Scheduled Shutdown
~~5/24/07~~		5/14/07	5:10	GRC	✓			✓		✓	Startup building (scrubber H2O 19.57)
5/19/07	5AM		~~5:00 AM~~	MG	✓			✓		✓	PLAN SHUT DOWN
~~5/19/07~~		5/24/07	2:20PM	MG	✓			✓		✓	START UP BUILDING H2O 14.34
5/26/07	4:AM			JH	✓			✓		✓	Plan shut down
		5/28/07	7:00AM	MG	✓			✓		✓	START UP BUILDING H2O 14.82 9pm
6/02/07	12AM			EP	✓			✓		✓	Plan Shut down
		6/4/07	11 5/ Pm	DB	✓			✓		✓	Started up scrubber, water flow 13.4 & 6 PM
6/9/07	1 30 Am			DB	✓			✓		✓	Planned shut down
		6/11/07	1:00PM	EP	✓			✓		✓	Started up Scrubber water flow 14.5 1PM
6/16/07	4 20 AM			JB	✓			✓		✓	Weekend shut down
		6/18/07	6 31 Am	DB	✓			✓		✓	Started up scrubber, water flow 15.0 6 PM
6/22/07	6 pm			TR	✓			✓		✓	Planned Shut down:
		6/27/07	9pm	GRC	✓			✓		✓	Startup scrubber 14.76 gpm
7/1/07	7am			GRC	✓			✓		✓	Planned Shutdown
		7/2/07	9 Am	TR	✓			✓		✓	Startup (Scrubber 14.87 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	
3/17/07	2:AM			EP	✓			✓		✓	Plan Shut down.
		8:30 AM	3/19/07	JB	✓			✓		✓	Startup
3/24/07	5:45AM			GRC	✓			✓		✓	Shutdown for weekend
		3/26/07 8:00AM	11 AM	GRC	✓			✓		✓	Startup for the week Scrubber 14.85 gpm
4/3/07	6 PM			GRC	✓			✓		✓	Shutdown, Large well problem / Ca
		4/3/07	10:30 AM	GH	✓			✓		✓	Start up
4/7/07	5AM			SH	✓			✓		✓	Plan Shut down
		4/8/07	2:30 AM	MJ.	✓			✓		✓	START UP SCRUBBER 14.74
4/14/07	5 AM			GRC	✓			✓		✓	Planned Shutdown
		4/16/07	11:00 AM	JH	✓			✓		✓	Plan start up Scrubber water flow rate 14.25 GPM
4/20/07	7 5:27 PM			D.B	✓			✓		✓	Planned Shutdown
		4/23/07	8 AM	EP	✓			✓		✓	Startup Scrubber Flow rate 14.78 GPM
4/25/07	5 35 AM			JB	✓			✓		✓	Planned shut down
		4/30/07	6:24 AM	DB.	✓			✓		✓	Started Scrubber water flow 14.57 GPM
5/4/07	1 30 AM			TR	✓			✓		✓	Planned Shut down.
		5/7/07	8:00 AM	T.R	✓			✓		✓	Startup for week (Hx flow 18.85)

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	
1/19/07	6:25 PM			D.B.	✓			✓		✓	Shut down for weekend
		1/22/07	6:40 AM	D.B.	✓			✓		✓	Started up scrubber, water flow rate 14.1 GPM
1/27/07	4:45 PM			T.R.	✓			✓		✓	Shut down for weekend (planned)
		1/29/07	7:45 AM	T.R.	✓			✓		✓	Started up 7:45 AM. H2O flow 15.10 gpm
2/3/07	5 AM			G.R.C.	✓			✓		✓	Shut down for weekend
			10 AM	T.R.	✓			✓		✓	Start up scrubber after weekend
2/10/07	3 pm			G.R.C.	✓			✓		✓	Shutdown for weekend
		2/12/07	7 AM	G.R.C.	✓			✓		✓	Startup of the building scrubber 17.64 GPM
2/17/07	5:30 PM			J.H.	✓			✓		✓	Shutdown for weekend
~~2/19/07~~		2/19/07	7 AM	M.G.	✓			✓		✓	START UP OF SCRUBBER. 16.48
2/24/07	5 PM			E.P.	✓			✓		✓	Plan Shut down
		2/26/07	4:35 PM	J.H.	✓			✓		✓	Plan Start up
3/3/07	4:00 PM			J.H.	✓			✓		✓	PLAN SHUT DOWN
		3/5/07	6:35 AM	E.P.	✓			✓		✓	Start up Scrubber water flow rate 17.57 GPM
3/11/07	12 AM			J.B.	✓			✓		✓	PLAN Shut Down
		3/12/07	2 pm	G.R.C.	✓			✓		✓	Start up building scrubber. 17.97 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	
		12/4/06	6:54 AM	D.B	✓			✓		✓	Started up scrubber, flow rate 15 GPM
											12/5/06 4 towers shut down scrubber flow 7
12/16/06	12 AM	12/18/06		CJS	✓			✓		✓	Shutdown building for weekend
T2 ~~Shutdown~~	~~6:00 AM~~	12/19/06 6 AM	6 43 AM	TR	✓			✓		✓	Start up scrubber flow 16 gpm
12/23/06	3:00 AM			MU	✓			✓		✓	SHUT DOWN BUILDING FOR WEEK END
		12/27/06	7:00 AM	MU	✓			✓		✓	START UP SCRUBBER FLOW 14.54 GPM
12/30/06	7 AM			JH	✓			✓		✓	Plan shut down
		1/2/07	7:30 AM	MU	✓			✓		✓	STARTED UP SCRUBBER FLOW 14.52 GPM
1/6/07	4:30 AM	~~1/8/07~~	~~7:45 AM~~	JH	✓			✓		✓	Shut down building for weekend
		1/8/07	7:00 AM	JH	✓			✓		✓	Start up scrubber flow -1.09 GPM
1/18/07	12 PM			JH	✓			✓		✓	Plan shut down
		1/15/07	5:PM	E.P.	✓			✓		✓	Start up scrubber water flowrate (GPM) 12.92

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, 2007 through June 30, 2007

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:

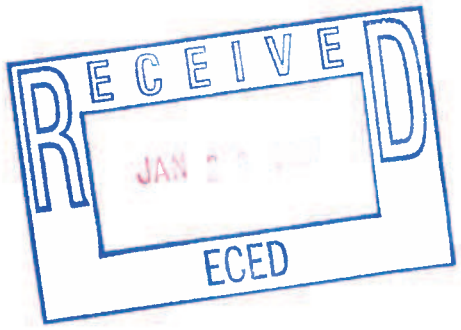
Kymene Process Area LDAR Tag #'s 6096, 6010, and 6010, were identified as leaking on 6/12, 6/13, and 6/20, respectively. All three events were monitored within 5 days of repair.

Forrest Co

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

January 22, 2007



CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. No.: 7005 0390 0000 1703 8663

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
07/01/06-12/31/06

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.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending December 31, 2006. 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, 2006, to December 31, 2006.

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

Terry D. Brooks
Plant Manager

TDB/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 July 1, 2006 through December 31, 2006, contains the following sections:

1. Fuel Burning Equipment
2. Kymene Process Area
3. AKD Process Area
4. HRA Process Area
5. Neuphor Process Area
6. Kymene LDAR Monitoring
7. Deviations from Permit Requirements

Fuel Burning Equipment

FUEL BURNING REPORT SUMMARY

As required by 5.A.4, 5.B18, and 5.C.3, monthly records of the type 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 2006

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	0	0	0	0	0	0	0	0	0	0	0	0	0
AF001	RAD nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM001	No. 5 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM002	No. 6 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM003	No. 7 package boiler	9,609	9,070	8,476	7,398	7,367	8,184	8,065	8,384	9,427	9,519	9,620	10,780	105,899
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0	0	0	0	0	0	0	0
T5ngas		9,609	9,070	8,476	7,398	7,367	8,184	8,065	8,384	9,427	9,519	9,620	10,780	105,899

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.4, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.194	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.136	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
Jul-05	0.000	2.170	0.178	2.195	0.178	4.365
Aug-05		2.113	0.181	2.190	0.181	4.303
Sep-05		2.056	0.178	2.183	0.178	4.239
Oct-05		1.999	0.184	2.181	0.184	4.180
Nov-05		1.412	0.182	2.180	0.182	3.592
Dec-05		0.888	0.183	2.181	0.183	3.069
Jan-06		0.677	0.182	2.169	0.182	2.846
Feb-06		0.490	0.180	2.165	0.180	2.655
Mar-06		0.354	0.179	2.163	0.179	2.517
Apr-06		0.112	0.182	2.167	0.182	2.279
May-06		0.056	0.178	2.166	0.178	2.222
Jun-06		0.000	0.188	2.175	0.188	2.175
Jul-06		0.000	0.187	2.184	0.187	2.184
Aug-06		0.000	0.187	2.190	0.187	2.190
Sep-06		0.000	0.188	2.198	0.188	2.198
Oct-06		0.000	0.183	2.197	0.183	2.197
Nov-06		0.000	0.181	2.196	0.181	2.196
Dec-06		0.000	0.177	2.190	0.177	2.190
Jan-07		0.000		2.008	0.000	2.008
Feb-07		0.000		1.828	0.000	1.828
		0.000		1.649	0.000	1.649
		0.000		1.467	0.000	1.467
		0.000		1.289	0.000	1.289

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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. The area did not operate.

HRA Flaking Belt Dust Collector (AG-005)

As required by 5.B.4, 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. The area did not operate.

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

Operator and mechanic maintenance checks were performed on the Aduct reactor scrubber

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, 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, 2006 through December 31, 2006

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:**

   - No 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
   - 103 total valves (V_T=103) 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
   - 2 affected pumps monitored 6 times, and 1 affected pump monitored 3 times for a total of 15 pumps (P_T=15) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Jan Total
Valves Monitored:							
KYMENE	0	0	54	1	48	0	103
Total	0	0	54	1	48	0	103
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%

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Jan Total
Pumps Monitored:							
KYMENE	2	2 ~~0~~	2	3	3	3	15 ~~13~~
Total	2	2 ~~0~~	2	3	3	3	15 ~~13~~
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%

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Jan Total
Connectors Monitored:							
KYMENE	0	0	6	0	22	195	223
Total	0	0	6	0	22	195	223
Connectors Leaking:							
KYMENE	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-Jan Total
Screwed Connectors							
KYMENE	0	0	1	0	0	0	1
Total	0	0	1	0	0	0	1
Screwed Connectors							
KYMENE	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%

SEMI-ANNUAL REPORT MONITORING RESULTS

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Jan 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%

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Jan Total
Pressure Relief Device							
KYMENE	0	0	3	0	0	0	3
Total	0	0	3	0	0	0	3
Pressure Relief Device							
KYMENE	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	
		12/4/06	6:34 AM	D.B.	✓			✓		✓	Started up scrubber, flow rate 15 GPM
											12/8/06 Never shut down scrubber because of freezing weather
12/16/06	12 AM	12/18/06		GRC	✓			✓		✓	Shut down building for weekend
T/2 ~~[illegible]~~	~~[illegible]~~	~~[illegible]~~ 6 AM	6:45 AM	TR	✓			✓		✓	Start up scrubber flow 16 gpm
12/23/06	3:00 AM			MU	✓			✓		✓	SHUT DOWN BUILDING FOR WEEK END
		12/27/06	7:00 AM	MU	✓			✓		✓	START UP SCRUBBER FLOW 14.54 GPM
12/30/06	7:00 AM			JH	✓			✓		✓	Plan shut down
		1/2/07	7:30 AM	MU	✓			✓		✓	STARTED UP SCRUBBER FLOW 14.52 GPM
1/6/07	4:30 AM	~~1/8/07~~	~~7:45 AM~~	JH	✓			✓		✓	Shut down building for weekend
		1/8/07	7:00 AM	JH	✓			✓		✓	Start up scrubber flow -1.09 GPM
1/13/07	12:35 PM			JH	✓			✓		✓	Plan shut down
		1/15/07	5:PM	E.P.	✓			✓		✓	Started up scrubber water flowrate (GPM) 18.92

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.
10/6/06	6:10 PM			E.P.	✓			✓		✓	Plan Shut down.
		10/9/06	6:30 AM	E.P.	✓			✓		✓	Startup Scrubber Flowrate water 16.03 gpm.
10/14/06	1:47 AM			JB	✓			✓		✓	Plan shutdown
		10/16/06	6:29 AM	D.B	✓			✓		✓	Started Scrubber, water 15.41 GPM
10-25-06	5:10 PM			GRC	✓			✓		✓	Planned Shutdown.
[illegible]	[illegible] PM	11/3/06	12 PM	TR	✓			✓		✓	Startup Scrubber flowRate 14.16 GPM
11-4-06	3:39 PM			M.J.	✓			✓		✓	PLANTED SHUT DOWN
		11-6-06		GRC	✓			✓		✓	Startup building, scrubber flow 10.99 GPM
11-11-06	1:00 PM			GRC	✓			✓		✓	Planned Shutdown of building for week
		11/13/06	6:30 AM	M.G.	✓			✓		✓	STARTED SCRUBBER WATER 15.19 GPM
[illegible]											
11/18/06	5:17 PM			JB	✓			✓		✓	Weekend shutdown
		11/20/06	7 AM	J/T	✓			✓	✓		Start up scrubber water 14.00 GPM
11/23/06	10:13 AM			JB	✓			✓		✓	Shut down Thanksgiving
		11/27/06	7:AM	E.P.	✓			✓		✓	Startup Scrubber water Flowrate 17.079 GPM.
12/2/06	3:45 PM			E.P.	✓			✓		✓	Plan Shut 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?		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	
8/19/06	1:04 Am			D.B.	✓			✓		✓	Planed Shut down
		8/21/06	7:14 AM	K.P.	✓			✓		✓	Startup Scrubber water flowrate 16.5 gpm
8/26/06	2:00 pm			GRC	✓			✓		✓	Planned Shutdown
		8/28/06	4:30 p	TR	✓			✓		✓	Start up after Service Hx required
9/1/06	3 Am			TR	✓			✓		✓	Planned Shut down
		9/4/06	6:35 AM	JB	✓			✓		✓	Startup on Monday 16.55
9/5/06	8:14 Am			JB	✓			✓		✓	Had to shut down #1 Layne well pumps
9/5/06	~~8:30 pm~~	9/5/06	4:30 p	TR	✓			✓			Planned Startup
9/9/06	12:30 pm			GRC	✓			✓		✓	Planned Shutdown for Weekend
~~9/11/06~~		9/11/06	6:30 Am	TR	✓			✓		✓	Start up after Weak-end
9/16/06	5:30 Am			JB	✓			✓		✓	Planned shutdown
~~9/18/06~~		9/18/06		GRC	✓			✓		✓	Start up after Weekend
9/23/06	8:15 AM			JH	✓			✓		✓	Planed shutdown
~~9/25/06~~		9/25/06	3:00 AM	JH	✓			✓		✓	Pland Start up
9/29/06	1:00 PM			JH	✓			✓	~~✓~~	✓	Pland shut down
~~10/2~~		10/2/06	8 N	JH	✓			✓		✓	Pland Start up

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	
6/24/06	3:20 AM			JH	✓			✓		✓	Plan Shutdown
		6/26/06	7:AM	JH	✓			✓		✓	Plan Start up Scrubber water Flowrate 15.23 GPM
7/1/06	1:00AM			E.P.	✓			✓		✓	Plan Shut down
		7/5/06	7:Am	E.P.	✓			✓		✓	Startup Scrubber Water Flowrate 16.84 gpm
7/7/06	11:28 pm/7										Plan Shut down
		7/10/06	6:31 Am	D.B.	✓			✓		✓	Started up Scrubber, water flow 15.24 GPM
7/14/06	4:45 Am			TR				✓		✓	Planned Shut Down
		7/17/06	7:24am	JB	✓			✓		✓	Startup Scrubber, water flow 16.01
7/22/06	5:30Am			GRC	✓			✓		✓	Planned Shutdown
		7/24/06	10:30PM	M.G.	✓			✓		✓	START up SCRUBBER WATER flow 15.25
7/29/06	5:00AM			M.G.	✓			✓		✓	Planned Shutdown
		7/31/06	8Am	GRC	✓			✓		✓	Kymene Startup, scrubber 20.00 gpm
8/5/06	6:35 AM			JH	✓			✓		✓	Plan Shut Down
		8/7/06	7Am	M.G.	✓			✓		✓	STARTED UP SCRUBBER WATER flow 16.24
8/12/06	6:00AM			E.P.	✓			✓		✓	Plan Shut down
		8/14/06	6:50 Am	JH	✓			✓		✓	Plan Start up. 20.00 GPM

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, 2005 through June 30, 2005

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:

There were no deviations from permit requirements during this reporting period.

Forrest Co

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

July 21, 2006

RECEIVED
JUL 26 2006
Dept of Environmental Quality
Office of Pollution Control

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. MAIL # 7005 0390 0000 1703 8540

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
01/01/06 – 06/30/06

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.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending June 30, 2006. 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, 2006, to June 30, 2006.

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,

Terry D. Brooks
Plant Manager

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, 2006 through June 30, 2006, 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 (Melter)
6. Neuphor Process Area
7. Kymene LDAR Monitoring
8. Deviations from Permit Requirements

Fuel Burning Equipment

MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS 5.A.4

YEAR 2006

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	0	0	0	0	0	0							0
AF001	RAD nat. gas Dowtherm boiler	0	0	0	0	0	0							0
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0							0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0							0
AM001	No. 5 package boiler	0	0	0	0	0	0							0
AM002	No. 6 package boiler	0	0	0	0	0	0							0
AM003	No. 7 package boiler	9,609	9,070	8,476	7,398	7,367	8,184							50,104
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0							0
T5ngas		9,609	9,070	8,476	7,398	7,367	8,184							50,104

FUEL BURNING REPORT SUMMARY

As required by 5.A.4, 5.B18, and 5.C.3, monthly records of the type and quantity of fuel combusted are provided in this section. Only natural gas was combusted during this semi-annual reporting period.

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.4, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.988	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.184	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.136	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
Jul-05	0.000	2.170	0.178	2.195	0.178	4.365
Aug-05		2.113	0.181	2.190	0.181	4.303
Sep-05		2.056	0.178	2.183	0.178	4.239
Oct-05		1.999	0.184	2.181	0.184	4.180
Nov-05		1.412	0.182	2.180	0.182	3.592
Dec-05		0.888	0.183	2.181	0.183	3.069
Jan-06		0.677	0.182	2.169	0.182	2.846
Feb-06		0.490	0.180	2.165	0.180	2.655
Mar-06		0.354	0.179	2.163	0.179	2.517
Apr-06		0.112	0.182	2.167	0.182	2.279
May-06		0.056	0.178	2.166	0.178	2.222
Jun-06		0.000	0.188	2.175	0.188	2.175
Jul-06		0.000		1.997	0.000	1.997
Aug-06		0.000		1.816	0.000	1.816
Sep-06		0.000		1.638	0.000	1.638
Oct-06		0.000		1.454	0.000	1.454
Nov-06		0.000		1.272	0.000	1.272
Dec-06		0.000		1.089	0.000	1.089
Jan-06		0.000		0.907	0.000	0.907
		0.000		0.727	0.000	0.727
		0.000		0.548	0.000	0.548
		0.000		0.366	0.000	0.366
		0.000		0.188	0.000	0.188

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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. The area did not operate.

HRA Flaking Belt Dust Collector (AG-005)

As required by 5.B.4, 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. The area did not operate.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Process Melter (AC-004)

The Melter did not operate during this reporting period.

The complete POLY-PALE process area, including the melter, has gone through Demolition.

A 502B10 notification was submitted on June 12, 2006, for the removal of emission point AC-004

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

Operator and mechanic maintenance checks were performed on the Aduct reactor scrubber

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, 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

January 1, 2006 through June 30, 2006

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:**

   - No 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
   - 98 total valves (V_T=98) 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
   - 2 affected pumps monitored 6 times, and 1 affected pump monitored 4 times for a total of 16 pumps (P_T=16) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
KYMENE	0	49	0	0	0	49	98
Total	0	49	0	0	0	49	**98**
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	2	2	16
Total	3	3	3	3	2	2	**16**
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%**

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? 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 and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
12/24/05	3:24 AM			JB	✓			✓		✓	Weekend shutdown
~~12/26/05~~		12/26/05	6:32 AM	SH	✓			✓			Plan [illegible]
12/31/05	5:59 AM			MS	✓			✓		✓	PLANT SHUT DOWN
		1-2-06	6:25 AM	E.P.	✓			✓		✓	Start up Scrubber water flow rate [illegible]
1/02/06	11:30 PM				✓			✓		✓	Planed Shut down
		1/9/06	6:31 AM	DJ ERP	✓			✓		✓	Startup Scrubber water Flow 14.41 gpm
1-14-06	8:30 AM			E.P.	✓			✓		✓	Plan shut down.
		1/16/06	8:AM	T.R.	✓			✓		✓	Start up Scrubber water flow rate 14.93 GPM
1/21/06	10:29 AM			JB	✓			✓		✓	Weekend shutdown
		1/23/06	6:33 AM	EP	✓			✓		✓	Startup Scrubber water Flow rate 2[illegible] gpm
1/28/06	1:13 AM			JB	✓			✓		✓	Weekend shutdown
		1/30/06	6:32	TR	✓			✓		✓	Start up water flow 11.91 gpm
2/1/06	7:08 AM			TR	✓			✓	✓		Scrubber pump locking (down for repairs)
		2/1/06	4:35 PM	JB	✓			✓	✓		Repair on leaking Scrubber pump
~~2/4/06~~											
2/4/06	4:AM			E.P.	✓			✓		✓	Plan Shut down

For a , 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	
~~2/1/06~~		2/1/06	9:57 AM	GRC	✓			✓		✓	Start up Plant
2/1/06	2:34 AM			D.B.	✓			✓		✓	Planned shut down
		2/3/06	6:40 AM	T.R.	✓			✓		✓	Start up, Scrubber water flowrate 14.38 gpm
2/18/06	12:46 pm			D.B.	✓			✓		✓	Planned shut down
		2/20/06	6:30 am	GRC/NB	✓			✓		✓	Plant Startup water flowrate 11.43 gpm JT
2/24/06	7:11 pm			T.R.	✓			✓		✓	Planned Shut Down
		2/27/06	10:20 AM	T.R.	✓			✓		✓	Planned start up
3/4/06	4:33 AM			D.B.	✓			✓		✓	Planned shut down
		3/6/06	6:30 AM	GRC	✓			✓		✓	Planned Startup 20.00 gpm
3/11/06	4:52 AM				✓			✓		✓	Planned Shut down
		3/13/06	6:43 AM	D.B.	✓			✓		✓	Started up scrubber, water flow 15.84 GPM
3/17/06	11 pm			T.R.	✓			✓		✓	Planned Shut down
		3/20/06	6:50 AM	E.P.	✓			✓		✓	Started up Scrubber water flow 16.56 GPM
3/25/06	3:17 AM			D.B.	✓			✓		✓	Planned shut down
		3/27/06	1:30 pm	T.R.	✓			✓		✓	Planned start up

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 and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
4/1/06	3:53 AM			JB	✓			✓		✓	
D.B.		4/3/06	12:12PM	D.B.	✓			✓		✓	Started up scrubber, water flow 16.93 GPM
4/4/06	3:58 PM 4/06			JB	✓			✓		✓	Stopped flow to let contactors [illegible]
		4/4/06	9:21 PM	JB	✓			✓		✓	Started back after getting [illegible]
4/7/06	5:30 AM			TR	✓			✓		✓	Shut down for [illegible]
		4/10/06	1:28 PM	JB	✓			✓		✓	Monday Startup
4/14/06	5:30 AM			GRC	✓			✓		✓	Shutdown for long weekend
		4/17/06	10:20 AM	TR	✓			✓		✓	Started up after [illegible]
4/21/06	11:35PM			MD	✓			✓		✓	SHUT DOWN PER WEEK END
		4-24-06	1:30 AM	GRC	✓			✓		✓	Startup after weekend [illegible]
4/28/06	1:00 AM			JH	✓			✓		✓	Shut down for weekend
		5/1/06	7:30AM	MG	✓			✓		✓	STARTED UP SCRUBBER WATER FLOW 15.1 GPM
5/3/06	1:30 PM	5/3/06	7:15PM	JB MG	✓			✓	✓		LEAKING SEAL ON R-401, REPLACE SEAL
5/6/06	9:30AM			E.P.	✓			✓		✓	P/O Shut down.
5/8/06		5/8/06	7 AM	JH	✓			✓		✓	Start up after weekend Scrubber @ 15:23

For a , 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	
5/12/06	8:00PM			E.P.	✓			✓		✓	Plan Shut down.
		5/16/06	6:45AM	E.P.	✓			✓		✓	Scrubber water flowrate 19.84 GPM.
5/19/06	4:07pm			D.B.	✓			✓		✓	Plan Shut down
		5/22/06	6:27 AM	D.B.	✓			✓		✓	Started up scrubber, water flow 16.0 G.P.M.
5/22/06	5:42pm			JB 8:42pm	✓			✓	✓		Ruptured water line to Scrubber repaired.
		~~11:30 pm~~ 5/22/06	~~JB~~ 11:30 pm	JB	✓			✓		✓	Startup after water line repaired
5/26/06	~~9~~ 7:40 pm			JB	✓			✓		✓	Plan Shut down
		5/31/06	7:15	GRC	✓			✓		✓	Startup after the long weekend
6/3/06	12:20 pm			GRC	✓			✓		✓	Plan Shut down
~~6/5/06~~	~~Coben~~	6/5/06	7:20	GRC	✓			✓		✓	Weekly Startup as scheduled 20.00 GPM
6/10/06	2:45AM			M.G.	✓			✓		✓	PLANT SHUT DOWN
		6/12/06	5:00pm	GRC	✓			✓		✓	Plant Startup after [illegible]
6/17/06	3:45AM			M.G.	✓			✓		✓	PLAN SHUT DOWN
		~~7:00 AM~~	~~JB~~								
		6/19/06	7:00 AM	M G	✓			✓		✓	Start up

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	
6/24/06	3:20 AM			JH	✓			✓		✓	Plan Shutdown
		6/26/06	7:AM	JH	✓			✓		✓	Plan Start up Scrubber water Flowrate 15.63 GPM
7/1/06	1:00 AM			E.P.	✓			✓		✓	Plan Shut down
		7/5/06	7:AM	E.P.	✓			✓		✓	Startup Scrubber water flowrate 16.84 gpm
7/7/06	11:28 pm/7										Plan Shut down
		7/10/06	6:31 AM	D.B.	✓			✓		✓	Started up Scrubber, water flow 15.24 GPM
7/14/06	4:45 Am			TR	.			✓		✓	Planned Shut Down
		7/17/06	7:24 am	JB	✓			✓		✓	Startup Scrubber, water flow 16;01

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, 2005 through June 30, 2005

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:

There were no deviations from permit requirements during this reporting period.

File
Forrest Co
Title V

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

DATA CODED

RECEIVED
JAN 27 2006
Dept of Environmental Quality
Office of Pollution Control

January 27, 2006

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
CERT. MAIL # 7005 0390 0000 1703 8380

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
7/01/05-12/31/05

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.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending June 30, 2005. 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, 2005, to December 31, 2005.

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

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 July 1, 2005 through December 31, 2005, 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.B18, and 5.C.3, monthly records of the type 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 2005

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	0	0	0	0	0	0	0	0	0	0	0	0	0
AF001	RAD nat. gas Dowtherm boiler	0	2,016	497	0	0	0	3,444	0	0	0	0	0	5,957
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM001	No. 5 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM002	No. 6 package boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM003	No. 7 package boiler	10,763	8,820	10,181	8,796	6,483	5,898	7,136	7,999	6,609	8,006	8,264	10,795	99,748
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0	0	0	0	0	0	0	0
T5ngas		10,763	10,836	10,678	8,796	6,483	5,898	10,580	7,999	6,609	8,006	8,264	10,795	105,705

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.4, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.194	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.136	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
Jul-05	0.000	2.170	0.178	2.195	0.178	4.365
Aug-05	0.000	2.113	0.181	2.190	0.181	4.303
Sep-05		2.056	0.178	2.183	0.178	4.239
Oct-05		1.999	0.184	2.181	0.184	4.180
Nov-05		1.412	0.182	2.180	0.182	3.592
Dec-05		0.888	0.183	2.181	0.183	3.069
Jan-06		0.677		1.887	0.000	2.664
Feb-06		0.490		1.803	0.000	2.293
Mar-06		0.354		1.622	0.000	1.976
Apr-06		0.112		1.444	0.000	1.556
May-06		0.056		1.265	0.000	1.321
		0.000		1.086	0.000	1.086
		0.000		0.908	0.000	0.908
		0.000		0.727	0.000	0.727
		0.000		0.549	0.000	0.549
		0.000		0.365	0.000	0.365
		0.000		0.183	0.000	0.183
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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.4, 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.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Process Melter (AC-004)

The Melter did not operate during this reporting period.

RAD Process Area

RAD PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Ammonia Packed Bed Scrubber (AF-002)

As required by 5.B.4, 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.

As required by 5.B.7, 5.B.10, and 5.B.11, the scrubbing liquid flow rate and the scrubber effluent were monitored as required.

On May 5, 2005, Polyether Polyol Production (40 CFR 63 Subpart PPP) was shutdown.

The Ethylene Oxide storage tank was properly cleaned by venting any residual material remaining in the empty tank after May 5,2005, to the scrubber. The EO Packed Bed Scrubber (AF-004) operation was shut down on July 6, 2005.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
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May-06		0.056		1.265	0.000	1.321
		0.000		1.086	0.000	1.086
		0.000		0.908	0.000	0.908
		0.000		0.727	0.000	0.727
		0.000		0.549	0.000	0.549
		0.000		0.365	0.000	0.365
		0.000		0.183	0.000	0.183
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

Operator and mechanic maintenance checks were performed on the Aduct reactor scrubber

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, 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.

HURRICANE KATRINA- Contractor performing LDAR monitoring was unable to travel to plant both times scheduled before and after hurricane. Governor/MDEQ Emergency Order 5062 05 covers facilities rendered inoperable for monitoring required by permits.

PERIODIC LEAK MONITORING REPORT

July 1, 2005 through December 31, 2005

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:**

   - No 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
   - 103 total valves (V_T=103) 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 5 times for a total of 15 pumps (P_T=15) 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
   - 94 total connectors (C_T=94) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Dec Total
Valves Monitored:							
KYMENE	0	0	54	0	49	0	103
Total	0	0	54	0	49	0	103
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%

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Dec Total
Pumps Monitored:							
KYMENE	3	0	3	3	3	3	15
Total	3	0	3	3	3	3	15
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%

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Dec Total
Connectors Monitored:							
KYMENE	0	0	27	0	67	0	94
Total	0	0	27	0	67	0	94
Connectors Leaking:							
KYMENE	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 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%

SEMI-ANNUAL REPORT MONITORING RESULTS

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Dec Total
Agitator Monitored:							
KYMENE	1	0	1	1	1	1	5
Total	1	0	1	1	1	1	**5**
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%**

	JUL	AUG	SEPT	OCT	NOV	DEC	Jul-Dec Total
Pressure Relief Device							
KYMENE	0	0	1	0	0	0	1
Total	0	0	1	0	0	0	**1**
Pressure Relief Device							
KYMENE	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	
6/4/05	7:30 AM			[illegible]	✓			✓		✓	Plant shutdown
		6/6/05	11:01 AM	LO	✓			✓		✓	PLANT START-UP 19.85 GPM
6/9/05	12:29 AM			JB	✓			✓		✓	Plant shut down
		6/9/05	9:10 AM		✓			✓		✓	PLANT START-UP
06/10/05	2:20 AM			RR	✓			✓		✓	PLANNED SHUT DOWN
		6/13/05	7:38 AM	JH	✓			✓		✓	Plant Start up 12.22
06/18/05	5:30 AM			MG	✓			✓		✓	PLANT SHUT DOWN
		6/22/05	1:22 pm	JB	✓			✓		✓	Plant start up 14.80 GPM
6/23/05	8:12 pm			Zm	✓			✓		✓	planned shut down
		6/23/05	8:31 pm	Zm	✓			✓		✓	planned start up 16.34 GPM
7/07/05	2:47 AM			Zm	✓			✓		✓	planned shut down!
		7/7/05	4:21	JB	✓			✓		✓	Plant startup 16.89 GPM
07/08/05	3:45 AM			RB	✓			✓		✓	SHUT DOWN
		7/11/05	5:19 pm	DB	✓			✓		✓	Started up scrubber, water flow 14.09 GPM
07/16/05	12:00 pm			RB	✓			✓		✓	SHUT DOWN
		7/18/05	6:06 AM	DB	✓			✓		✓	Started up scrubber, water flow 15.39 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	
11-1	9:21 PM			JB	✓			✓		✓	Plant shut down
7/25/05	7:00 PM	7/25/05	2:55 PM	DB	✓			✓		✓	PLANT START up
7/30/05	9:14 PM			E.B.	✓			✓		✓	Plan Shut down
8/1/05		8/1/05	7 AM	SH	!			!		!	PLANT START UP
8/6/05	6:30 AM			M.U.	✓			✓		✓	PLANT SHUT DOWN
		8/8/05	7 AM	E.B.	✓			✓		✓	Start up Scrubber water flowrate 15 GPM 17.33
8/13/05	2:17 AM			Zm	✓			✓		✓	Planned Shut down.
		8/15/05	7 AM	M.U.	✓			✓		✓	PLANT START UP SCRUBBER GPM 16.5
08/20/05	7:23				✓			✓		✓	SHUT DOWN
		8/22/05	7:12 pm	Zm	✓			✓		✓	Planned Start up GPM SCRUBBER → 15.74
08/24/05	7:45 pm			R.B.	✓			✓	✓		POWER FAILURE
		8/24/05	7:55 p.m	E.B.	✓			✓		✓	Power on start up
8/26/05	8:58 PM			D.B.	✓			✓		✓	Planned shut down
		9/1/05	8:06 AM	D.B.	✓			—		✓	Started up Scrubber, water flow 14.41 GPM
9/5/05	10:27 AM			D.B.	✓			—		✓	Shut down Scrubber for repairs, reactor on down
		9/8/05	3:57 pm	JB	✓			✓		✓	Start back after scrubber was repaired 16.34 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	
9/16/05	10:31 AM			JB	✓			✓		✓	Shut down for Weekend
				JB	✓			✓		✓	Start up for week.
[redacted]	9:23 pm			JB	✓			✓		✓	Shut down weekend
				JB	✓			✓		✓	Start up for week
9/[illegible]/05	6:45 AM			EoP	✓			✓		✓	Plan Shut down
9/		9/26/05	10:18 AM	MG	✓			✓		✓	START up FOR WEEK
9/30/05	4:48 pm			Zm	✓			✓		✓	Shut down for weekend
		10/3/05	1:44 pm	JB	✓			✓		✓	Start up for Week
10/5/05	7:42 pm			Zm	✓			✓	✓		Seal Leak on Sine Pump!
10/6/05	~~2pm 5:17 pm~~		5:17 pm	Zm	✓			✓		✓	Seal Repaired started up!
	~~10/6/05~~										
10/8/05	5:00 AM			R.B	✓			✓		✓	PLAN SHUT DOWN
		10/10/05	3:15 pm	R.B.	✓			✓		✓	START UP
10/14/05				R.B	✓			✓		✓	PLAN SHUT DOWN
		10/17/05	2:36 PM	D.B	✓			✓		✓	Started up Scrubber, water flow 11632 GPM
10/[illegible]/05	5:14 AM				✓			✓		✓	Planned shut 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.
		10/4/05	3:00 PM	PB	✓			✓		✓	Started up Scrubber water flow 14.30
10/29/05	3:54 AM			JB	✓			✓		✓	Weekend Shutdown
~~10/31/05~~		10/31/05	2:05 PM	RB	✓			✓		✓	Started up Scrubber water flow 12.51
11/5/05	2:AM			E.P.	✓			✓		✓	Plan Shut down
~~11/7/05~~		11/7/05	7 AM	SH	✓			✓		✓	start scrubber water flow 14.25
11/14/05	2:05 AM	~~11/14/05~~		MG	✓			✓		✓	PLANT SHUT DOWN
		11/14	5:07 PM	JB	✓			✓		✓	Plant startup
	7:?? AM			JB	✓			✓		✓	Scheduled to work on scrubber.
		11/17	10:26 AM	JB	✓			✓		✓	Started back after flushing out scrubber
11/18/05	3:16 PM			ZM	✓			✓		✓	Shut down for weekend.
		11/21/05	6:35 AM	MG	✓			✓		✓	START UP PLANT SCRUBBER 14.21
11/24/05	4:07 PM			ZM	✓			✓		✓	Shut down for Holiday
		11/28/05	6:49 AM	MG	✓			✓		✓	START UP PLANT SCRUBBER 12.74
11/30/05	5:31			ZM	✓			✓		✓	Shut down for weekend.
		12/2/05	6:04 AM	ZM	✓			✓		✓	Start up for week 14.17 gpm

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

12/3/05 ~~2:05 PM~~ ✓ ✓ ✓ PLANNED SHUT DOWN R.B.

~~12/04/05~~ 5 ~~6:20 AM~~ 12/04/05 6:20 AM R.B. ✓ ✓ ✓ START UP

12/7/05 2:30 PM 12/14/05 7 AM SH ✓ ✓ ✓ Plan Shut down

Plan to start up

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 and provide comments or Action(s) taken during SSM. Include scrubber water flowrate (gpm) at Startup.
12/24/05	3:24 AM			JB	✓			✓		✓	Weekend shutdown
[illegible]		[illegible]	[illegible]	[illegible]	✓			✓		✓	[illegible]
12/31/05	5:55 AM			[illegible]	✓			✓		✓	[illegible]
		[illegible]	[illegible]	[illegible]	✓			✓		✓	PLANT SHUT DOWN
[illegible]	[illegible]				✓			✓		✓	[illegible]
		1/6/06	6:30 AM	[illegible]	✓			✓		✓	Plant shut down
1-14-06	8:30 AM			E.P.	✓			✓		✓	Pump shut down.
		1/16/06	8 AM	T.R.	✓			✓		✓	Startup Scrubber water flow rate 14.95 gpm

For a , 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.17 and 5C4(a)(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.

On May 5, 2005, Polyether Polyol Production (40 CFR 63 Subpart PPP) was shutdown.

The Ethylene Oxide storage tank was properly cleaned by venting any residual material remaining in the empty tank after May 5,2005, to the scrubber. The EO Packed Bed Scrubber (AF-004) operation was shut down on July 6, 2005.

Deviations from Permit Requirements

DEVIATIONS FROM PERMIT REQUIREMENTS

January 1, 2005 through June 30, 2005

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:

None

HURRICANE KATRINA- Contractor performing LDAR monitoring was unable to travel to plant both times scheduled before and after hurricane. Governor/MDEQ Emergency Order 5062 05 covers facilities rendered inoperable for monitoring required by permits.

Forrest Co

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

July 30, 2005

RECEIVED
AUG - 8 2005
Dept. of Environmental Quality
Office of Pollution Control

CERTIFIED MAIL # 7004 0750 0001 6606 7834

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
1/01/05-6/30/05

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.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending June 30, 2005. 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, 2005, to June 30, 2005.

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.

On May 5, 2005, Polyether Polyol Production (40 CFR 63 Subpart PPP) was shutdown. The production unit, consists of Emission Point AF-000(EO): The Rosin Amine Derivatives (RAD) process area that is in the Ethylene Oxide (EO) service. Equipment in the process area includes reactors, tanks, vents, piping, etc. Emissions occur from associated equipment and from fugitive losses. Emission Point AF-004(EO): The RAD process vents in EO service equipped with a packed bed sulfuric acid scrubber. Emission Point AF-005(EO): The RAD Process Area 18,550 gallon Ethylene Oxide (EO) Pressurized Storage Tank (Hercules Reference No. RA-50). (Pressurized in excess of 204.9 kilopascals).

There are currently no plans to operate this unit again in the future. Therefore, no permit requirements will be included in the next semi-annual reporting period. The HAP of concern, Ethylene Oxide, is no longer used by Hercules Incorporated.

Hercules Incorporated, does continue to facilitate receiving Tank Car shipments of Ethylene Oxide for Zeon Chemicals Mississippi Incorporated.

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

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, 2005 through June 30, 2005, 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.B18, and 5.C.3, monthly records of the type 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 2005

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	0	0	0	0	0	0							0
AF001	RAD nat. gas Dowtherm boiler	0	2,016	497	0	0	0							2,513
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0							0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0							0
AM001	No. 5 package boiler	0	0	0	0	0	0							0
AM002	No. 6 package boiler	0	0	0	0	0	0							0
AM003	No. 7 package boiler	10,763	8,820	10,181	8,796	6,483	5,898							50,941
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0							0
T5ngas		10,763	10,836	10,678	8,796	6,483	5,898							53,454

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).
The weekly maintenance check was not properly documented the weeks of 2/14 and 2/28 and is noted in the Deviation section. The historical electronic data base for the scrubber water flow rate is available.

Adipic Acid Dust Shaker (AA-002)

As required by 5.B.4, weekly operator and mechanic maintenance checks were performed on the Adipic Acid Dust Shaker (AA-002).

As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.194	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.136	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
		2.170		2.017	0.000	4.187
		2.113		1.831	0.000	3.944
		2.056		1.646	0.000	3.702
		1.999		1.460	0.000	3.459
		1.412		1.277	0.000	2.689
		0.888		1.095	0.000	1.983
		0.677		0.901	0.000	1.578
		0.490		0.717	0.000	1.207
		0.354		0.536	0.000	0.890
		0.112		0.358	0.000	0.470
		0.056		0.179	0.000	0.235
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000

AKD Process Area

AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).
The scrubber weekly operator maintenance check was not properly documented the week of 2/28 and is noted in the Deviation section. The historical electronic data base for the scrubber water flow rate is available.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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.4, 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.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Process Melter (AC-004)

The Melter did not operate during this reporting period.

RAD Process Area

RAD PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Ammonia Packed Bed Scrubber (AF-002)

As required by 5.B.4, 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.

As required by 5.B.7, 5.B.10, and 5.B.11, the scrubbing liquid flow rate and the scrubber effluent were monitored as required.

On May 5, 2005, Polyether Polyol Production (40 CFR 63 Subpart PPP) was shutdown.

There are currently no plans to operate this unit again in the future. Therefore, no permit requirements will be included in the next semi-annual reporting period. The HAP of concern, Ethylene Oxide, is no longer used by Hercules Incorporated.

Hercules Incorporated, does continue to facilitate receiving Tank Car shipments of Ethylene Oxide for Zeon Chemicals Mississippi Incorporated.

The Ethylene Oxide storage tank has been properly cleaned by venting any residual material remaining in the empty tank to the scrubber. The EO Packed Bed Scrubber (AF-004) operation was shut down on July 6, 2005.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168
Jan-05	0.211	1.721	0.194	1.852	0.405	3.573
Feb-05	0.187	1.908	0.184	2.036	0.371	3.944
Mar-05	0.138	2.044	0.181	2.217	0.317	4.261
Apr-05	0.242	2.229	0.178	2.212	0.420	4.441
May-05	0.056	2.228	0.179	2.209	0.235	4.437
Jun-05	0.056	2.227	0.179	2.203	0.235	4.430
		2.170		2.017	0.000	4.187
		2.113		1.831	0.000	3.944
		2.056		1.646	0.000	3.702
		1.999		1.460	0.000	3.459
		1.412		1.277	0.000	2.689
		0.888		1.095	0.000	1.983
		0.677		0.901	0.000	1.578
		0.490		0.717	0.000	1.207
		0.354		0.536	0.000	0.890
		0.112		0.358	0.000	0.470
		0.056		0.179	0.000	0.235
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000
		0.000		0.000	0.000	0.000

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber (AD-001)

Operator and mechanic maintenance checks were performed on the Aduct reactor scrubber

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, 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

January 1, 2005 through June 30, 2005

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:**

   - No 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
   - 99 total valves (V_T=99) 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
   - 168 total connectors (C_T=168) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
KYMENE	49	0	1	0	0	49	99
RAD	0	0	85	0	0	0	85
Total	49	0	86	0	0	49	**184**
Valves Leaking:							
KYMENE	0	0	0	0	0	0	0
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:							
KYMENE	3	3	3	3	3	3	18
RAD	3	3	3	3	3	0	15
Total	6	6	6	6	6	3	**33**
Pumps Leaking:							
KYMENE	0	0	0	0	0	0	0
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:							
KYMENE	168	0	0	0	0	0	168
RAD	440	0	0	0	0	0	440
Total	608	0	0	0	0	0	**608**
Connectors Leaking:							
KYMENE	0	0	0	0	0	0	0
RAD	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

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Screwed Connectors							
KYMENE	1	0	0	0	0	0	1
Total	1	0	0	0	0	0	**1**
Screwed Connectors							
KYMENE	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%**

	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							
KYMENE	2	0	0	0	0	0	2
RAD	10	0	0	0	0	0	10
Total	12	0	0	0	0	0	**12**
Pressure Relief Device							
KYMENE	0	0	0	0	0	0	0
RAD	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	
		12/13/04	7:25AM	E.P.	✓			✓		✓	Startup Scrubber water flowrate 19.20 gpm.
1/1/05	4:52AM			D.B	✓			✓		✓	Plan Shut down
1/		1/3/05		ZM	✓			✓		✓	~~Start up Scrubber water flow~~ 14.05 gpm
1/05/05	7:00pm			ZM	✓		~~ZM~~ ✓	✓	✓		Sinking seal failure
~~1/06/05~~ ZM		1/06/05		ZM	✓			✓		✓	~~Start up Scrubber water flow rate 14.3 gpm~~
1/15/05	4:00AM			E.P.	✓			✓		✓	Plan Shut down
~~1/17/05~~	JB										
~~1/17/05~~	JB										
		1/17/05	9:00 A.M.	JB	✓			✓		✓	Monday Startup
1/22/05	12:12AM			D.B	✓			✓		✓	Plan Shut down
		1/24/05	11:44 AM	JH	✓			✓		✓	Start up scrubber water flow rate 14.66 gpm
01/29/05	1:15 AM				✓			✓		✓	PLAN SHUT DOWN
~~1/30/05~~		1/31/05	6:25 AM	DB	✓			✓		✓	START up scrubber water flow rate 15.15
JB ~~10:54 pm~~											
2/4/05	10:54 pm				✓			✓		✓	Weekend shutdown
2		2/7/05	11:30 AM	DB	✓			✓		✓	START up WATER FLOW RATE 16.03

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

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	
2/2/05	10:20 pm			E.P.	✓			✓		✓	Plan Shut down; SCRUBBER
	~~11:45~~ DP	2/14/05	9:20 AM	OB	✓			✓		✓	~~PLANNED~~ START UP 11.85 GPM
2/19/05	5 +/- AM			JB	✓			✓		✓	
		2/21/05	8:35 AM	OD	✓			✓		✓	START UP SCRUBBER 13.45 GPM
2/25/05	9:00 pm			OD	✓			✓		✓	Plan shut down
		2/28/05	10:01 AM	JB	✓			✓		✓	Startup scrubber 14.21
3/5/05	3:30 AM			D.B.	✓			✓		✓	Planed shut down
		3/7/05	8:00 AM	SH	✓			✓		✓	Start up 11.87
03/12/05	5:15 AM			RD	✓			✓		✓	PLANNED SHUT DOWN
3/14/05	~~6:00 AM~~ DP	3/14/05	6:13 AM	OD	✓			✓		✓	START UP 16.45
3/19/05	3:30 pm			JB	✓			✓		✓	Planned shutdown
3/		03/21/05	10:10 AM	RJB	✓			✓		✓	PLANNED START UP
3/24/05	2:10 pm			OD	✓			✓		✓	Plan shutdown
		3/25/05	5:00 AM	OD	✓			✓		✓	Plan start up
04/01/05	5:30 AM	~~04/01/05~~		R.B.	✓			✓		✓	PLAN SHUT DOWN
	~~11:05 AM~~	04/01/05	11:05 AM	R.B.	✓			✓		✓	START UP 19.87

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	
4/8/05	6:56 pm			JB	✓			✓		✓	Plan Shutdown
		04/11/05	12:11 pm	R.B	✓			✓		✓	START UP
4/16/05	3:27 pm			JB	✓			✓		✓	Plan Shutdown
		4/18/05	6:25 AM	M.G.	✓			✓		✓	START UP 18.31 GPM
4/23/05	12:25 pm			JB	✓			✓		✓	Plan Shut down
~~4/25/05~~	~~7:55 pm~~	4/25/05	7:55 pm	SH	✓			✓		✓	Start up 19.5 GPM
4/30/05	6:00 AM			M.G.	✓			✓		✓	PLAN SHUTDOWN
		05/02/05	2:00 am	R.B.	✓			✓		✓	START UP
5/4/05	11:00 pm				✓			✓		✓	planned shut down
		5/7/05	7:30 am	ZM	✓			✓		✓	planned Start up 19.36 Gpm
5/14/05	2:35 a.m			RB	✓			✓		✓	Plan shutdown
		05/16/05	4:30 pm	R.B	✓			✓		✓	START UP
5/21/05	3:50 pm			DB	✓			✓		✓	Planned Shutdown
		05/23/05	10:00 AM	R.B.	✓			✓		✓	START UP
5/28/05	3:15 pm			DB	✓			✓		✓	PLANNED SHUTDOWN
		5/31/05	7:12 AM	DB	✓			✓		✓	Start up scrubber, 15.81 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	
6/4/05	7:30 AM			DH	✓			✓		✓	Plant shutdown
		6/6/05	11:01 AM	DO	✓			✓		✓	PLANT START-UP 14.85 GPM
6/9/05	12:29 AM			JB	✓			✓		✓	Plant shut down
		6/9/05	9:10 AM		✓			✓		✓	PLANT START UP
06/11/05	2:20 AM			RR	✓			✓		✓	PLANNED SHUT DOWN
		6/13/05	7:30 AM	JH	✓			✓		✓	Plant Start up 12.22
06/18/05	5:30 AM			MG	✓			✓		✓	PLANT SHUT DOWN
		6/24/05	1:22 P.m	JB	✓			✓		✓	Plant start up 14.80 GPM
6/24/05	7:11 Pm			Zm	✓			✓		✓	planned shut down
		6/27/05	8:31 PM	Zm	✓			✓		✓	planned start up 16.34 GPM
7/07/05	2:47 AM			Zm	✓			✓		✓	planned shut down
		7/5/05	4:21	JB	✓			✓		✓	Plant Startup 16.89 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.17 and 5C4(a)(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.

On 3/31/05, a LDAR leak on the Rx feed pump packing, (tag #5612 suction flange, tag #5609 discharge flange), was detected. The pump was shut down and the packing tightened on 3/31/05. The 1st attempt repair was successfully completed with monitoring on 4/5/05.

On 5/4/05, a LDAR leak on the Rx feed pump packing, (tag #5612 suction flange, tag #5609 discharge flange), was detected. The pump was shut down and the packing tightened on 5/4/05. The 1st attempt repair was successfully completed with monitoring on 5/9/05.

PERIODIC LEAK MONITORING REPORT

January 1, 2005 through June 30, 2005

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
   - 85 total valves (V_T=85) 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 5 times for a total of 15 pumps (P_T=15 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
   - 440 connectors (C_T=440) 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.

SEMI-ANNUAL REPORT MONITORING RESULTS

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Valves Monitored:							
KYMENE	49	0	1	0	0	49	99
RAD	0	0	85	0	0	0	85
Total	49	0	86	0	0	49	**184**
Valves Leaking:							
KYMENE	0	0	0	0	0	0	0
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:							
KYMENE	3	3	3	3	3	3	18
RAD	3	3	3	3	3	0	15
Total	6	6	6	6	6	3	**33**
Pumps Leaking:							
KYMENE	0	0	0	0	0	0	0
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:							
KYMENE	168	0	0	0	0	0	168
RAD	440	0	0	0	0	0	440
Total	608	0	0	0	0	0	**608**
Connectors Leaking:							
KYMENE	0	0	0	0	0	0	0
RAD	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

	JAN	FEB	MAR	APR	MAY	JUN	Jan-Jun Total
Screwed Connectors							
KYMENE	1	0	0	0	0	0	1
Total	1	0	0	0	0	0	1
Screwed Connectors							
KYMENE	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%

	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							
KYMENE	2	0	0	0	0	0	2
RAD	10	0	0	0	0	0	10
Total	12	0	0	0	0	0	12
Pressure Relief Device							
KYMENE	0	0	0	0	0	0	0
RAD	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
--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	
											never shut down or went out of control limits.
11-9-04	2:45pm			LmH	✓			✓	✓		E.O. Scrubber was shut down to replace pH probe.
											(Read-out was below zero.) pH probe was replaced, tank
											level solenoid switch was repaired, and tank-to-stack
											gasketing was reinforced.
		11-9-04	5:30pm	LmH	✓			✓		✓	E.O. Scrubber back on line within control limits.
		[illegible]		[illegible]	✓			✓		✓	[illegible]
[illegible]	[illegible]			[illegible]	✓			✓		✓	[illegible]
		[illegible]		[illegible]	✓			✓		✓	[illegible]
				[illegible]	✓			✓			[illegible]
		12/16/04	10:00 AM	[illegible]	✓			✓		✓	[illegible]
12-15-04	11:00PM			LmH	✓			✓	✓		pH reading below zero. Surfactant Unit had not started up.
12-16-04	10:00AM			LmH	✓			✓		✓	Restarted E.O. Scrubber.
		[illegible]	11:00AM	LmH	✓			✓		✓	Shut down E.O. Scrubber. Surfactant Unit already down.
[illegible]				[illegible]	✓			✓		✓	[illegible]

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	
5-10-05											
		5-19-05	3:15 PM	LMH	✓			✓		✓	Shut down E.O. Scrubber
5-20-05	8:30 AM			LMH	✓			✓		✓	Started up E.O. Scrubber
		5-20-05	1:45 PM	LMH	✓			✓		✓	Shut down E.O. Scrubber
5-22-05	10:15 AM	5-23-05		LMH	✓			✓		✓	Started up E.O. Scrubber

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	
								✓			
7/6/05	10. AM				✓			✓		✓	SHUT DOWN SCRUBBER
											RA 50 - EO STORAGE TK OPENED
											& FOUND TO BE BONE DRY
											RA50 VENT GASES TESTED
											& FOUND TO BE < 1.0 ppm EO
											ON 7/5/05 GFG

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, 2005 through June 30, 2005

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 the weeks of 2/14 and 2/28, as required by 5.B.4, for scrubber (AA001), The weekly maintenance check was not properly documented and is noted in the Deviation section. The historical electronic data base for the scrubber water flow rate is available.

On the week of 2/28, as required by 5.B.4, for scrubber (AB001), The weekly operator maintenance check was not properly documented and is noted in the Deviation section. The historical electronic data base for the scrubber water flow rate is available.

Forrest Co

HERCULES

Hercules Incorporated
613 West 7th Street
Hattiesburg, MS 39401
(601) 545-3450
Fax: (601) 584-3226
www.herc.com

January 21, 2005

CERTIFIED MAIL # 7004 0750 0001 6606 7650

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

RECEIVED
JAN 21 2005
DEQ

Re: Hercules Incorporated
Facility No. 0800-00001
Title V Semi-Annual Report
7/01/04-12/31/04

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(a)(6), 5.C.4.(a)(7) [40CFR63.1439(e)(6) and 40CFR63.182(d)], 5.B.17, 5.C.3, 5.C.5, and 5.C.6, attached is the required summary data for the semi-annual reporting period ending December 31, 2004. 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, 2004, to December 31, 2004.

On August 03, 2004, a modified Title V permit was issued. The modified permit conditions contained some changes and this semi-annual report period addresses both the old permit reporting and the modified permit reporting accordingly.

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.

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

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 July 1, 2004 through December 31, 2004, 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.18, and 5.C.3, monthly records of the type 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 2004

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	0	0	0	0	0	0	0	0	0	0	0	0	0
AF001	RAD nat. gas Dowtherm boiler	3,986	1,777	0	0	0	0	0	0	0	0	0	1,272	7,035
AG001	HRA nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AJ001	Rosin dist. nat. gas Dowtherm boiler	0	0	0	0	0	0	0	0	0	0	0	0	0
AM001	No. 5 package boiler	33,631	2,108	0	0	0	0	0	0	0	0	0	0	35,739
AM002	No. 6 package boiler	0	18,425	13,900	8,300	3,050	0	0	0	0	0	0	0	43,675
AM003	No. 7 package boiler	N/A	N/A	N/A	N/A	2,973	8,440	7,975	7,913	7,543	8,508	9,892	12,406	65,649
AN001	Carbon Reg.nat. gas Furnace	0	0	0	0	0	0	0	0	0	0	0	0	0
T5ngas		37,617	22,310	13,900	8,300	6,023	8,440	7,975	7,913	7,543	8,508	9,892	13,678	152,099

Kymene Process Area

KYMENE PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Kymene Reactor Scrubber (AA-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Kymene Reactor Scrubber (AA-001).
The weekly maintenance check was not documented the week of 12/6 on the maintenance log sheet. The historical electronic data base for the scrubber water flow rate during this week was retrieved and put in the log sheet records. An example is included in this section.

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).

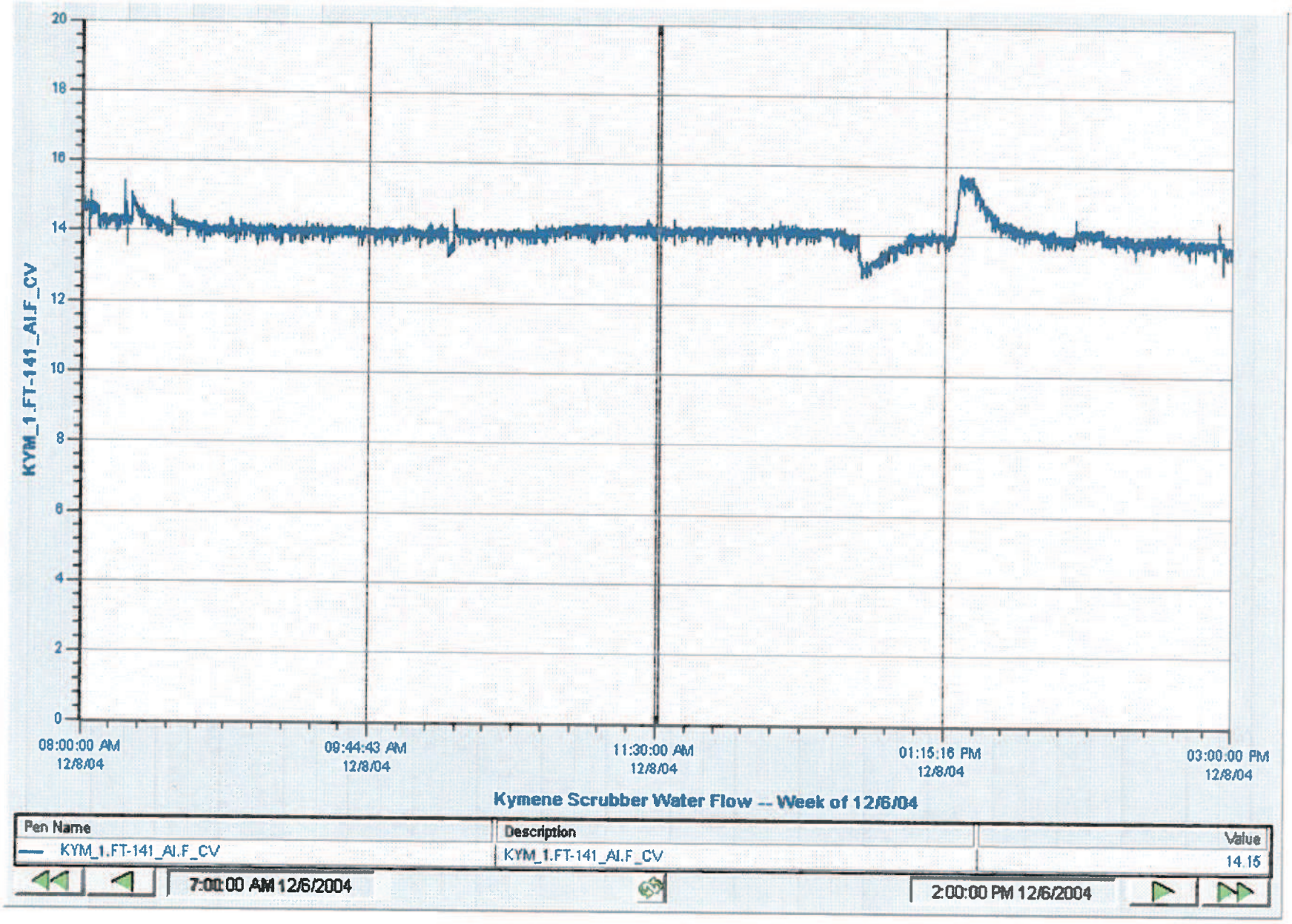
As required by 5.B.19, inspections for visible emissions (VE) were performed in accordance with 5.B.19 protocol.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

TONS

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
Jun-04	0.057	0.171	0.185	0.550	0.242	0.721
Jul-04	0.057	0.228	0.186	0.736	0.243	0.964
Aug-04	0.057	0.285	0.186	0.922	0.243	1.207
Sep-04	0.057	0.342	0.185	1.107	0.242	1.449
Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168


KYM_1.FT-141_AI.F_CV
20
18
16
14
12
10
8
6
4
2
0
08:00:00 AM
12/8/04
09:44:43 AM
12/8/04
11:30:00 AM
12/8/04
01:15:16 PM
12/8/04
03:00:00 PM
12/8/04
Kymene Scrubber Water Flow -- Week of 12/6/04
Pen Name
Description
Value
KYM_1.FT-141_AI.F_CV
KYM_1.FT-141_AI.F_CV
14.15
7:00:00 AM 12/6/2004
2:00:00 PM 12/6/2004

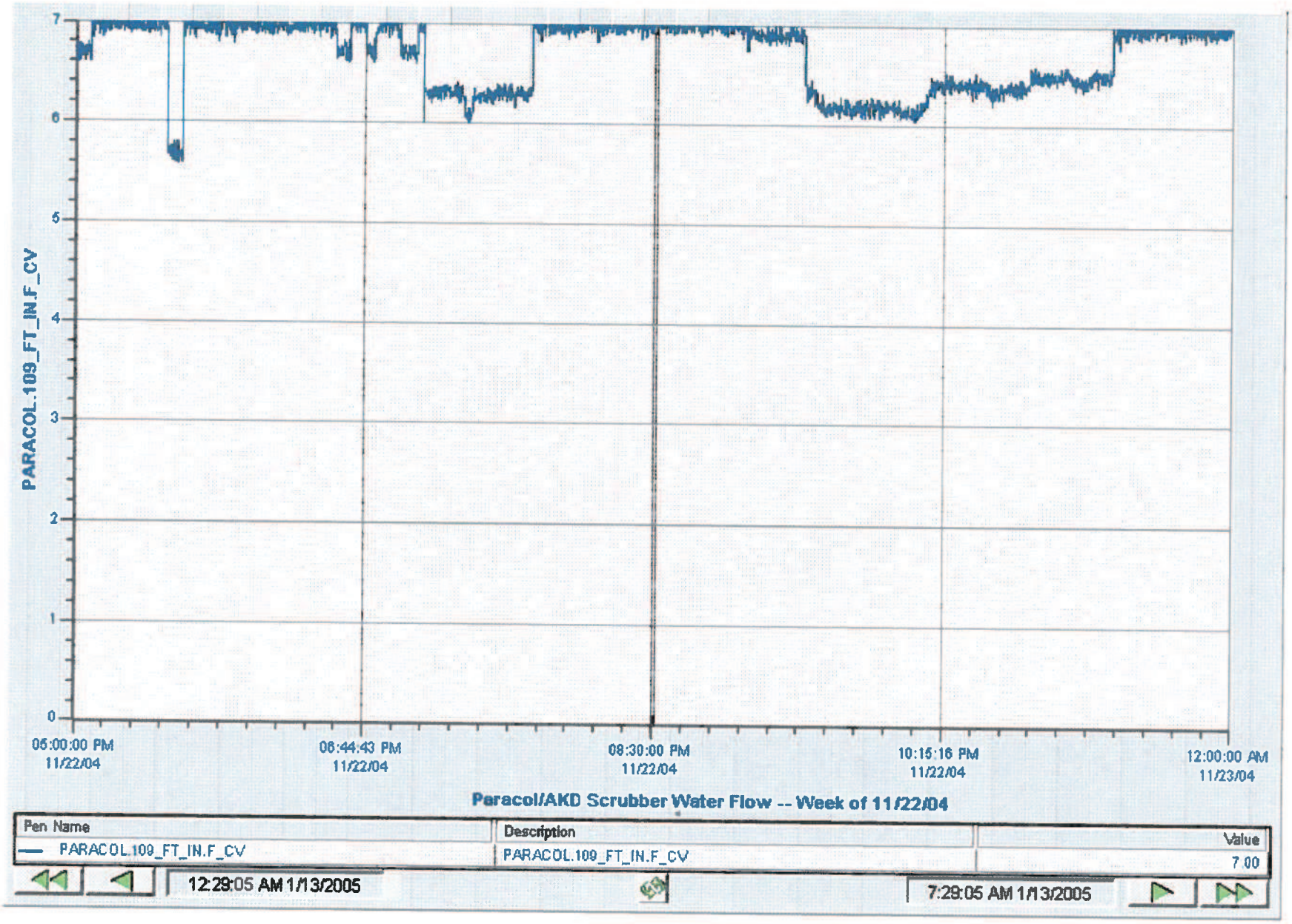
AKD Process Area

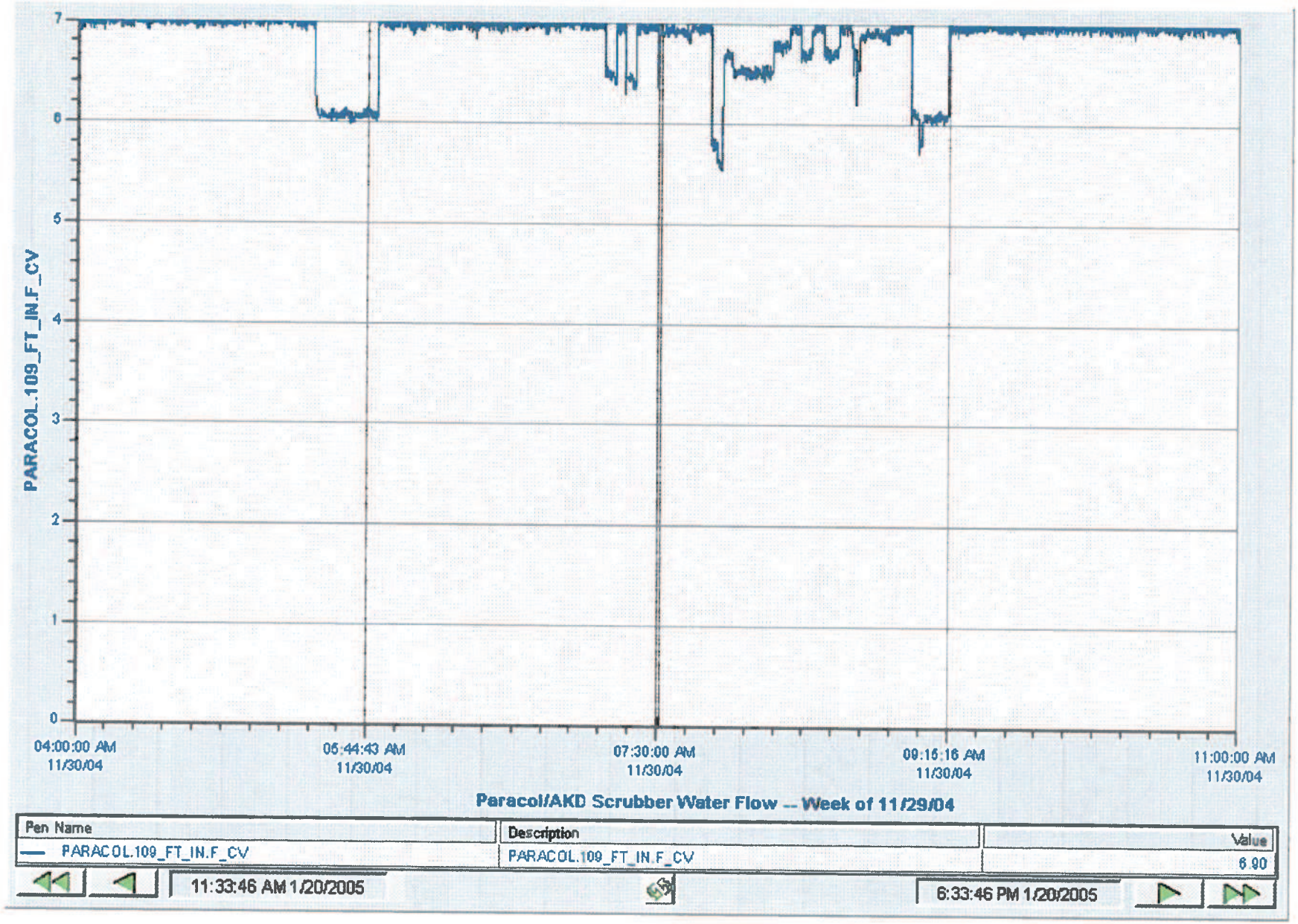
AKD PROCESS AREA REPORT SUMMARY

Paracol Water Scrubber (AB-001)

As required by 5.B.4, weekly operator maintenance checks were performed on the Paracol Water Scrubber (AB-001).
The weekly maintenance check was not documented the weeks of 11/22 and 11/29 on the maintenance log sheet. The historical electronic data base for the scrubber water flow rate during this week was retrieved and put in the log sheet records. An example is included in this section.

As required by 5.C.6 (and 5.A.4 data reporting), there were no abnormal visible emissions recorded during this reporting period.


PARACOL.109_FT_IN.F_CV
7
6
5
4
3
2
1
0
05:00:00 PM
11/22/04
06:44:43 PM
11/22/04
08:30:00 PM
11/22/04
10:15:16 PM
11/22/04
12:00:00 AM
11/23/04
Paracol/AKD Scrubber Water Flow -- Week of 11/22/04
Pen Name
Description
Value
PARACOL.109_FT_IN.F_CV
PARACOL.109_FT_IN.F_CV
7.00
12:29:05 AM 1/13/2005
7:29:05 AM 1/13/2005


PARACOL.109_FT_IN.F_CV
7
6
5
4
3
2
1
0
04:00:00 AM
11/30/04
05:44:43 AM
11/30/04
07:30:00 AM
11/30/04
09:15:16 AM
11/30/04
11:00:00 AM
11/30/04
Paracol/AKD Scrubber Water Flow -- Week of 11/29/04
Pen Name
Description
Value
PARACOL.109_FT_IN.F_CV
PARACOL.109_FT_IN.F_CV
6.90
11:33:46 AM 1/20/2005
6:33:46 PM 1/20/2005

HRA Process Area

HRA PROCESS AREA REPORT SUMMARY

HRA Water Scrubber (AG-003)

As required by 5.B.4, 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.4, 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.

Poly-Pale Process Area

POLY-PALE PROCESS AREA REPORT SUMMARY

Poly-Pale Process Melter (AC-004)

The Melter did not operate during this reporting period.

RAD Process Area

RAD PROCESS AREA REPORT SUMMARY

As required by 5.B.20, for the entire facility, calculations and records for the tons of individual hazardous air pollutant (HAP) emitted each month and the total individual HAP emissions for each consecutive 12-month period were performed. Calculations and records for the total combined HAP's emitted for each consecutive 12-month period were performed.

As required by 5.C.5, for all hazardous air pollutant (HAP) emissions, monthly individual HAP emissions and the individual and combined HAP emissions for each consecutive 12-month period are included in this section.

Ammonia Packed Bed Scrubber (AF-002)

As required by 5.B.4, 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. The Scrubber did not operate during this reporting period.

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

As required by 5.B.4, 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.

On 9/23/04, an oral notification was reported as an upset that occurred on 9/22/04 and was also reported by letter to MDEQ on 9/28/04.

As required by 5.B.7, 5.B.10, and 5.B11, the scrubbing liquid flow rate and the scrubber effluent pH were monitored as required.

(MONTHLY) and (CONSECUTIVE 12-MONTH) HAP emissions, Individual and Conbined

TONS

DATE	ETHYLENE OXIDE		EPICHLOROHYDRIN		TOTAL	
M/Y	MONTHLY	12-MONTH	MONTHLY	12-MONTH	MONTHLY	12-MONTH
Apr-04	0.057	0.057	0.183	0.183	0.240	0.240
May-04	0.057	0.114	0.182	0.365	0.239	0.479
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Oct-04	0.057	0.399	0.186	1.293	0.243	1.692
Nov-04	0.587	0.986	0.183	1.476	0.770	2.462
Dec-04	0.524	1.510	0.182	1.658	0.706	3.168

Neuphor Process Area

NEUPHOR PROCESS AREA REPORT SUMMARY

Adduct Reactor Scrubber

Operator and mechanic maintenance checks were performed on the Adduct Reactor Scrubber.

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, 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 11/06/04, a leak on Rx 401 pump, tag # 6183, was detected and repaired by replacing the pump seal. This seal replacement, as compaired to a LDAR "repair" attempt, does not require a 1st attempt repair(resampling) within 5 days.

On 12/09/04, a sensory emission, during routine LDAR monitoring, was detected on the Epichlorohydrin storage tank PVR devise. The brief emission, by design, had stopped upon recheck.

PERIODIC LEAK MONITORING REPORT

July 1, 2004 through December 31, 2004

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:**

   - No 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
   - 105 total valves (V_T=105) 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.

```
ERROR: typecheck
OFFENDING COMMAND: get

STACK:

/CSD
/24
1
```