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YTHE COUNTY AND YAS MANACEMENT DISTRICT Martinez, CA 94553-0071

Martinez Refinery PO Box 711 Tel (925) 313-3000 Fax (925) 313-3065

CERTIFIED MAIL

January 20, 2012

Director of Compliance and Enforcement Bay Area Air Quality Management District 939 Ellis Street San Francisco, CA 94109 Attn: Title V Reports

Subject:

Semi-Annual Title V Deviation Summary Report

July 1, 2011 - December 31, 2011

Dear Mr. Bateman:

Please find Shell Oil Products US, Martinez Refinery's Semi-Annual Title V Deviation Summary report for the period of July 1, 2011 through December 31, 2011. This report includes a summary of the inoperable monitors for the second half of 2011.

The refinery's Responsible Official, Paul Gabbard, has signed the reports.

If you have any questions regarding this matter, please contact Kathy Wheeler at (925) 313-3722.

Sincerely yours,

Teresa Makarewicz

Manager, Health, Safety, Security and Environmental Affairs Department

Shell Oil Products US, Martinez Refinery

Teresa & Mahareway

Attachments

Contact: Liz Rosales	City: Martinez State: CA Zip Code: 94553-0071	Facility Address: 3485 Pacheco Blvd	A0011 Shell Oil Products US Martinez Refinery		
Title: Environmental Speciali Phone: (925) 313-3857	City: Martinez State: CA Zip Code: 94553-0071	Mailing Address PO Box 711	ez Refinery	From 7/1/2011 to 12/31/2011	6 Month Deviation Summary Report

Title V deviations for the reporting period are summarized below:

Source Number: 4180 Source Number: 4180 Permit: Abatement Device: A4180 AQMD: Regulation 9 Rule 1 Section 30		Fr
Permit:	ement Device: A4180	Stopped: 7/8/2011 2:00 AM Ongoing Event Abatem
May liave resulted in a violation to .	ource Number: 4180	Event Started: 7/8/2011 1:00 AM Sour
Mar. 6000 (000 150 150 150 150 150 150 150 150 150	ļ.	

Probable Cause: SO2 increased suddenly while slowly warming up the SRU 4 sulfur pit spare eductor after putting it back on line after normal maintenance.

Corrective actions or preventative steps taken:

The eductor was quickly re-isolated.

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		Corrective actions or preventative steps taken: The units were isolated and the flaring stopped.
die to an instrumentation problem	Mt. View H2S Ground Level Monitor 1AI1471, showed an indicated excess of 60 ppb in a 3 min average. The excess occurred during a cudden flating except at the LOB flate due to the incontrolled chutdown of several units due to an instrumentation problem.	
May have resulted in a violation of: Permit: AQMD: Regulation 9 Rule 2 Section 30 Other:	Source Number: 1A1471 Abatement Device: Emission Point:	Event Started: 7/13/2011 1:10 AM
us improvement and believe it is important nphasized with operations, maintenance ensure all open-ended lines are closed.	We continue to investigate the cause for lines being left open ended. All of the open ended lines were capped or plugged. We continue to voluntarily audit our program to ensure continuous improvement and believe it is important to continue to audit in order to maintain a robust LDAR program. The importance of closing any open ended line is emphasized with operations, maintenance and project personnel. With several hundred thousand components in the refinery, it is a continuous auditing effort to ensure all open-ended lines are closed.	Probable Cause: We continue to investigate the cause for lines being left open ended Corrective actions or preventative steps taken: All of the open ended lines were capped or plugged. We continue to to continue to audit in order to maintain a robust LDAR program. It and project personnel. With several hundred thousand components.
ing the 2nd Ort 2011 audit, 14 open ended	Shell conducts voluntary internal audits on a quarterly basis in order to continuously improve our LDAR program. During the 2nd Qrt 2011 audit, 14 open ended lines were discovered. All of the open ended lines have been capped or plugged.	Event Description: Shell conducts voluntary internal audits on a quarte lines were discovered. All of the open ended lines
May have resulted in a violation of: Permit: AQMD: Other: 40 CFR Part 60 NSPS GGG	Source Number: 32102 Abatement Device: Emission Point:	Event Started: 7/11/2011 12:00 PM Stopped: 7/11/2011 12:00 PM
r excess.	ure re-evaluated to determine how to install the eductor and another excess.	
超	cated excess of > 250 ppm SO2 hour average in the Sam clock hour suffur pit spare eductor back on line after preventative maintenance.	Event Description: SRU 4 Stack SQ2 analyzer 18AI601 showed an indicated excess of > 250 ppm SQ2 hour avera Probable Cause: The excess occurred when trying again to place the sulfur pit spare eductor back on line after.
May have resulted in a violation of: Permit: AQMD: Regulation 9 Rule 1 Section 30 Other:	Source Number: 4180 Abatement Device: A4180 Emission Point:	Event Started: 7/10/2011 5:00 AM

Wednesday, January 11, 2012

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Corrective actions or The fuse was replaced and the NOx brought back under control.	Probable Cause: The blown fuse caused the loss of power to the ammonia heater.	Event Description: Air Products Hydrogen Plant 3 (Source #4160) reported an indicated NOx excess greate fuse had blown causing power failure of the heater to the ammonia system for the SCR	Stopped: 7/31/2011 8:00 AM Ongoing Event		iken:	Probable Cause: An upset occurred in SRU 4 due to changes in Corrective actions or main air valve to SRU 4 was iincorrectly adjusted.	Event Description: SRU 4 Stack SO2 analyzer 18AI601 showed an		Stopped: 8/4/2011 2:00 AM Ongoing Event	Event Started: 8/4/2011 1:00 AM		Corrective actions or preventative steps taken: The valve was replaced and an investigation begun to determine what caused the failure.	Probable Cause: Valve malfunctioned allowing ship vapors to vent to atmosphere	Event Description: <u>Pressure Vacuum Valve SPVV13 on Berth 2 ma</u> Thermal Oxidizer. SPVV13 pressure never read		Stopped: 7/23/2011 6:38 PM Ongoing Event	Event Started: 7/23/2011 2:10 AM		a (the three terms of the many the time of the terms many the terms of
ack under control.	<u>e ammonia heater.</u>	Air Products Hydrogen Plant 3 (Source #4160) reported an indicated NOx excess greater than the permit limit of 10 ppm 3 hour average when a control power fuse had blown causing power failure of the heater to the ammonia system for the SCR	Abatement Device: A4161 Emission Point:	Source Number: 4161	The mistake in the air valve position was recognized and corrected (within 10 minutes) but the stack SO2 had spiked high enough to exceed the hourly average.	An upset occurred in SRU 4 due to changes in acid gas feed composition from Nitrogen purging of Sour Water Stripper #6. While addressing main air valve to SRU 4 was iincorrectly adjusted causing the unit to go extremely SO2 rich and overwhelming the treating capacity of SCOT-4.	SRU 4 Stack SO2 analyzer 18AI601 showed an indicated excess of > 250 ppm SO2 hour average in the 1am clock hour	Emission Point:	Abatement Device: A4180	Source Number: 4180		egun to determine what caused the failure.	nt to atmosphere.	Pressure Vacuum Valve SPVV13 on Berth 2 malfunctioned during loading of a ship which allowed a realease to the atmosphere instead of going through the MVR. Thermal Oxidizer. SPVV13 pressure never reached relief pressure setting so true relief of valve is not indicated.	Emission Point:	Abatement Device: A100	Source Number: 2002		
		nit of 10 ppm 3 hour average when a control power	AQMD: Other:	Permit: 12271 Part 20	 d spiked high enough to exceed the hourly average.	of Sour Water Stripper #6. While addressing this upset the overwhelming the treating capacity of SCOT-4.	n clock hour	Other:	AQMD: Regulation 9 Rule 1 Section 30	Permit:	May have resulted in a violation of:			to the atmosphere instead of going through the MVR ed.	Other:	AQMD: Regulation 8 Rule 44 Sec 304	Permit: Condition #4288 Section 5	May have resulted in a violation of:	

Corrective actions or As soon as excess opacity was observed visually and on the monitor, the test was halted. Le preventative steps taken: the opacity event lasted for close to 9 minutes.	Probable Cause: Water was applied to the ducting leading to CO	Event Description: COB #2 analyzer 9AI2531 showed an indicated excess of greater than 1 Ring District-observed test to determine the cause for rain-induced opacity events.	9/26/2011	Event Started: 0/26/2011 1:34 DM	The alarm strategy was reviewed and revised to provide an alarm on an hourly rate of SO2 operations to make changes in operation to ensure compliance with the limit.	Probable Cause: This is a mass emission limit on SO2 over both COGENs. Stack gas flow. An alarm was set on the calculated total received an alarm that the COGENs were going to excee preventative steps taken: There was not enough time provided to the operator to the control of the control	Event Description: COGEN's exceeded their SO2 daily mass emissions limit of 458 lbs	Event Started: 9/17/2011 8:40 PM Stopped: 9/18/2011 12:00 AM Ongoing Event	Probable Cause: <u>Insufficient ammonia was added by the board operator to the SCR to maintain compliance were generated for August.</u> Corrective actions or <u>violation was identified when the monthly compliance reports were generated for August.</u> preventative steps taken: <u>Additional ammonia was added to bring the NOx into compliance. The operator has received</u>	Event Description: HGHT Heater F-14012 (S#4031) exceeded the 10 ppm 3 hour average Title V NOx limit.	Event Started: 8/14/2011 5:50 PM
y and on the monitor, the test was halted. Le	Water was applied to the ducting leading to CO Boiler 2 stack to simulate a heavy rain event.	COB #2 analyzer 9AI2531 showed an indicated excess of greater than 1 Ringelmann for more than 3 minutes in a clock hour during the 1:00 pm hour during a District-observed test to determine the cause for rain-induced opacity events.	Abatement Device: A13 Emission Point:	1	hourly rate of SO2 limit.	The SO2 emissions are calculated SO2 to let the operator know if the d the allowed SO2 limit, it was too l eact to the alarm before the limit was too leads to the alarm before the limit was too leads to the source.	sions limit of 458 lbs.	Source Number: 4190 Abatement Device: A4190 Emission Point:	to maintain compliance we generated for August. The operator has received	e 10 ppm 3 hour average Title V NOx limit. The excess was not	Source Number: 4031 Abatement Device: A4141 Emission Point:
ss than10 galions of water was applied over a 30 second period but		s in a clock hour during the 1:00 pm hour during a	AQMD: Regulation 6 Rule 1 Other: 40 CFR 60.102(2)	May have resulted in a violation of :	being emitted that will provide plenty of advance notice for	based on the measured SO2 concentration in the stack gas and the y were running close to the limit. However, by the time the operator ate to make enough of a change in operation to stay in compliance.		May have resulted in a violation of : Permit: 12271 Part 24b AQMD:	yith the NOx limit. The operator failed to report the excess. The	The excess was not reported within the 96 hour reporting deadline.	May have resulted in a violation of: Permit: Title V Condition 12271 part 35 AQMD: Other:

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Corrective actions or preventative steps taken:

The opacity quickly returned to normal levels but had already exceeded the limit

Event Description:

Probable Cause:

and steady at the time.

There was a reduction in power level to the precipitator fields, but no conclusive cause for the power dip could be determined. Process conditions were normal

Corrective actions or Probable Cause: Many of the open-ended lines that are found appear to be historic, i.e. original equipment installed many years ago without caps, plugs or double block valves.

Some of the open ends are due to missing caps that were either not properly replaced or vibrated off. Shell continues to actively investigate the cause of all sections or open ends in order to eliminate them.

emphasized with operations, maintenance and project personnel All of the open ended lines were capped, plugged or had the second valve closed. We continue to voluntarily audit our program to ensure continuous improvement and believe it is important to continue to audit in order to maintain a robust LDAR program. The importance of closing any open ended line is.

Certification Statement

preventative steps taken:

attachments and other materials are true, accurate, and complete. reasonable inquiry, the statements and information in this document and in all I certify under penalty of law that based on the information and belief formed after

Signature of Responsible Official Kull Salhand

Print Name Title Title Date

BAAQMD Title V Permit 6 Month Monitoring Report

From 7/1/2011 to 12/31/2011

7.b code: 54553-0071	State: CA	City: Martinez	3485 Pacheco Blvd	Facility Address:	
tip course! Obross (025) 313.857	State: CA	City: Martinez	Ņ.	Mailing Address	
Bhone: (875) 313-3857			PU Box /11	!	
3857					

Inoperable monitors as defined by BAAQMD Regulations 1-522 and 1-523 for the reporting period are summurized below:

Started Stopped	Source (Sf) Device (A#) Point (P#)	CEM GLM Gas Parametri NO _X SO2 CO 112S TRS NH3 O2 CO2 H2O LTA Lead Steam Flow Wind Dir Speed pH Temp VOC Press
9:55 AM 7/5/2011 12:38 PM		
Event Description: HP2 F-104 O2 analyzer 15 Al 661 was out of service due to problems with the NOx analyzer 15 Al 660	ut of service due to problems with the NOx analyzer 15 AI 660.	
7/4/2011 9:55 AM 7/12/2011 1:00 PM		
Event Description: HP2 F-104 Nox analyzer 15 Al 660 went verified by the Air District as valid. Air I	HP2 F-104 Nox analyzer 15 A1 660 went bad (burned out multiple ozonator boards and transformers) so the analyzer was removed and a spare was verified by the Air District as valid. Air District has been notified and they will be out the week of 7/11 to certify the analyzer.	the analyzer was removed and a spare was installed. The spare was calibrated twice for accuracy, but will remain out of service until the analyzer can be certify the analyzer.
7/20/2011 7:35 AM 7/21/2011 3:25 PM		
event Description: Chillingy 2 NOX and OZ Analyzers (10A.	русті (Сехтірінні — Сіппінку Z мух анд VZ Анагудетs (поддов) да под сертення сертення за результина	Galifild Blitch Collision and the fact valuation of the fact of th
7/28/2011 10:05 AM 8/3/2011 7:30 AM [Event Description: Refinery Fuel Gas Blend Drum TRS analysts.]	(A) 1. Vizer 09A 2825 is out of service for preventative maintenance an	7/28/2011 10:05 AM 8/3/2011 7:30 AM G
The second secon		The second secon
7/28/2011 10:05 AM 8/3/2011 7:30 AM	S	
Event Description: Refinery Fuel Gas Blend Drum H2S anal	lyzer 09A 2831 is out of service for preventative maintenance an	Event Description: Refinery Fuel Gas Blend Drum H2S analyzer 09A 2831 is out of service for preventative maintenance and awaiting parts. Replaced columns, adjusted flows and calibrated.
7/28/2011 11:35 AM 8/4/2011 9:15 AM		
Event Description: Cogen Gas Turbine #1 NOx analyzer 66/	AI 0417 will be out of service to replace our current NOx Model	Event Description: Cogen Gas Turbine #1 NOx analyzer 66AI 0417 will be out of service to replace our current NOx Model 951A with Model 951C. This new analyzer will not be called back into service until the completion of CD/CE, RATA and BAAQMD certification.
8/9/2011 10:00 AM 8/17/2011 9:20 AM	<u>S</u>	
Event Description: FXG H2s analyzer 14A 1251 will be out	of service for several days for preventative maintenance. This v	Event Description: FXG H2s analyzer 14A 1251 will be out of service for several days for preventative maintenance. This will be it's annual rebuild of the analyzer with warm-up and calibration once maintenance is completed.
9/11/2011 5:10 PM 9/13/2011 4:35 PM		
Event Description: Wharf Met Station Wind Speend parametric 1S4582 is out of service greater than 24 hours. Cause is under investigation	tric 1S4582 is out of service greater than 24 hours. Cause is und	r investigation.

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tarted Stopped Source (Si) Abatement Scource (Sii) Device (Aii)	Emission Point (P#)	CEM GLM Gas Parametri NOx SO2 CO	Parametri	NOx SO2 CO H2S TRS NH3 O2 CO2 H2O 1/TA Lead Steam Flow Wind Dir. Speed pH Temp. YOC. Press.	w Wind l	Wind Gauge Dir. Speed pH. Temp, VOC. Press,
9/12/2011 10:30 AM 9/13/2011 3:50 PM 👩 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂	ice greater than 24 ho	ours due to a compone	nt failure	ent failure while calibrating, (Correction made in Gas Gravity analyzer #)		
9/29/2011 5:00 PM 10/1/2011 12:10 PM 🕢 🖂 🗆 🗆 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂	nce on the flare line.	0 0				
/2011 7:40 PM 💹 lyzer 9A 2716 was out of service for greater than 24 hours fo	ntenance.		S			
10/9/2011 8:55 AM 10/10/2011 10:30 AM 👩 4192 A4192 🗹 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂 🖂	l plugged air treater.	Cleaned, blew systen	n back, ad	D D D D D D D D D D D D D D D D D D D		
10/9/2011 8:55 AM 10/10/2011 10:30 AM 🕢 4192 A192 A192 Sound plugged air treater. Cleaned, blew back system, adjusted flow and recalibrated.	d plugged air treater.	Cleaned, blew back s	system, ad	0		
12/2/2011 9:00 AM 12/5/2011 8:00 AM 🕢 1569 A13						

Certification Statement

Event Description: COB #2 Opacity analyzer 9A 2531 chart recorder jammed and did not record. Repaired and returned to service today.

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attackments and other materials are true, accurate, and complete.

Read Ladman

The Date Date

Date

Print Name

The Date