



ConocoPhillips Company  
San Francisco Refinery  
1380 San Pablo Avenue  
Rodeo, CA 94572

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January 27, 2012

BAY AREA AIR QUALITY  
MANAGEMENT DISTRICT

ESDR-033-12  
05-B-01-C

**CERTIFIED MAIL – 7009 3410 0001 8041 1768**

Mr. Brian Bateman  
Director of Compliance and Enforcement  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Attn: Title V Reports

**Subject: Six-month Monitoring Report for July 1, 2011 through December 31, 2011  
ConocoPhillips San Francisco Refinery – Plant No. A0016**

Mr. Bateman:

ConocoPhillips is submitting its Monitoring Report covering the period of July 1, 2011 through December 31, 2011 as required by section I.F in its Title V permit.

If you have any questions, or require additional information on the information contained in this report, please contact Mr. Brent Eastep at (510) 245-4672.

Sincerely,

Don Bristol, Superintendent  
Environmental Department

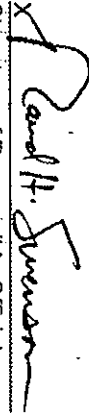
Attachment

cc: Mr. Kevin Vo, BAAQMD inspector via e-mail (KVo@baaqmd.gov)

BAQMD Title V Permit  
6 Month Deviation Summary Report  
From 7/1/2011 to 12/31/2011  
San Francisco Refinery, A0016

**Certification Statement**

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 attachments and other materials are true, accurate, and complete.

X   
Signature of Responsible Official

Rand Swenson  
Print Name

Refinery Manager  
Title

1/27/2012  
Date

BAAQMD Title V Permit  
6 Month Deviation Summary Report

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

**A0016 Conocophillips Company San Francisco Refinery**

Facility Address: 1380 San Pablo Ave		Mailing Address: 1380 San Pablo Ave	
City: Rodeo	State: CA	City: Rodeo	State: CA
ZIP Code: 94572		ZIP Code: 94572	
Contact: Brent Easter	Title: Environmental Engineer	Phone: (510) 245-4672	

Title V deviations for the reporting period are summarized below:

Deviation No: 033-11

Event Started: 4/30/2011

Stopped: 11/10/2011

Source Number(s): 448

Abatement Device(s):

Emission Point(s):

May have resulted in a deviation from:

Permit: 12133-1

AQMD:

Other:

Event Description: Tank 1007 (S448) exceeded its rolling 12 month throughput limit of 2,190,000 barrels. This limit was established when Tank 1007 was in alkylate/cracked naphtha service, which had a low throughput rate. The throughput increased over historical levels due to a change in service to a diesel storage tank.

Probable Cause: The change in service led to a higher throughput than the tank had historically. In addition, as part of a recent permit modification, the applicable regulations section of the permit was modified to allow Tank 1007 to operate as exempt from Regulation 8.5 when storing diesel and other exempt materials. As part of the permit process, the throughput limit should have been removed when the tank is in exempt service.

Corrective actions or preventative steps taken: A permit to operate was received (App #23754) which removed the throughput limit when the tank is in exempt service.

Deviation No: 034-11

Source Number(s): 300; 43

Permit: \_\_\_\_\_

May have resulted in a deviation from:

Event Started: 7/12/2011 9:58 AM  
Stopped: 7/12/2011 1:33 PM

Abatement Device(s): \_\_\_\_\_  
Emission Point(s): \_\_\_\_\_

AQMD: 8-18-301  
Other: \_\_\_\_\_

Event Description: BAAQMD Inspector Kevin Vo discovered a Venturi Educator underneath B-202 in Unit 200 leaking in excess of the 100 ppm VOC threshold. ConocoPhillips repaired and reinspected the Venturi Educator pursuant to the applicable rule.

ConocoPhillips received NOV AS2106 on July 12th, 2011.

Probable Cause: The Venturi Educator needed to be tightened.

Corrective actions or preventative steps taken: The Venturi Educator was tightened.

Deviation No: 036-11

Source Number(s): 182

Permit: \_\_\_\_\_

May have resulted in a deviation from:

Event Started: 7/20/2011 10:48 AM  
Stopped: 7/20/2011 4:30 PM

Abatement Device(s): \_\_\_\_\_  
Emission Point(s): \_\_\_\_\_

AQMD: 8-5-306.2  
Other: \_\_\_\_\_

Event Description: BAAQMD performed an LDAR/Tank inspection on 7/20/2011. A leak in excess of the leak threshold was found on top of Tank 294 on a sample port. The sample port was located inside of a sample hatch. The inspector had to first open the lid on the sample hatch in order to access the sample port. The inspector did not detect any emissions when the hatch lid was closed. ConocoPhillips repaired the leak as quickly as possible.

Probable Cause: The sample port was not fully tightened down after a sampling event.

Corrective actions or preventative steps taken: The sample port was tightened.

Deviation No: 038-11

Source Number(s): 7

Permit: I.F

May have resulted in a deviation from:

Event Started: 7/6/2011 9:00 PM  
Stopped: 8/15/2011 1:45 PM

Abatement Device(s): \_\_\_\_\_  
Emission Point(s): \_\_\_\_\_

AQMD: 1-523.1; 1-523.2  
Other: \_\_\_\_\_

Event Description: The Unit 231 B-103 (S#7) O2 parametric monitor became inoperative on 7/6/2011, but due to an inadvertent communications error, ConocoPhillips did not report the monitor as inoperative the next business day. Following its investigation regarding the equipment malfunction, ConocoPhillips concluded that the Oximiler Transmitter portion of the O2 analyzer had failed and required repairs. ConocoPhillips promptly ordered a replacement. ConocoPhillips was unable to fix the inoperative monitor within the required 15 days due to the amount of time it took to receive the part from the manufacturer. Once the part was received, ConocoPhillips promptly repaired the monitor and brought it back online (because the exact replacement control cards and transmitters are no longer available, use of a suitable replacement required that some conduit and wiring changes were made which ConocoPhillips accomplished while awaiting receipt of the transmitter). In the interim, ConocoPhillips monitored the O2 levels several times per day with a portable analyzer.

Probable Cause: The monitor amplifier board needed to be replaced.

Corrective actions or preventative steps taken: The board was replaced and the monitor was returned to service.

Deviation No: 039-11 Source Number(s): 300 Permit: \_\_\_\_\_  
Event Started: 8/2/2011 12:40 PM Abatement Device(s): \_\_\_\_\_ AQMD: \_\_\_\_\_  
Stopped: 8/2/2011 1:24 PM Emission Point(s): \_\_\_\_\_ Other: 40 CFR 60.482-6

Event Description: During routine LDAR monitoring technicians discovered an open-ended line (OEL) in Unit 200 on a 0.75" gate valve that was missing a plug. ConocoPhillips repaired the OEL within an hour of discovery.

Probable Cause: Failure to put the plug back into place after sampling or draining the line.  
Corrective actions or preventative steps taken: The plug was replaced within an hour of discovery.

May have resulted in a deviation from:

Deviation No: 041-11 Source Number(s): 175, 175 Permit: \_\_\_\_\_  
Event Started: 6/28/2011 Abatement Device(s): 7 AQMD: 1-301  
Stopped: 6/28/2011 Emission Point(s): \_\_\_\_\_ Other: \_\_\_\_\_

Event Description: On 6/28/11 BAAQMD issued a Notice of Violation for a Public Nuisance due to 6 confirmed odor complaints on 6/28/11.

Probable Cause: ConocoPhillips believes that a natural gas blanket control system and vacuum relief valve malfunction on Tank 284 may have caused a vapor release to atmosphere. Debris was found in the vacuum relief valve indicating a potential for gas to be released to atmosphere during the event. The pressure indicator on the tank was falsely showing a vacuum in the tank due to adverse weather conditions. Due to the false negative pressure reading in the tank, the natural gas valve opened allowing natural gas into the tank head space which presumably led to the release of vapors to the atmosphere through the vacuum relief valve.

Corrective actions or preventative steps taken: After determining that the negative pressure reading at Tank 284 was incorrect and that natural gas was flowing into the tank, the natural gas valve was blocked off and the bypass relief valve to the odor abatement compressors was opened. This allowed the pressure in the tank to decrease, which subsequently eliminated the release of vapors to the atmosphere to the extent such release was occurring. The debris was removed from the vacuum relief valve which allowed the valve to close normally.

May have resulted in a deviation from:

Deviation No: 042-11 Source Number(s): 371, 372 Permit: 1694 C2  
Event Started: 8/8/2011 2:00 PM Abatement Device(s): 17 AQMD: \_\_\_\_\_  
Stopped: 8/8/2011 5:00 PM Emission Point(s): \_\_\_\_\_ Other: \_\_\_\_\_

Event Description: On 8/8/11, the NOx CEMs at the U228 B-520/521 heater indicated an excess of the 3 hour average NOx limit of 20 ppm @ 3% O2. The indicated excess occurred for 3 hours from 2 pm to 5 pm with a maximum value of 39.84 ppm. A breakdown end excess were filed for this event on 8/8/11 (ID 06806 and 06807).

Probable Cause: ConocoPhillips believes the NOx excess resulted from a failed ammonia injection nozzle that prevented the flow of ammonia to the SCR unit. ConocoPhillips believes that the nozzle failed due to plugging.

Corrective actions or preventative steps taken: Two replacement nozzles were ordered. The nozzle was changed out and is now on an 18 month (or sooner) change out cycle.

Deviation No: 046-11

Source Number(s): 122

Permit: 22963-1

May have resulted in a deviation from:

Event Started: 8/25/2011

Abatement Device(s):

AQMD: 8-5-301

Stopped: 9/8/2011

Emission Point(s):

Other:

Event Description: During voluntary periodic verification of true vapor pressure (TVP) for Tank 167, ConocoPhillips discovered that the limit of 11 psia had been exceeded. Tank 167 is an external floating roof tank that stores naphtha, which is blended into finished gasoline at Unit 76.

ConocoPhillips calculates TVP for purposes of complying with this limit using Reid vapor pressure (RVP) and temperature measurements. After the increased TVP was discovered, the feed to Tank 167 was stopped and routed to another tank to allow the temperature in Tank 167 to drop, which reduced the TVP below the 11 psia limit.

Probable Cause: Increase in temperature and RVP of the material.

Corrective actions or preventative steps taken: After the increased TVP was discovered, the feed to Tank 167 was stopped and routed to another tank to allow the temperature in Tank 167 to drop, which reduced the TVP below the 11 psia limit.

Deviation No: 049-11

Source Number(s): 122

May have resulted in a deviation from:

Event Started: 10/24/2011

Abatement Device(s):

AQMD: 8-5-301

Stopped: 10/26/2011

Emission Point(s):

Other:

Event Description: During voluntary periodic verification of true vapor pressure (TVP) for Tank 167, ConocoPhillips discovered that the limit of 11 psia had been exceeded. Tank 167 is an external floating roof tank that stores naphtha, which is blended into finished gasoline at Unit 76.

ConocoPhillips calculates TVP for purposes of complying with this limit using Reid vapor pressure (RVP) and temperature measurements. After the increased TVP was discovered, the feed to Tank 167 was stopped and routed to another tank to allow the temperature in Tank 167 to drop, which reduced the TVP below the 11 psia limit.

Probable Cause: Increase in temperature and RVP of the material.

Corrective actions or preventative steps taken: After the increased TVP was discovered, the feed to Tank 167 was stopped and routed to another tank to allow the temperature in Tank 167 to drop, which reduced the TVP below the 11 psia limit.

Deviation No: 054-11

Source Number(s): 339

Permit:

May have resulted in a deviation from:

Event Started: 11/7/2011 1:40 PM

Abatement Device(s):

AQMD:

Stopped: 11/7/2011 2:00 PM

Emission Point(s):

Other: 40 CFR 60.482-6

Event Description: During routine LDAR monitoring, technicians discovered an open-ended line (OEL) in Unit 80 on a 0.50" needle valve that was missing a plug. ConocoPhillips repaired the OEL by replacing the plug within an hour of discovery.

Probable Cause: The plugs were removed for either maintenance or sampling and were not replaced.

Corrective actions or preventative steps taken: The plug was replaced within an hour of discovery.

May have resulted in a deviation from:

Deviation No: 055-11

Source Number(s): 174

Permit: 23724 Part 4

Event Started: 10/5/2011 1:15 PM

Abatement Device(s):

AQMD:

Stopped: 11/7/2011 8:00 AM

Emission Point(s):

Other:

Event Description: An excess on Tank 281 occurred on 10/5/2011 at approximately 1:15 PM due to a pressure alarm failure. Due to an internal communication breakdown, the excess was not timely reported to those responsible for external agency communications, and therefore, the 10-day and 30-day reports required pursuant to the Title V permit Section 23724(4) were not submitted within the required timeframes.

ConocoPhillips has created an automated e-mail system to improve its internal communication capabilities and minimize the risk of similar deviations in the future.

Probable Cause: Due to an internal communication breakdown, the excess was not timely reported to those responsible for external agency communications.

Corrective actions or preventative steps taken: ConocoPhillips has created an automated e-mail system to improve its internal communication capabilities and minimize the risk of similar deviations in the future.

May have resulted in a deviation from:

Deviation No: 056-11

Source Number(s): 296, 398

Permit:

Event Started: 11/22/2011

Abatement Device(s):

AQMD: 12-12-406

Stopped: 11/22/2011

Emission Point(s):

Other:

Event Description: A Notice to Comply (NTC A43258) was issued by BAAQMD for alleged deficiencies in several flaring root cause analysis (RCA) reports required by BAAQMD Reg 12-12. While ConocoPhillips does not agree that there are deficiencies in the RCA reports, it has taken steps to incorporate the changes recommended by BAAQMD. In addition, we are providing this notice of potential deviation given BAAQMD's interpretation as communicated by delivery of the NTC.

Probable Cause: BAAQMD reviewed RCA reports and noted alleged deficiencies.

Corrective actions or preventative steps taken: Per discussions with BAAQMD, ConocoPhillips has taken steps to incorporate the changes recommended by BAAQMD.

Deviation No: 051-11

Source Number(s): 45

May have resulted in a deviation from:

Permit:

Event Started: 10/29/2011 4:00 PM

Abatement Device(s):

AQMD: 1-522.4

Stopped: 10/31/2011 12:30 PM

Emission Point(s):

Other:

Event Description: The Unit 246 CEMs became inoperative on 10/29/2011, but due to an inadvertent communications issue, ConocoPhillips did not report the monitor as inoperative the next business day. The cause of the inoperative monitor was a failed sample back pressure regulator. The regulator was replaced and the monitor was returned to service.

Probable Cause: An inadvertent communications issue led to the inoperative monitor not being reported the next business day.

Corrective actions or preventative steps taken: Prompt communication of CEM issues was reviewed with relevant personnel.

May have resulted in a deviation from:

Deviation No: 052-11

Source Number(s): 304

Permit:

Event Started: 10/27/2011 2:44 PM

Abatement Device(s):

AQMD:

Stopped: 10/27/2011 2:53 PM

Emission Point(s):

Other: 40 CFR 60.482-6

Event Description: During routine LDAR monitoring, technicians discovered an open-ended line (OEL) in Unit 229 on a 0.75" gate valve that was missing a plug. ConocoPhillips repaired the OEL within minutes of discovery.

Probable Cause: The plugs were removed for either maintenance or sampling and were not replaced.

Corrective actions or preventative steps taken: The plug was replaced within minutes of discovery.

May have resulted in a deviation from:

Deviation No: 053-11

Source Number(s): 438

Permit: 1694 E4

Event Started: 11/5/2011 11:30 AM

Abatement Device(s): 46

AQMD:

Stopped: 11/5/2011 3:10 PM

Emission Point(s):

Other:

Event Description: The U110 H-L Heater CEMs indicated an excess of the NOx 1-hour average limit of 7 PPM corrected to 3% O2. The maximum NOx concentration recorded during the event was 25 ppm. There were 4 hours where the CEMs indicated an excess of the 1-hour rolling average on 11/5/11.

The excess occurred when the inlet line to the ammonia vaporizer plugged. The line was cleared and NOx emissions are now below permitted limits.

Probable Cause: The ammonia vaporizer line plugged (with rust).

Corrective actions or preventative steps taken: The line was cleared.



May have resulted in a deviation from:

Deviation No: 059-11 Source Number(s): 371, 372 Permit: 1694 C 2

Event Started: 11/26/2011 10:00 AM Abatement Device(s): 17 AQMD: \_\_\_\_\_

Stopped: 12/21/2011 2:00 PM Emission Point(s): \_\_\_\_\_ Other: \_\_\_\_\_

Event Description: On 11/26/11, the NOX CEMs at the U228 B-520/521 heater indicated an excess of the 3-hour average NOX limit of 20 ppm @ 3% O2. The indicated excess occurred for 13 hours from 10 am to 11 pm with a maximum value of 51.8 ppm (BAAQMD ID 06C47).

On 11/30/11, the NOX CEMs at the U228 B-520/521 heater indicated an excess of the 3-hour average NOX limit of 20 ppm @ 3% O2. The indicated excess occurred for 2 hours from 11 am to 1 pm with a maximum value of 22.7 ppm (+13.5%) (BAAQMD ID 06C55).

The cause of the initial excess on 11/26/11 was plugging of the ammonia line to the ammonia vaporizer. When the line was pressurized to unplug it a hole was discovered in the braided hose that feeds ammonia to the vaporizer. A temporary hose was fabricated and installed on 11/26/11. When the replacement braided hose arrived, refinery personnel began the installation believing that it would be done quickly and without creating any compliance issues. However, the repair took longer than expected and was not trouble-free, which resulted in the slight excess on 11/30/11.

On 12/21/2011, the NOX CEMs at the U228 B-520/521 heater indicated an excess of the 3-hour average NOX limit of 20 ppm @ 3% O2. The indicated excess occurred for 3 hours from 11 am to 1 pm with a maximum value of 35.4 ppm (BAAQMD ID 06C79). This occurred during a maintenance activity to replace and upgrade the ammonia injection nozzle. The existing nozzle contained a restricting point which contributed to plugging issues.

Probable Cause: The line to the ammonia vaporizer plugged. When the line was pressurized to unplug it, a hole was discovered in the braided hose. The replacement line was not on hand resulting in a delay of the repair period. The existing nozzle contained a restricting point which contributed to plugging issues.

Corrective actions or preventative steps taken: A temporary braided hose was fabricated until the replacement hose could arrive. On 12/21/11 the nozzle was upgraded to a model which does not contain the restrictive area.

May have resulted in a deviation from:

Deviation No: 061-11 Source Number(s): 45 Permit: 22962.4a

Event Started: 11/30/2011 3:00 AM Abatement Device(s): \_\_\_\_\_ AQMD: \_\_\_\_\_

Stopped: 11/30/2011 8:00 AM Emission Point(s): \_\_\_\_\_ Other: \_\_\_\_\_

Event Description: On 11/30/2011 the U246 B-801 AB (S-45) Heater CEMs indicated an excess of the NOX 3-hour average limit of 5 PPM at 3% O2. The maximum NOX concentration during the event was 5.2 ppm (+4%). There were 5 hours where the CEMs indicated an excess of the 3-hour rolling average. The ammonia flow to the SCR was placed in manual and could not auto-correct to a slight firing rate increase, resulting in an increase in NOX. The ammonia flow was increased when the excess was identified and was later set to automatic.

Probable Cause: The ammonia flow was set to manual and did not react with an slight increase in firing rate.

Corrective actions or preventative steps taken: The ammonia flow was increased when the excess was identified and was later set to automatic.

Deviation No: 062-11

Source Number(s): 300

Permit:

May have resulted in a deviation from:

Event Started: 11/28/2011 8:00 AM

Abatement Device(s):

AQMD:

Stopped: 11/29/2011 12:00 PM

Emission Point(s):

Other: 40 CFR 60.482-6

Event Description: During routine LDAR monitoring ConocoPhillips discovered four open-ended lines (OELs) in the Coker Unit (U200) that were missing plugs. The first three OEL's were discovered on 11/28/2011, two on 0.5" needle valves and the third was found on a sample station. The fourth OEL was discovered on 11/29/2011 on a 0.75" gate valve. None of the OEL's were leaking above the leak threshold of 100 ppm and all were repaired on the same day as discovery.

Probable Cause: The plugs were removed for either maintenance or sampling and were not replaced.

Corrective actions or preventative steps taken: The plugs/caps were replaced in a timely manner.

May have resulted in a deviation from:

Deviation No: 063-11

Source Number(s): 45

Permit: 22962.4 a

Event Started: 12/5/2011 4:00 PM

Abatement Device(s):

AQMD:

Stopped: 12/8/2011 11:00 AM

Emission Point(s):

Other:

Event Description: On 12/5/2011, the Unit 246 B801 A/B heater (S-45) CEMs indicated an excess of the NOx limit of 5 ppmv at 3% O2 (3-hr average) beginning at 4:00 PM for a total of 64 hours (BAAQMD ID No 06C68). The maximum NOx concentration for this period was 75.4 ppmv. The excess occurred due to an unexpected shutdown of the Air Liquide Hydrogen Plant which caused fresh feed to be removed from Unit 246. Air Liquide supplies the hydrogen required to convert the heavy gas oil feed stocks at Unit 246 to a more desirable light hydrocarbon product. After the Air Liquide shutdown, Unit 246 was circulated after fresh feed was removed and the heaters were operated in a low firing mode which resulted in higher than typical excess O2 and lower operating temperatures. During the period of excess there were times when the SCR inlet temperature dropped below the minimum operating temperature of 475 F causing the loss of ammonia flow to the SCR and leading to elevated NOx concentrations.

ConocoPhillips has received a permit to operate from the BAAQMD (Appl # 22671, 4/13/11) which includes an exemption from the NOx limit while there is no fresh feed to Unit 246 and the SCR inlet temperature is below 475 F. There were 16 hours during the excess period where the exemption in the permit to operate would have applied (i.e., there was no fresh feed and the SCR inlet temperature was below 475 F). An application to incorporate this permit to operate into the Title V permit has been submitted.

Probable Cause: The unplanned shutdown of the Air Liquide Hydrogen Plant caused feed to be pulled from Unit 246.

Corrective actions or preventative steps taken: Unit 246 was restarted as soon as practical which allowed the B-801 A/B heater to operate normally and comply with the NOx limit.

Deviation No: 066-11 Source Number(s): 460 Permit: 20989 Part B  
Event Started: 12/5/2011 Abatement Device(s): AQMD:  
Stopped: 12/8/2011 Emission Point(s): Other:

Event Description: On 12/5/11, the Unit 250 diesel hydrotreater was shut down after the third-party Air Liquide Hydrogen Plant had an unexpected shutdown. Initially, ConocoPhillips believed that Unit 250 was put into circulation, which led us to initially conclude that the hydrotreater had not "shut down" as that phrase is defined in the refinery's Title V Permit. ConocoPhillips personnel spoke with BAAQMD Inspector John Swanson that same day regarding the upset at Air Liquide and resulting upset at the refinery and informed him of our initial conclusion that Unit 250 was in circulation.

Upon further detailed review of the available data, we have concluded that the hydrotreater had "shut down" as that term is defined in the Title V Permit and that written notification to BAAQMD was required. Notification of the shutdown was faxed to BAAQMD on 12/8/11.

Probable Cause: Initially, ConocoPhillips believed that Unit 250 was put into circulation, which led us to initially conclude that the hydrotreater had not "shut down" as that phrase is defined in the refinery's Title V Permit.

Corrective actions or preventative steps taken: Upon further detailed review of the available data, we have concluded that the hydrotreater had "shut down" as that term is defined in the Title V Permit and that written notification to BAAQMD was required. Notification of the shutdown was faxed to BAAQMD on 12/8/11.

May have resulted in a deviation from:

Deviation No: 066-11 Source Number(s): 439 Permit: 12124-1  
Event Started: 11/1/2011 Abatement Device(s): AQMD:  
Stopped: 1/1/2012 Emission Point(s): Other:

Event Description: Tank 109 (S439), which is in crude oil service, exceeded its rolling 12 month throughput limit of 3,650,000 barrels. ConocoPhillips is investigating the cause of this deviation and will take all appropriate steps to ensure that this deviation is not repeated.

Probable Cause: Changes in storage tank utilization led to a slight increase in throughput at Tank 109.

Corrective actions or preventative steps taken: The throughput at Tank 109 was reduced and is now in compliance with the throughput limit.

Deviation No: 068-11

Source Number(s): 45

May have resulted in a deviation from:  
Permit: 22962.4.a

Event Started: 12/22/2011 11:00 AM

Abatement Device(s):

AQMD:

Stopped: 12/24/2011 5:00 AM

Emission Point(s):

Other:

Event Description: On 12/22/2011, the Unit 246 B801 A/B heater (S-45) CEMs indicated an excess of the NOx limit of 5 ppmv at 3% O2 (3-hr average) beginning at 11:00 AM. The maximum NOx concentration for the period from 12/22 11:00 AM to 12/24/11 05:00 AM was 19.6 ppmv (BAAQMD ID No 06C80). The excess occurred due to an unexpected shutdown of the Air Liquide Hydrogen Plant which required the removal of fresh feed from Unit 246, and the Unit placed in hot standby. The excess was mitigated once Hydrogen production was restored.

Air Liquide supplies the hydrogen required to convert the heavy gas oil feed stocks at Unit 246 to a more desirable light hydrocarbon product. After the Air Liquide shutdown, Unit 246 was circulated after fresh feed was removed and the heaters were operated in a low firing mode which resulted in higher than typical excess O2 and lower operating temperatures.

Probable Cause: The unplanned shutdown of the Air Liquide Hydrogen Plant caused feed to be pulled from Unit 246.

Corrective actions or preventative steps taken: Unit 246 was restarted as soon as practical which allowed the B-801 A/B heater to operate normally and comply with the NOx limit.



Started Stopped Deviation # Source (S#) Abatement Emission  
Device (A#) Point (P#)

7/22/2011 1:00 AM 7/22/2011 2:30 PM  035-11 461

Fuel		Opacity/		Wind		Gauge																	
CEM GLM	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Lead	Steam	Flow	Wind	Dir.	Speed	pH	Temp.	VOC.	Press.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Event Description: The Unit 250 B701 O2 monitor on the CEMs failed operation on 7/21/2011 at approximately 1:00 AM. The O2 analyzer was repaired and put back in service at 2:24 PM.

7/28/2011 11:43 AM 7/28/2011 12:46 PM  037-11 9

Fuel		Opacity/		Wind		Gauge																	
CEM GLM	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Lead	Steam	Flow	Wind	Dir.	Speed	pH	Temp.	VOC.	Press.	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Event Description: Unit 240 B2 O2 monitor used for NOx Box compliance became plugged on 7/27/2011 at 11:43 AM. The analyzer was checked out and the plugging was removed.

8/18/2011 9:00 AM 8/18/2011 2:15 PM  043-11 20

Fuel		Opacity/		Wind		Gauge																	
CEM GLM	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Lead	Steam	Flow	Wind	Dir.	Speed	pH	Temp.	VOC.	Press.	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Event Description: Unit 244 B506 Parametric O2 monitor became inoperative on 8/17/11 at 9:06 AM. Repairs were made and the monitor was returned to service on 8/18/11 at 2:15 PM.

8/20/2011 12:20 PM 8/22/2011 9:00 AM  045-11 338

Fuel		Opacity/		Wind		Gauge																	
CEM GLM	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Lead	Steam	Flow	Wind	Dir.	Speed	pH	Temp.	VOC.	Press.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Event Description: The U233 H2S CEM became inoperative on 8/20/2011 at 12:20 PM when a slide valve became stuck. The CEM was repaired on 8/22/2011 at 9:00 AM.

Started	Stopped	Deviation #	Source (S#)	Abatement	Emission
				Device (A#)	Point (P#)
9/10/2011	1:20 PM	9/12/2011	8:32 AM	<input checked="" type="checkbox"/> 047-11	338

<input checked="" type="checkbox"/> CEM GLM	<input type="checkbox"/> Gas	<input type="checkbox"/> Parametric	<input type="checkbox"/> NOx	<input type="checkbox"/> SO2	<input type="checkbox"/> CO	<input checked="" type="checkbox"/> H2S	<input type="checkbox"/> TRS	<input type="checkbox"/> NH3	<input type="checkbox"/> O2	<input type="checkbox"/> CO2	<input type="checkbox"/> H2O	<input type="checkbox"/> LTA	<input type="checkbox"/> Lead	<input type="checkbox"/> Steam	<input type="checkbox"/> Flow	<input type="checkbox"/> Wind	<input type="checkbox"/> Dir.	<input type="checkbox"/> Speed	<input type="checkbox"/> pH	<input type="checkbox"/> Temp.	<input type="checkbox"/> VOC.	<input type="checkbox"/> Gauge	<input type="checkbox"/> Press.
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Event Description: The Unit 233 H2S CEMs became inoperative. Repairs were made and the CEMs was returned to service.

10/29/2011	4:00 PM	10/31/2011	12:30 PM	<input checked="" type="checkbox"/> 051-11	45
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<input checked="" type="checkbox"/> CEM GLM	<input type="checkbox"/> Gas	<input type="checkbox"/> Parametric	<input checked="" type="checkbox"/> NOx	<input type="checkbox"/> SO2	<input type="checkbox"/> CO	<input type="checkbox"/> H2S	<input type="checkbox"/> TRS	<input type="checkbox"/> NH3	<input checked="" type="checkbox"/> O2	<input type="checkbox"/> CO2	<input type="checkbox"/> H2O	<input type="checkbox"/> LTA	<input type="checkbox"/> Lead	<input type="checkbox"/> Steam	<input type="checkbox"/> Flow	<input type="checkbox"/> Wind	<input type="checkbox"/> Dir.	<input type="checkbox"/> Speed	<input type="checkbox"/> pH	<input type="checkbox"/> Temp.	<input type="checkbox"/> VOC.	<input type="checkbox"/> Gauge	<input type="checkbox"/> Press.
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Event Description: The Unit 246 CEMs became inoperative on 10/29/2011, but, due to an inadvertent communications issue, ConocoPhillips did not report the monitor as inoperative the next business day. The cause of the inoperative monitor was a failed sample back pressure regulator. The regulator was replaced and the monitor was returned to service.

11/14/2011	9:00 AM	11/15/2011	11:00 AM	<input checked="" type="checkbox"/> 056-11	
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<input type="checkbox"/> CEM GLM	<input type="checkbox"/> Gas	<input type="checkbox"/> Parametric	<input type="checkbox"/> NOx	<input checked="" type="checkbox"/> SO2	<input type="checkbox"/> CO	<input checked="" type="checkbox"/> H2S	<input type="checkbox"/> TRS	<input type="checkbox"/> NH3	<input type="checkbox"/> O2	<input type="checkbox"/> CO2	<input type="checkbox"/> H2O	<input type="checkbox"/> LTA	<input type="checkbox"/> Lead	<input type="checkbox"/> Steam	<input type="checkbox"/> Flow	<input type="checkbox"/> Wind	<input type="checkbox"/> Dir.	<input type="checkbox"/> Speed	<input type="checkbox"/> pH	<input type="checkbox"/> Temp.	<input type="checkbox"/> VOC.	<input type="checkbox"/> Gauge	<input type="checkbox"/> Press.
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Event Description: The GLM recorder at the Torney site experienced a paper jam and data was not recorded for approximately 26 hours. The paper jam was removed and the recorder is once again operating properly.

11/18/2011	4:08 PM	11/20/2011	5:30 AM	<input checked="" type="checkbox"/> 057-11	45
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<input checked="" type="checkbox"/> CEM GLM	<input type="checkbox"/> Gas	<input type="checkbox"/> Parametric	<input checked="" type="checkbox"/> NOx	<input type="checkbox"/> SO2	<input type="checkbox"/> CO	<input type="checkbox"/> H2S	<input type="checkbox"/> TRS	<input type="checkbox"/> NH3	<input type="checkbox"/> O2	<input type="checkbox"/> CO2	<input type="checkbox"/> H2O	<input type="checkbox"/> LTA	<input type="checkbox"/> Lead	<input type="checkbox"/> Steam	<input type="checkbox"/> Flow	<input type="checkbox"/> Wind	<input type="checkbox"/> Dir.	<input type="checkbox"/> Speed	<input type="checkbox"/> pH	<input type="checkbox"/> Temp.	<input type="checkbox"/> VOC.	<input type="checkbox"/> Gauge	<input type="checkbox"/> Press.
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Event Description: Unit 246 B-801 A/B Nox monitor became inoperative on 11/18/2011 at 4:08 PM. Adjustments were made and the monitor was returned to service on 11/20/2011 at 5:30 AM.