ConocoPhillips

James F. Wallwork
Environmental Manager
Lake Charles Refinery

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(337) 491-4809 Fax: (337) 491-4213

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (7007 1490 0003 1969 6152)

March 30, 2012

Director, Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency
Mail Code 2242-A
1200 Pennsylvania Avenue, N.W.
Ariel Rios Building South
Room 1119
Washington, DC 20460-0001

RECEIVED
APR 9 2012
Office of
Environmental Compliance

Re: RCFA for Acid Gas Flaring
Incident Occurring on February 16, 2012
United States of America v. Conoco Inc.
Civil Action No. H-01-04430 in the U.S. District Court for the Southern District of Texas

Dear Sirs:

Per the requirements of Paragraphs 183 through 188 of the above referenced Consent Decree, ConocoPhillips is submitting a Root Cause Failure Analysis (RCFA) for an acid gas flaring incident that occurred on February 16, 2012 at the Lake Charles Refinery.

Enclosed you will find the completed RCFA report that describes what happened and the actions taken to reduce the impacts from the event.

Should you have any questions or concerns, please contact me at the number shown above.

Sincerely,

James F. Wallwork

James F. Wallwork

Enclosure

Additional copy distribution with enclosure (via certified mail):

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Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P. O. Box 7611, Ben Franklin Station
Washington, DC 20044-7611
Reference Case No. 90-5-2-1-06722/1

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Administrator, Enforcement Division
Office of Environmental Compliance
P. O. Box 4312
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED (7007 1490 0003 1969 6183)

Chief
Air, Toxics and Inspection Coordination Branch (6EN-A)
Compliance Assurance and Enforcement Division
United States Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, TX 75202

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Director, Air Enforcement Division
Office of Civil Enforcement
c/o Matrix New World Engineering Inc.
120 Eagle Rock Avenue, Suite 207
East Hanover, NJ 07936

Additional copy distribution (via electronic mail):

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CC with enclosures (via regular mail):

Mr. Tin Goedeker
ConocoPhillips Co.
Attn. TA3140
600 North Dairy Ashford
Houston, TX 77079-1175

ConocoPhillips

Version 3.0

Acid Gas Flaring/Tail Gas Incident – COPC Lake Charles Refinery

Date: March 30, 2012

Site: Lake Charles Manufacturing Complex Unit: South Flare

Primary Equipment Number: 1062
Event Type: AG

Was This Event Due to a Malfunction? No **Multiple Events** No **Number of Events: 1**

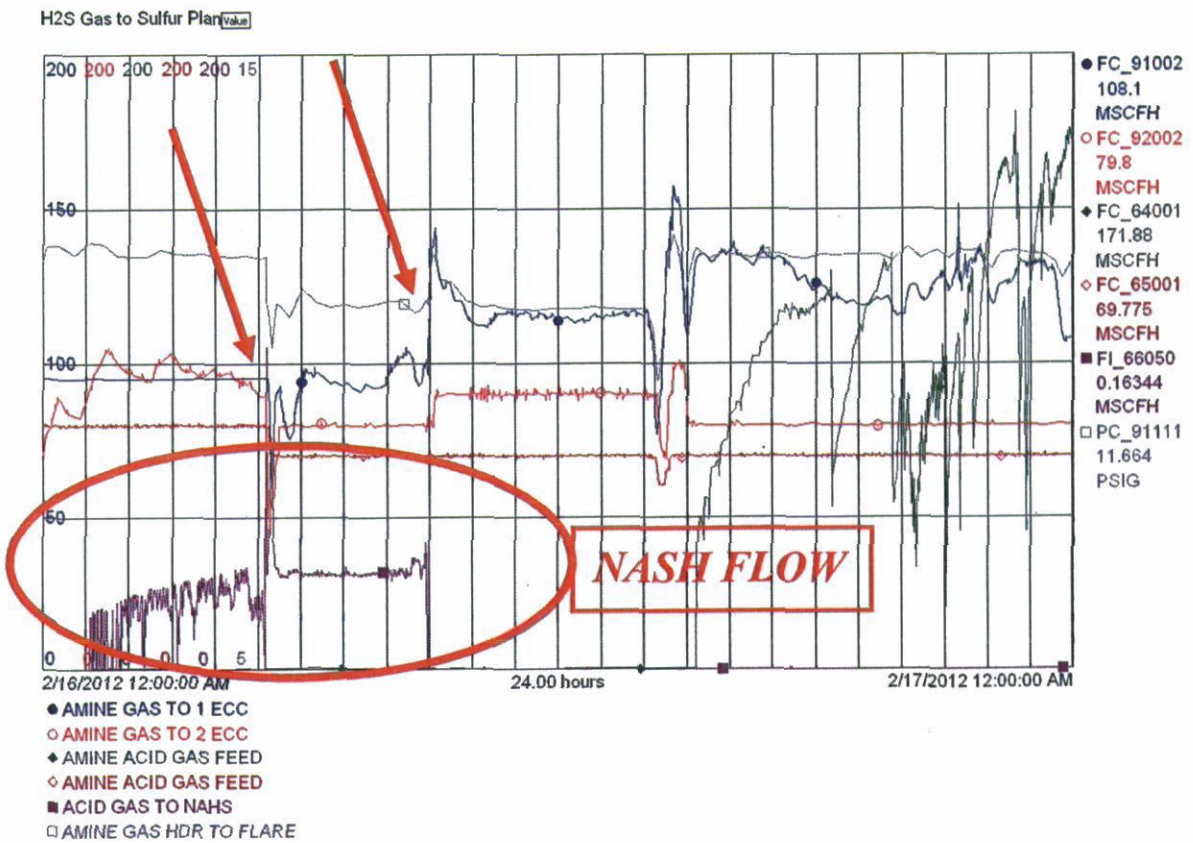
Start/End Date and Time; Quantity Emitted and Calculation (Paragraph 183 (a) and (b)

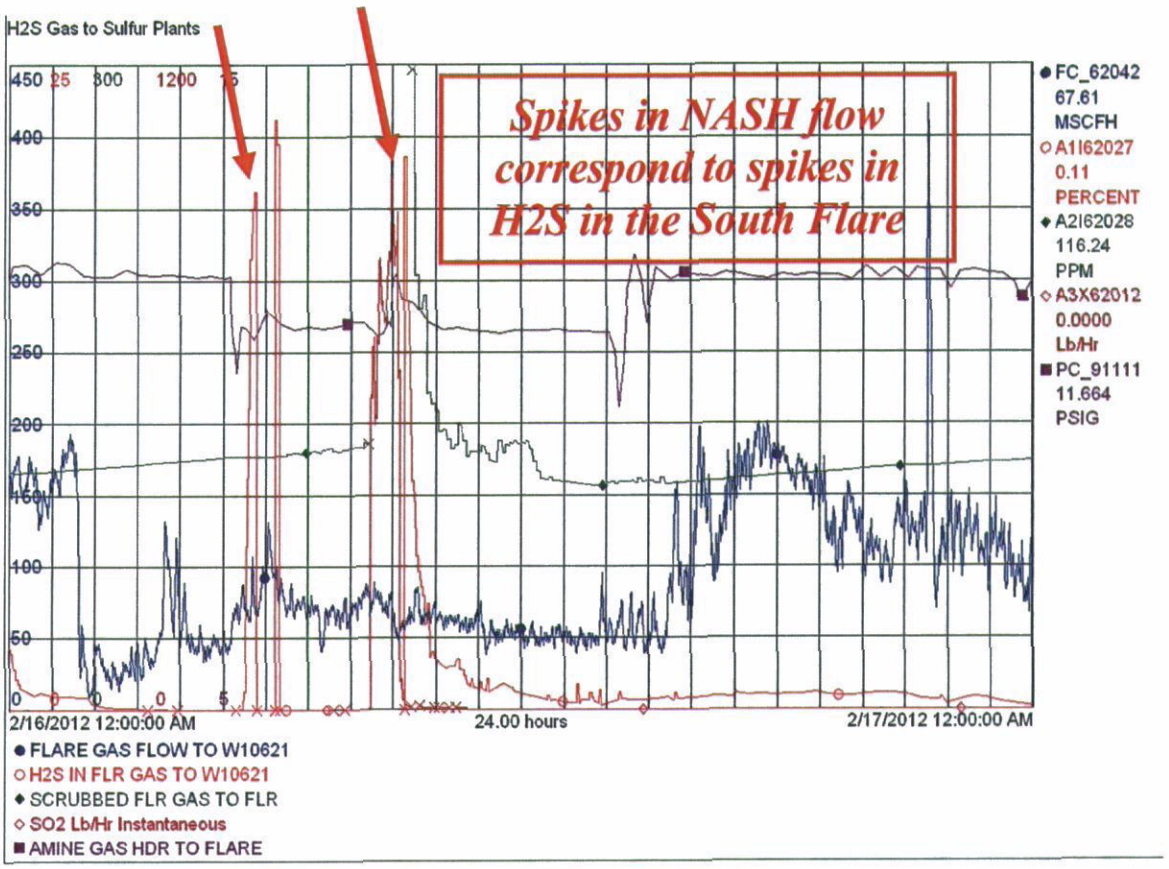
	Start Date/Time	Stop Date/Time	SO_2 Emissions	SO_2 Calculation Method
Incident	02/16/12 8:27 AM	02/16/12 10:42 AM		Show Calculation – follow Para 193
	Event Duration:	2 Hrs and 15 Minutes	0.3 Tons	See attachment 1.
		Total Emissions:	**0.3 tons**	

Statement: What Happened?

The Lake Charles Refinery and Excel Paralubes plant supplies amine gas containing H_2S to a co-located third-party company, TDC, that uses the H_2S to make sodium bisulfide (NaSH). TDC's system relieves to the Lake Charles Refinery South Flare, and it ties into the flare just upstream of the flare's caustic scrubber. TDC was preparing a line for maintenance by isolating and purging it, and during this maintenance activity, TDC sent a high concentration H_2S-containing gas to the South Flare System.

The attached plots illustrate how the Refinery and Excel Sulfur plants were operating stably, and the flow from TDC was unstable. The TDC flow is the purple line if the first plot, and the plot shows that their flow took two swings that correspond to the two high H_2S spikes going to the South Flare (the red line in the second plot).





Describe steps taken during event to limit duration and/or reduce SO_2 emissions *(Paragraph 183(c))*

The South Flare Caustic Scrubber operation was in good operating condition during the time of the event. The flow of high H_2S gas to the system from a third-party was enough to overwhelm the caustic scrubber system. Fresh caustic solution and water were added to the South Flare scrubber during the event to keep the scrubber as effective as possible.

Describe Root Causes and Contributing Causes *(Paragraph 183(d))*

Sudden spikes in flow from the third party "NASH" plant of a stream with high H_2S concentration (amine gas at 95% H_2S) and sufficient flow overwhelmed the capacity of the South Flare Caustic Scrubber to adequately treat the material.

Elements Required by Paragraph 183(f)(1):

1. Was the Acid Gas Flaring/Tail Gas Incident due to an error resulting from careless operation by the personnel charged with the responsibility for the SRPs, TGUs, or Upstream Process Units? *[Paragraph 189(a)]*
   Yes_____No___X__

2. Was the Acid Gas Flaring/Tail Gas Incident due to a failure of equipment that is due to a failure by the Refinery to operate and maintain that equipment in a manner consistent with good engineering practice? *[Paragraph 189(b)]*
   Yes_____No___X__

3. Was the Acid Gas Flaring Incident due to a failure to follow written procedures? *[Paragraph 189(c)]*
   Yes_____No___X__

4. Did the Acid Gas Flaring/Tail Gas Incident [as defined in Paragraph 154(d)] result in emissions of sulfur dioxide at a rate of greater than twenty (20) pounds per hour continuously for three (3) consecutive hours or more and the refinery failed to take any action during the Acid Gas Flaring/Tail Gas Incident to limit the duration and/or quantity of SO2 emissions associated with such Incident? *[Paragraph 190(a)]*
   Yes_____No___X__

5. Has the number of Acid Gas Flaring/Tail Gas Incidents at the facility exceeded five (5) in the last rolling 12-month period? *[Paragraph 190(b)]*

Yes_____No__X__

Elements Required by Paragraph 183(f)(2):

6. Was the Root Cause of the Acid Gas Flaring/Tail Gas Incident a First Time Occurrence? *[Paragraph 192(a)]*
   Yes__X__No_____

   If No, Answer Question 7, below.
   If Yes, Answer the following question, mark Question 7 as "N/A," and answer Question 8.

   Was the Root Cause of the Acid Gas Flaring Incident sudden, infrequent, and not reasonably preventable through the exercise of good engineering practice?

   Yes__X__The cause shall be designated as an agreed-upon malfunction for purposes of reviewing subsequent Flaring Incidents. *[Paragraph 192(a)(1)]*

   No_____Implement corrective action(s) pursuant to Paragraph 184. *[Paragraph 192(a)(2)]*

7. Was the Root Cause of the Acid Gas Flaring/ Tail Gas Incident a Repeat Occurrence? *[Paragraph 192(b)]*
   Yes_____No_____N/A__X__

   If Yes, answer the following:

   a. Did the Acid Gas Flaring/Tail Gas Incident result from a Malfunction as defined in Paragraph 154(k)? *[Paragraph 192(b)(1)]*
      Yes_____No_____

   b. Was the Root Cause of the Incident previously agreed-upon as a Malfunction pursuant to Paragraph 192(a)(1)? *[Paragraph 192(b)(2)]*
      Yes_____No_____

   c. Is the Incident a Repeat of an event for which the Refinery currently has a corrective action plan in place, but is not yet completed? *[Paragraph 192(b)(3)]*
      Yes_____No_____

Elements Required by Paragraph 183(f)(3):

8. State whether ConocoPhillips asserts a defense to the Acid Gas Flaring/Tail Gas Incident, and if so, a description of the defense if the subject incident falls under either Paragraph 190 or Paragraph 192(b).

   ConocoPhillips asserts a defense to this incident because the incident was the result of malfunction which was sudden, infrequent and not reasonable preventable.

Findings and Corrective Action (Paragraphs 183(d), 183 (e) and 184):

None.

Attachment 1

Emissions from this incident were calculated using the equation found in paragraph 193, and the emission calculations are as follows:

$$\boxed{TonsSO2 = [FR] \times [TD] \times [ConcH2S] \times [8.44x10^{-5}]}$$

Tons SO_2 = [89,260] * [2.25] * [0.020] * [8.44 * 10^{-5}] = 0.3

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