PM 4-19-13

VALERO

ST. CHARLES REFINERY • Valero Refining - New Orleans, L.L.C. • P. O. Box 518 • Norco, Louisiana 70079-0518 • Telephone (985) 764-8611

AI 26003

T 148110

S13-26054

JAMES DAZDAR

SERO

April 19, 2013

7011 3500 0001 6349 4327

USPS Certified Mail:

LA Dept. of Environmental Quality
ATTN: Surveillance Division – SPOC
"Unauthorized Discharge Notification Report"
P. O. Box 4313
Baton Rouge, LA 70821- 4313

LDEQ Southeast Regional Office
Building 4, Suite 420
201 Evans Road,
New Orleans, LA 70123-5230

State Emergency Response Commission
Office of the State Police
P. O. Box 66168.
Baton Rouge, LA 70896

Ms. Tiffany K. Clark, Council Secretary
Email: tclark@stcharlesgov.net
and
pduhe@stcharlesgov.net

Subject: Unauthorized Discharge Notification Report
AI # 26003
Incident Date: 04/14/13
LA Police Incident #: 13-01595

Dear Sir/Madam:

1. **Name, address, telephone number, Agency Interest (AI) number, and any other applicable identification numbers of the person, company, or other party who is filing the written report, and specific identification that the report is the written follow-up report required by LAC 33:I.3925:**

   Company Name: Valero St. Charles Refinery
   Address: P. O. Box 518, Norco, LA 70079 (14902 River Road)
   Telephone Number: 985-764-8611
   AI No.: 26003

   This is the first written follow-up report required by LAC 33:I.3925 for this incident.

2. **Time and date of notification, the official contacted when reporting, the name of the person making that notification, and identification of the site or facility, vessel, transport vehicle, or storage area from which the unauthorized discharge occurred:**

   On April 14, at approximately 08:48 hrs, Mr. Charles Kock made the following notifications that the Coker wet gas compressor (WGC) in the delayed coking unit had malfunctioned resulting in excess H_2S and SO_2 emissions at Flares 1, 2 and 4.

RECEIVED

APR 2 6 2013

DEQ
Single Point of Contact

Agency	Date/Time	Valero Rep	Action	Agency Rep	Purpose
State Police	04/14/13 08:35	Charles Kock	Call Made	Booth	Initial Notification
DEP	04/14/13 08:48	Charles Kock	Call Made	Brandon	Initial Notification
DEP	04/14/13 16:12	Charles Kock	Call Made	Brandon	Incident Update
State Police	04/14/13 16:14	Charles Kock	Call Received	Booth	Incident Update
DEP	04/14/13 22:58	Charles Kock	Call Made	George	All Clear
State Police	01/21/12 23:01	Charles Kock	Call Made	Ingrid	All Clear

3. **Date(s), time(s), and duration of the unauthorized discharge and, if not corrected, the anticipated time it is expected to continue:**

Date of Discharge: 04/14/2013
Time of Discharge: Approximately 07:51 hours
Duration: Approximately 11.67 hours

4. **Details of the circumstances and events leading to any emergency condition, including incidents of loss of sources of radiation and if the release point is subject to a permit:**

The Coker WGC shut down when the main thrust bearing failed. Without this bearing, we could not start the WGC and shutdown the Coker unit to eliminate flaring. The cause of the failure is still under investigation.

a. The current permitted limit for the pollutant(s) released:

SO_2
50 pounds per hour (hourly maximum), Flare 1
50 pounds per hour (hourly maximum), Flare 2
50 pounds per hour (hourly maximum), Flare 4

NOx
31 pounds per hour (hourly maximum), Flare 1
31 pounds per hour (hourly maximum), Flare 2
13 pounds per hour (hourly maximum), Flare 4

VOCs:
28.5 pounds per hour (hourly maximum), Flare 1
28.5 pounds per hour (hourly maximum), Flare 2
4.7 pounds per hour (hourly maximum), Flare 4

CO:
168.30 pounds per hour (hourly maximum), Flare 1
168.30 pounds per hour (hourly maximum), Flare 2
28.1 pounds per hour (hourly maximum), Flare 4

PM10
1.0 pounds per hour (hourly maximum), Flare 1
1.0 pounds per hour (hourly maximum), Flare 2
0.2 pounds per hour (hourly maximum), Flare 4

H_2S
1.00 pounds per hour (hourly maximum), Flare 1
1.00 pounds per hour (hourly maximum), Flare 2
0.50 pounds per hour (hourly maximum), Flare 4.

b. The permitted release point/outfall ID:

Source ID: EQT 013, EQT 007, EQT 0360
Descriptive Name: Flares 1, 2 and 4

c. Which limits were exceeded for air releases?

This incident is still under investigation and the estimated emissions will be submitted in a follow-up report.

5. Common or scientific chemical name of each specific pollutant that was released as the result of an unauthorized discharge, including the CAS number and U.S. Dept. of Transportation hazard classification, and best estimate of amounts of any or all released pollutants (expressed in pounds, including calculations):

Common or scientific chemical name = Sulfur Dioxide, SO_2
CAS # 7446-09-5
U.S. DOT hazard class = UN1079

Common or scientific chemical name = Hydrogen Sulfide, H_2S
CAS # 007783-06-4
U.S. DOT hazard class = UN1053

Emission estimates have not been completed and will be included with subsequent correspondence.

6. **Statement of actual or probable fate or disposition of the pollutant or source of radiation and what off-site impact resulted:**

   Gas from the Coker was combusted in Flares 1, 2 and 4, and the resulting combustion byproducts dispersed.

7. **Remedial actions taken, or to be taken, to stop unauthorized discharges or to recover pollutants or sources of radiation:**

   Emissions were minimized by reducing crude rate by approximately 50 percent and by shutting down the delayed coker unit.

8. **Procedures or measures which have or will be adopted to prevent recurrence of the incident or similar incidents, including incidents of loss of sources of radiation:**

   This incident is still under investigation. No procedures or preventive measures have been identified at this time. This information will be submitted in a follow-up report.

9. **If an unpermitted or unlicensed site or facility is involved in the unauthorized discharge, a schedule for submitting a permit or license application to the department, or rationale for not requiring a permit or license:**

   N/A

10. **The reporting party's status (former or present owner, operator, disposer, etc.):**

    Valero Refining – New Orleans, L.L.C. is the present owner of the facility.

11. **For discharges to the ground or groundwater, the following information shall also be included: all information of which the reporting party is aware that indicates pollutants are migrating, including, but not limited to, monitoring well data; possible routes of migrations; and all information of which the reporting party is aware regarding any public or private wells in the area of the migration used for drinking, stock watering, or irrigation:**

    N/A

12. **What other agencies were notified:**

    The agencies listed in question number 2 were the only agencies notified.

13. **Names of all other responsible parties of which the reporting party is aware:**

    N/A

14. A determination by the discharger of whether or not the discharge was preventable; if not, an explanation of why the discharge was not preventable.

The incident is still under investigation. We have not yet made a determination on whether or not this discharge was preventable. This information will be submitted in a follow-up report.

15. The extent of injuries, if any:

There were no injuries as a result of this incident.

16. The estimated quantity, identification, and disposition of recovered materials, if any:

No material was recovered from this event.

If you have any questions pertaining to this incident or require additional information please call me at 985-764-5605.

Sincerely,

Robert J.T. Martin, P.E.
Environmental Engineering Manager

PM 6/14/13

VALERO

ST. CHARLES REFINERY • Valero Refining - New Orleans, L.L.C. • P. O. Box 518 • Norco, Louisiana 70079-0518 • Telephone (985) 764-8611

AI# 26003
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Soil-ER
SI3-26054
SERO
James Dardar

June 14, 2013

7011 3500 0001 6349 8332

USPS Certified Mail:
LA Dept. of Environmental Quality
ATTN: Surveillance Division – SPOC
"Unauthorized Discharge Notification Report"
P. O. Box 4313
Baton Rouge, LA 70821- 4313

LDEQ Southeast Regional Office
Building 4, Suite 420
201 Evans Road,
New Orleans, LA 70123-5230

State Emergency Response Commission
Office of the State Police
P. O. Box 66168.
Baton Rouge, LA 70896

Tiffany K. Clark, Council Secretary
St. Charles Parish Emergency Group
Email pdf: tclark@stcharlesgov.net
and cc: pduhe@st-charles.la.us

RECEIVED
JUN 19 2013
DEQ
Single Point of Contact

Subject: Unauthorized Discharge Notification Report
AI # 26003
Incident Date: April 14, 2013
LA Police Incident #: 13-01595

Dear Sir/Madam:

1. **Name, address, telephone number, Agency Interest (AI) number, and any other applicable identification numbers of the person, company, or other party who is filing the written report, and specific identification that the report is the written follow-up report required by LAC 33:I.3925:**

   Company Name: Valero St. Charles Refinery
   Address: P. O. Box 518, Norco, LA 70079 (14902 River Road)
   Telephone Number: 985-764-8611
   AI No.: 26003

   This is the 60-day follow-up report required by LAC 33:I.3925 for this incident.

2. **Time and date of notification, the official contacted when reporting, the name of the person making that notification, and identification of the site or facility, vessel, transport vehicle, or storage area from which the unauthorized discharge occurred:**

   On April 14, 2013, at approximately 08:48 hrs, Mr. Charles Kock made the following notifications that the Coker Wet Gas Compressor (WGC) in the delayed coker unit had malfunctioned.

Agency	Date/Time	Valero Rep	Action	Agency Rep	Purpose
State Police	04/14/13 08:35	Charles Kock	Call Made	Booth	Initial Notification
DEP	04/14/13 08:48	Charles Kock	Call Made	Brandon	Initial Notification
DEP	04/14/13 16:12	Charles Kock	Call Made	Brandon	Incident Update
State Police	04/14/13 16:14	Charles Kock	Call Received	Booth	Incident Update
DEP	04/14/13 22:58	Charles Kock	Call Made	George	All Clear
State Police	04/14/13 23:01	Charles Kock	Call Made	Ingrid	All Clear

3. Date(s), time(s), and duration of the unauthorized discharge and, if not corrected, the anticipated time it is expected to continue:

Date of Discharge: 04/14/2013
Time of Discharge: Approximately 07:51
Duration: Approximately 11.67 hours

4. Details of the circumstances and events leading to any emergency condition, including incidents of loss of sources of radiation and if the release point is subject to a permit:

On April 14, 2013, at approximately 07:51, the Coker WGC malfunctioned, resulting in a unit shutdown and a release to the flare of approximately 47,536 pounds of sulfur dioxide and 144 pounds of hydrogen sulfide. The WGC tripped offline and could not be restarted due to a malfunction of the compression thrust bearing. Monitoring of the compression thrust data did not indicate prior degradation of the bearing. The bearing is believed to have failed from steam condensation due to a boiler malfunction approximately 25 minutes before the WGC tripped. The boiler malfunction caused the steam temperature to drop to the saturation point. Additionally, there was missing and damaged insulation found along the steam header upstream of the WGC. The missing insulation along with the heavy rain that was in the area during the time of the incident could have contributed to the drop in steam temperature to the saturation point. Emissions were minimized by reducing the crude rate by approximately 50 percent and by shutting down the delayed coker unit.

a. The current permitted limit for the pollutant(s) released:
SO_2
50 pounds per hour (hourly maximum), Flare 1
50 pounds per hour (hourly maximum), Flare 2
25 pounds per hour (hourly maximum), Flare 3
25 pounds per hour (hourly maximum), Flare 4

NOx
31 pounds per hour (hourly maximum), Flare 1
31 pounds per hour (hourly maximum), Flare 2
12.95 pounds per hour (hourly maximum), Flare 3
12.95 pounds per hour (hourly maximum), Flare 4

VOCs:
28.5 pounds per hour (hourly maximum), Flare 1
28.5 pounds per hour (hourly maximum), Flare 2
4.74 pounds per hour (hourly maximum), Flare 3
4.74 pounds per hour (hourly maximum), Flare 4

CO:
168.30 pounds per hour (hourly maximum), Flare 1
168.30 pounds per hour (hourly maximum), Flare 2
28.05 pounds per hour (hourly maximum), Flare 3
28.05 pounds per hour (hourly maximum), Flare 4

PM10/2.5
1.0 pounds per hour (hourly maximum), Flare 1
1.0 pounds per hour (hourly maximum), Flare 2
0.17 pounds per hour (hourly maximum), Flare 3
0.17 pounds per hour (hourly maximum), Flare 4

H_2S
1.00 pounds per hour (hourly maximum), Flare 1
1.00 pounds per hour (hourly maximum), Flare 2
0.5 pounds per hour (hourly maximum), Flare 3
0.5 pounds per hour (hourly maximum), Flare 4

b. The permitted release point/outfall ID:

Source ID: EQT 013 and EQT 360
Descriptive Name: Flares 1, 2 and 4

c. Which limits were exceeded for air releases?

We exceeded the maximum hourly permitted emissions for NO_x, CO, VOC, H_2S and SO_2 at Flares 1 and 2. We also exceeded the reportable quantity for H_2S and SO_2 as a result of the incident. The estimated emissions associated with this incident are found in Attachment 1.

5. **Common or scientific chemical name of each specific pollutant that was released as the result of an unauthorized discharge, including the CAS number and U.S. Dept. of Transportation hazard classification, and best estimate of amounts of any or all released pollutants (expressed in pounds, including calculations):**

   Common or scientific chemical name = Sulfur Dioxide, SO_2
   CAS # 7446-09-5
   U.S. DOT hazard class = UN1079

   Common or scientific chemical name = Hydrogen Sulfide, H_2S
   CAS # 007783-06-4
   U.S. DOT hazard class = UN1053

   The estimated emissions associated with this incident are included as Attachment 1.

6. **Statement of actual or probable fate or disposition of the pollutant or source of radiation and what off-site impact resulted:**

   Gas from the Coker was combusted in Flare 1, 2 and 4, and the resulting combustion byproducts dispersed.

7. **Remedial actions taken, or to be taken, to stop unauthorized discharges or to recover pollutants or sources of radiation:**

   Emissions were minimized by reducing the crude rate by approximately 50 percent and by shutting down the delayed coker unit.

8. **Procedures or measures which have or will be adopted to prevent recurrence of the incident or similar incidents, including incidents of loss of sources of radiation:**

   1. Communicate this incident to all affected personnel
   2. Replace missing or damaged insulation on the steam header
   3. Evaluate Mud Legs for performance and adequacy
   4. Evaluate the need for an inline separator on the 650-lb steam to the WGC
   5. Perform an infrared (IR) camera scan of the 650-lb steam header

9. **If an unpermitted or unlicensed site or facility is involved in the unauthorized discharge, a schedule for submitting a permit or license application to the department, or rationale for not requiring a permit or license:**

   N/A

10. **The reporting party's status (former or present owner, operator, disposer, etc.):**

    Valero Refining – New Orleans, L.L.C. is the present owner of the facility.

11. For discharges to the ground or groundwater, the following information shall also be included: all information of which the reporting party is aware that indicates pollutants are migrating, including, but not limited to, monitoring well data; possible routes of migrations; and all information of which the reporting party is aware regarding any public or private wells in the area of the migration used for drinking, stock watering, or irrigation:

N/A

12. What other agencies were notified:

The agencies listed in question number 2 were the only agencies notified.

13. Names of all other responsible parties of which the reporting party is aware:

N/A

14. A determination by the discharger of whether or not the discharge was preventable; if not, an explanation of why the discharge was not preventable.

This incident was not reasonably preventable because the drop in steam temperature was likely caused from an unexpected boiler trip and there was no indication of degradation to the thrust bearing prior to the WGC malfunction.

15. The extent of injuries, if any:

There were no injuries as a result of this incident.

16. The estimated quantity, identification, and disposition of recovered materials, if any:

No material was recovered from this event.

If you have any questions pertaining to this incident or require additional information please call Mr. Andre Marquette at 985-764-8611.

Sincerely,

Ralph Phillip
Vice President and General Manager

Enclosure

Attachment 1

Basis:

	Start Time:	End Time:	Duration (hrs)	HC Gas Flow (scf)	MMBTU released to flare	Fraction H_2S
Flare #1	4/14/13 7:51	4/14/13 7:57	0.10	32,391	2	
Flare #2	4/14/13 7:52	4/14/13 14:14	6.37	5,348,425	271	
Flare #4	4/14/13 7:53	4/14/13 7:53	0.02	3,633	0	
Flare #1	4/14/13 10:14	4/14/13 12:23	2.15	1,983,187	100	
Flare #1	4/14/13 14:15	4/14/13 16:09	1.90	799,479	40	0.051
Flare #4	4/14/13 15:09	4/14/13 15:09	0.02	3,255	0	
Flare #4	4/14/13 15:18	4/14/13 15:18	0.02	3,239	0	
Flare #4	4/14/13 15:34	4/14/13 15:59	0.42	9,616	0	
Flare #2	4/14/13 16:03	4/14/13 19:31	3.47	565,555	29	
Total	**4/14/13 7:51**	**4/14/13 19:31**	**11.67**	**8,748,780**	**443**	

Emission calculation:

Criteria Pollutant:	Emission Factor (lb/mmbtu):	Flare #1	Flare #2	Flare #4	Total Released (lbs)
CO	0.37	1,160	2,436	8	3,604
NOx	0.068	213	448	1	662
PM	0.0028	7	15	0	22
VOC	0.14	9	18	0	27
SO_2	N/A	15,295	32,133	107	47,536
H_2S	N/A	46	97	0.3	144

Formulas:

$$Q_{SO_2,released} = \left(\frac{x\ scf_{HCGas}}{hr}\right)\left(\frac{y\ scf_{H_2S}}{scf_{HCGas}}\right)\left(\frac{lb-mole_{H_2S}}{379\ scf_{H_2S}}\right)\left(\frac{0.995\ lb-mole_{SO_2}}{lb-mole_{H_2S}}\right)\left(\frac{64\ lb_{SO_2}}{lb-mole_{SO_2}}\right) = \frac{z\ lb_{SO2}}{hr}$$

$$Q_{H2S,released} = \left(\frac{x\ scf_{HCGas}}{hr}\right)\left(\frac{0.051\ scf_{H_2S}}{scf_{HCGas}}\right)\left(\frac{lb-mole_{H_2S}}{379\ scf_{H_2S}}\right)\left(\frac{34\ lb_{H_2S}}{lb-mole_{H_2S}}\right)\left(\frac{0.005\ lb_{H_2S,released}}{lb_{H_2S}}\right) = \frac{z\ lb_{H_2S}}{hr}$$

$$Q_{CO,release\ d} = \left(\frac{x\ scf_{HCGas}}{hr}\right)\left(\frac{y\ BTU}{scf_{HCGas}}\right)\left(\frac{0.37\ lb_{CO}}{MMBTU}\right)\left(\frac{MMBTU}{1E6\ BTU}\right) = z\frac{lb_{CO}}{hr}$$