

**For CCHMP Use Only:**

**Received By:**

**Date Received:**

**Incident Number:**

**Copied To:**

**Event Classification Level:**

**ATTENTION:** Randall L. Sawyer  
Hazardous Materials Program Director  
Contra Costa Health Services Department  
4333 Pacheco Boulevard  
Martinez, CA 94553

**INCIDENT DATE:** August 6, 2012

**INCIDENT TIME:** 06:30 PM

**FACILITY:** Chevron Richmond Refinery

**PERSON TO CONTACT FOR ADDITIONAL INFORMATION:** Karen Draper

Phone Number: (510) 242-1547

## I. SUMMARY OF EVENT

On August 6, 2012 at approximately 06:30 PM a fire occurred at the Chevron Refinery #4 Crude Unit. Based on current information, it is believed that the primary location of the fire was near P-1149 (C-1100 Atmospheric Column No. 4 Sidecut pump). At the time of the fire, Operations personnel were in the process of evaluating a reported leak with the assistance of Chevron Fire Department personnel.

The #4 Crude Unit distills crude oil into various fractions of different boiling ranges, each of which are then processed further in the other refinery processing units. The #4 Crude Unit at Richmond Refinery has both an Atmospheric Distillation column and a Vacuum Distillation column. This incident involved equipment associated with the Atmospheric Distillation column.

## II. AGENCIES NOTIFIED, INCLUDING TIME OF INITIAL NOTIFICATION

Primary: Community Warning System (CWS):

- Level 3 CWS (shelter in place) activated at approximately 6:35 PM (Which served as the initial notification to most of the agencies below)
- Shelter in place lifted by Contra Costa County Hazardous Materials Programs (CCHMP) at 11:12 PM

Secondary: Subsequent notifications via telephone to the agencies below

RPD	Dispatch	510-620-6933	7:40 PM
CCHMP	Melissa Hagen	925-335-3232	7:28 PM
BAAQMD	Mr. Scott	415-749-4979	7:33 PM

SOES	Bob McRae	800-852-7550	6:53 PM
NRC	Garrther	800-424-8802	6:59 PM
Cal / OSHA	Clyde Trombettas	925-602-6517	10:09 PM

The list above does not include all representatives from all agencies

### III. AGENCIES RESPONDING, INCLUDING CONTACT NAMES AND PHONE NUMBERS:

At this time, we are aware of the following agencies that have responded.

Cal / OSHA	Clyde Trombettas	925-602-2665
CCHMP	Trisha Asuncion	925-335-3247
BAAQMD	Jackie Huynh	415-749-4979
OSPR– Dept. Fish & Game	Bob Chedsey	707-864-4975
U.S. EPA	Scott Adair	415-947-4549
Richmond Police Department		510-233-1214

### IV. EMERGENCY RESPONSE ACTION:

- Chevron Fire Department was on scene prior to the outbreak of the fire
- Chevron Fire Department and Plant Operators activated water spray on fire.
- Both Petro-Chem Mutual Aid and Municipal Mutual Aid were called in for support.
  - This included Richmond Fire, El Cerrito Fire, Berkeley Fire, Contra Costa County Fire, Moraga/Orinda Fire, Hercules/Rodeo Fire, Phillips 66, Valero, Shell, Tesoro and Dow Fire.

### V. IDENTITY OF MATERIAL RELEASED AND ESTIMATED OR KNOWN QUANTITIES:

Emissions from flaring associated with the event are summarized below.

	Flare emissions
Vent Gas Volume (SCF)	2,099,500*
Hydrocarbon (lbs)	---
SO <sub>2</sub> (lbs)	739*
Methane (lbs)	87*
Non-Methane Hydrocarbon(lbs)	1,270*
H <sub>2</sub> S (lbs)	3.9*
NO <sub>x</sub> (lbs)	69*

\* Flare emissions data presented herein is for the date of the initial event (08/06/12). The flaring associated with the event continues in order to safely depressure the #4 Crude Unit through the use of the LSFO Flare. Estimates herein are based on currently available data and are subject to change based on further investigation and analysis.

In addition, an unknown amount of hydrocarbon was combusted. Emissions due to the fire have not yet been determined. Analysis results to date from Sections VIII (b) and (c) provides no evidence of adverse air quality impacts associated with the fire.

### VI. METEOROLOGICAL CONDITIONS AT TIME OF EVENT:

Wind Speed	11 MPH
Wind Direction	130° (E-SE)
Precipitation	None
Temperature (F)	76°

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Information based on data received from the Refinery's meteorological station.

## VII. DESCRIPTION OF INJURIES:

The following employee injuries were associated with this incident (all were part of the emergency response):

- 1) Employee received minor burn to small area of the left ear.
- 2) Employee received minor burn to left wrist.
- 3) Employee abdominal strain – cause to be determined.
- 4) Employee respiratory irritation.
- 5) Employee irritation to lower leg from boot rubbing it.

All employees received first aid onsite by the Chevron Fire Department and/or the onsite clinic. All employees returned to work on the same shift. There were no injuries to contractor personnel associated with this incident.

## VIII. COMMUNITY IMPACT:

- a) Chevron has established a claims process to compensate our neighbors for medical and property expenses incurred as a result of the incident.
- b) Sampling data and community monitoring results: Five Chevron employees were deployed outside of the refinery on August 6, 2012 to take air monitoring samples at various locations downwind of the fire. All 17 direct-reading samples showed non-detectable Hydrogen Sulfide (H<sub>2</sub>S), Sulfur Dioxide (SO<sub>2</sub>), and Carbon Monoxide (CO) concentrations (<0.1 ppm, <0.1 ppm and < 1ppm, respectively). Additionally, 19 gas bag samples were collected in various downwind locations in Richmond, El Sobrante, and El Cerrito. Samples have been sent to Air Toxics Ltd. Laboratory for sulfur compounds and Volatile Organic Compounds testing. The test results are expected within the next several days. Follow up community monitoring was conducted on August 7, 2012. All 6 direct-reading samples showed non-detectable Hydrogen Sulfide (H<sub>2</sub>S), Sulfur Dioxide (SO<sub>2</sub>), and Carbon Monoxide (CO) concentrations (<0.1 ppm, <0.1 ppm and < 1ppm, respectively).
- c) Fence line monitoring:  
Continuous monitoring data is gathered around the clock from instrumentation located at Chevron's Office Hill, Castro Street and Gertrude Street monitoring stations. A data point is given, close to or prior to the incident as a reference. The following maximum readings were recorded between the times the fire started and the time all-clear was called by CCHMP (between 18:30 and 23:31). None of the maximum readings exceeded OSHA's Permissible Exposure Limits (PELs).

	Maximum Concentration Readings		
	Castro Street	Office Hill	Gertrude Street
H <sub>2</sub> S (ppb) Background @ 15:00	3.04 ppb	3.99 ppb	2.09 ppb
H <sub>2</sub> S (ppb) Max.	3.27 ppb	5.41 ppb	2.51 ppb
SO <sub>2</sub> (ppm) Background @ 15:00	0.006 ppm	0.003 ppm	0.002 ppm
SO <sub>2</sub> (ppm) Max.	0.007 ppm	0.006 ppm	0.002 ppm

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Note: The Cal/OSHA PEL for SO<sub>2</sub> is 2,000 ppb (2 ppm) averaged over an 8-hour period. The Cal/OSHA PEL for H<sub>2</sub>S is 10,000 ppb (10 ppm) averaged over an 8-hour period.

**IX. INCIDENT INVESTIGATION RESULTS:**

A formal TapRoot® investigation to determine the cause of the incident has been initiated. The investigation team is composed of Subject Matter Experts (SMEs) as well as operations personnel, management personnel and Union representatives. Other SMEs will be brought into the investigation on an as needed basis. The investigation Team Leader is a Manager from another Chevron refinery and the investigation Facilitator also comes from outside of Richmond Refinery.

**X. SUMMARIZE INVESTIGATION RESULTS BELOW OR ATTACH COPY OF REPORT:**

An investigation has been initiated to prepare the 30-day report. However, technical analysis may further extend the completion timeline of this investigation.

**XI. SUMMARIZE PREVENTABLE MEASURES TO BE TAKEN TO PREVENT RECURRENCE INCLUDING MILESTONE AND COMPLETION DATES FOR IMPLEMENTATION**

The impacted portion of the plant is not operational. Preventative measures and corrective actions will be based upon the investigation report mentioned in Section X, above.