

**ATTACHMENT C  
30 DAY FOLLOW-UP NOTIFICATION REPORT FORM  
CONTRA COSTA HEALTH SERVICES**

**For CCHS Use Only:**

**Received By:** \_\_\_\_\_  
**Date Received:** \_\_\_\_\_  
**Incident Number:** \_\_\_\_\_  
**Copied To:** \_\_\_\_\_  
**Event Classification Level:** \_\_\_\_\_

**INSTRUCTIONS:** A hardcopy and an electronic copy of this report is to be submitted for all Level 2 and 3 incidents or when requested by CCHS. See Attachment C-1 for suggestions regarding the type of information to be included in the report. Attach additional sheets as necessary. This form is to be used for update reports after the initial 30 day report has been submitted. Forward the completed form to:

ATTENTION: Randall L. Sawyer  
Hazardous Materials Programs Director  
Contra Costa Health Services  
4585 Pacheco Boulevard, Suite 100  
Martinez, CA 94553

**INCIDENT DATE:** 12/27/2016

**INCIDENT TIME:** 23:45PM

**FACILITY:** Chevron Richmond Refinery

**PERSON TO CONTACT FOR ADDITIONAL INFORMATION**

Name Karla Salomon

Phone number 510-242-3629

**Provide any additional information that was not included in the 72-hour report when the 72-hour report was submitted, including material released and estimated or known quantities, community impact, Injuries etc:**

No new information to report in regards to the flaring on 12/27.

**I. Incident Investigation Results**

Is the investigation of the incident complete at this time?  Yes  No

If the answer is no, when do you expect completion of the investigation?

\_\_\_\_\_

If the answer is yes complete the following:

**Summarize Investigation Results below or attach a copy of the report:**

On 12/28/16 at 00:20, the 2 North Yard Flare Gas Recovery (FGR) Compressors tripped offline due to a high liquid level in a Liquid Knockout Drum. The trip is automatic and prevents liquid carryover into the compressors. Both compressors remained offline for approximately one hour while Operations completed troubleshooting of the high liquid level.

It was determined that the high liquid level occurred because a bottoms pump could not pump the liquid from the vessel to the normal destination of the Lube Oil (RLOP) plant recovery vessel. Flow was restricted due to plugging in the 2" line.

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**INCIDENT DATE: 12/27/2016**

**FACILITY: Chevron Richmond Refinery**

**Summarize preventive measures to be taken to prevent recurrence including milestone and completion dates for implementation:**

<b>Preventive Measures</b>	<b>Anticipated Completion Date</b>
Update the Consequence of deviation Table for FGR high level alarm. Include potential for plugging in piping for the RLOP recovery vessel in "Probable Cause" and include alternate routings of FGR knockout liquid in "Corrective Action."	4/30/2017
Consider installation of flow instrumentation on liquid knock out piping at the RLOP recovery vessel to allow for increased monitoring of the FGR liquid knock out system.	6/30/2017
Consider lowering high level alarm set point for the FGR vessel to allow Operations additional time to troubleshoot increasing liquid level.	6/30/2017
Consider adjusting Automatic pump start (APS) setpoint for the FGR vessel so that pump auto-starts at a lower liquid level.	6/30/2017

**State and describe the Root-Cause of the incident:**

The root cause has been determined to be plugging in the 2" FGR Knockout vessel pump out line to the RLOP recovery vessel. The exact cause of the plugging could not be confirmed by the investigation team although multiple subject matter experts were involved along with engineering evaluations during which many potential causes were evaluated. Preventive measures were created that will help the operators and engineering teams better understand if plugging is occurring and give more time to pump liquids to alternate vessels.