

**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: 12/28/2016

INCIDENT TIME: 20:45PM

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 regarding the flaring occurring 12/28 evening.

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:

At 4:00 pm on December 28th, 2016, following the mechanical completion of a shutdown, the RLOP Gas Recovery Unit (GRU) off gas compressor was in the process of being started using the required procedure. Once online the necessary plant feeds were routed to the compressor to ensure it had minimum flow for steady operation. The compressor began surging (poor performance) and did not provide adequate flow. While operators and technical employees were troubleshooting the cause of the surging, the inlet pressure at the compressor increased and a designated pressure controller device opened to allow it to de-pressure to the relief system. This controller ensured the

30 DAY REPORT, PAGE 2

INCIDENT DATE: 12/28/2016

FACILITY: Chevron Richmond Refinery

compressor stayed within proper operating limits. But the additional flow to the relief system exceeded the Flare Gas Recovery (FGR) capacity and resulted in flaring.

After 24 hours of troubleshooting, it was determined that there was a restriction up-stream of the compressor and it would need to be shut down to inspect.

Once the compressor was isolated, it was discovered that a blind (steel plate) remained in the line, cutting off all flow to the 1st stage of the compressor. The installed blind was found to have a "straight tab" on it, which visually indicates a spacer (a material installed to give the piping the proper fit to the compressor). Externally a blind resembles a spacer but, per Chevron standards, a blind has a "T" shaped tab instead of a straight tab to differentiate it from a spacer. The visual field walk team for the Pre-Startup Safety Review observed the blind with a straight tab and concluded it was a spacer as it did not have the normal Chevron "T".

There was a change of contractors during the turnaround work on this equipment, so the isolation, welding work, and partial blind removal were completed by one contracting company and transferred to another contracting company to complete the removal of the remaining blinds. The potential gap existed that the original contracting company knew that the blind installed was different than the Chevron standard but failed to communicate this information.

Thereafter, a proper spacer with the appropriate straight shaped tab was installed in place of the blind. At 8:00 pm on December 31st, the compressor was restarted successfully and startup proceeded as normal.

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

The corrective actions recommended:

1. Update Refinery Instruction RI-9900 to directly reference the standard blind drawing.
 - Anticipated completion date: 12/31/2017
2. Provide communication and training of the Refinery Instruction changes to the refinery, routine maintenance and contractors as well as contractors before turnarounds.
 - Anticipated completion date: 12/31/2017
3. Conduct survey of the Refinery's blinds to ensure that they meet Chevron's current standard for external identification.
 - Anticipated completion date: 12/31/2017
4. Review the Refinery's standard drawing for blinds and spacers to ensure the design meets the Refinery's current standards.
 - Anticipated completion date: 12/31/2017

30 DAY REPORT, PAGE 3
INCIDENT DATE: 12/28/2016
FACILITY: Chevron Richmond Refinery

5. Review the Refinery's turnaround procurement guidance to ensure all potential blind sources (whether purchased by Chevron, manufactured on site, or procured by a contractor) are documented.
 - Anticipated completion date: 12/31/2017
6. Develop a Job Hazard Analysis to document the required information that needs to be communicated when a job is turned over from one contracting company to another.
 - Anticipated completion date: 12/31/2017

State and describe the Root-Cause of the incident:

The identified root causes:

- a) Blind did not conform to the standard Refinery drawing.
 - The primary means of external identification of a blind/spacer is the design of the tab attached. The design is specified in a refinery standard. In this incident, the blind did not have the required "T" and looked like a spacer.
- b) No clear documentation or chain of custody for procurement of the blind for large projects.
 - There are multiple sources for procuring blinds. In this incident, the source of the blind could not be determined through the procurement documentation. This allowed the possibility of obtaining a blind that did not meet the Refinery standards.
- c) Lack of effective turnover from one contractor to the next.
 - The isolation, welding work, and partial blind removal were completed by one contracting company and transferred to another contracting company to complete the removal of the remaining blinds. The potential gap existed that the original contracting company knew that the blind installed was different than the Chevron standard but failed to communicate this information.