



CONTRA COSTA  
HEALTH SERVICES

INCIDENT REPORT  
March 7, 2018

**INCIDENT NO.** 18-0227-01  
**INCIDENT DATE:** February 27, 2018  
**LOCATION:** Pittsburg Rail Yard

**SUMMARY**

At 12:28, CCHSHMP received a dispatch notification from Contra Costa Fire Protection District (Con Fire) regarding odors coming from at least two (2) railcars: one containing a residual of 200 gallons of spent sodium sulfide solution ("TCIX728781", UN1760) that was en route to Tesoro/Andeavor Refinery; and the other was a full railcar containing picoline ("DOWX5833"), which belonged to The DOW Chemical Company (DOW). Both cars were on Burlington Northern Santa Fe (BNSF) rail lines.

BNSF personnel were notified but their estimated time of arrival was unknown at the time. Con Fire initially received the call from the Union Pacific (UP) rail master regarding odors from a couple of rail cars and giving rail yard workers metallic-like taste in mouths. CCHSHMP was requested to help identify/verify the source of the leak, assess the severity of the leak, and mitigate the leak, if possible, to minimize impact to the nearby community.

Command

The Incident Command Post (ICP) was established approximately 3/8 of a mile east of the location where the two railcars in question at the rail yard. Con Fire Battalion Chief Bob Atlas was Incident Commander (IC) and Captain Chris Bloch was Safety Officer/Operations Chief. CCHSHMP was the Haz Mat Group: T. Johnson was Group Supervisor and A. Ackerman Haz Mat Assistant Safety Officer (ASO).

Glenn from Union Pacific briefed IC, Safety/Ops, and Haz Mat Group about the incident, including the location of the railcars. Johnson decided that the Haz Mat Group would check only on the spent sodium sulfide solution railcar and requested that IC contact DOW to send a crew to look at the picoline railcar. The Haz Mat Group moved its staging closer to the railcars, which was about a ¼ mile west from the ICP. Any communications between Command and Haz Mat Group would be through the radio channel "Charlie 2."

Haz Group Operations

Refer to Attachment E for the ICS 208 form, which contains details such as Entry/Backup Team personnel, monitoring equipment, and the diagram of the scene.

The objectives of the entry were to:

- Conduct reconnaissance of railcar "TCIX728781" containing spent sodium sulfide solution in order to verify that the source of the odor is from this railcar.
- Monitor air around the railcars and on top of the railcar; and
- If it is verified that the railcar is the source of the leak, then the Entry Team would try to find the source and mitigate if it is possible and safe to do so.



Based on the two hazardous materials the Entry and Backup Teams may encounter downrange (i.e., corrosive sodium sulfide and flammable picoline), the ASO/Tech Ref assessed that the Entry and Backup Teams don firefighting turnouts and self-contained breathing apparatus (SCBA) and have a work mission duration of 30 minutes. The Entry Team communicated with Entry Team Leader on Hazmat Tactical Channel 01. If the Entry Team received any liquid exposures, they would be pH'ed and subject to water deluge.

#### Assessment

The Entry Team proceeded downrange toward the suspected leaking railcar, the 16<sup>th</sup> car along Track #7. The Entry Team brought with them the QRae to monitor for LEL and the Jerome to check for hydrogen sulfide (H2S); and a bag of wrenches for tightening loose components on the railcar.

The Jerome detected approximately 1-2 parts per billion (ppb) during the approach to the railcar. When they reached railcar "TCIX728781", the air monitoring devices did not detect anything at ground level. When they reached the top of the railcar, they placed the Jerome at an opening of the protective housing. The Jerome read "HL" meaning that H2S was detected at greater than 50 ppm, the device's maximum limit. The Entry Team surmised that the leak originated from inside and broke the seal to open the cover of the protective housing and release the trapped vapors that accumulated. Once the housing was opened, the Entry Team monitored the temperature port and liquid line and had readings of 0.3 ppm on the Jerome. The reading for the vacuum breaker was 0.4 ppm. The vacuum breaker was considered as the possible source of the leak.

#### Mitigation

Quarter-turns were made to tighten bolts of the temperature port and liquid line, which reduced the H2S readings to 0.018 ppm at the temperature port and 0.002 ppm at the liquid line. The Entry Team did not have the proper tools to stop the release altogether thought to be from the vacuum breaker. However, the readings after the release of the trapped vapor were low enough in which crews can safely work in the environment with at least an air purifying respirator (APR) and make the necessary repairs. Additionally, the small release would not adversely impact the neighboring community.

#### Post-Entry

The Entry Team descended from the railcar and proceeded to staging. With no liquid exposures incurred, the Entry Team did not need decon. As the Entry Team arrived at staging, they spoke with BNSF representatives and contractors from Environmental Logistics of their observations at the top of the railcar.

The DOW Chemical Company also sent a crew to the rail yard and they had also arrived to assess the picoline car "DOWX5833." Per their assessment, the picoline railcar was fully intact and there was no indication of a release/leak.

#### Shelter-in-Place

IC made the decision to put in a Shelter-in-Place order for residents living near the rail yard. CCHSHMP sounded the siren nearest the rail yard at 14:28.

With the opening of the protective housing which contained H2S vapors at greater than 50 ppm and the reduction of the H2S readings (partly by tightening bolts) to a level in which it would not harm the community, and with the picoline railcar not a threat per DOW Chemical's assessment, the Haz Mat Group made the recommendation to lift the Shelter-in-Place order at 15:00.

**BNSF UPDATE:**

On March 1, CCHSHMP spoke with BNSF Hazardous Materials Field Manager James Farner and asked to provide an update of the leaking railcar. Railcar "TCIX728781" was still at the rail yard at the time of the call. After local agencies left the scene in the previous day, Environmental Logistics contractors investigated the source of the leak and found that it actually originated not from the vacuum breaker but from the liquid line. The contractors tried to tighten the bolts down appeared secured at 18:00 on February 27, but they were still getting some readings of H2S. BNSF was granted a one-time Federal Railroad Administration (FRA) approval on February 28 to move the railcar to Tesoro/Andeavor where the shipper can repair the railcar and return it to service.

**TIMELINE**

Refer to Attachment B for the incident timeline.

**ATTACHMENT(S)**

- A. Incident Report Form #180227-01
- B. Incident Timeline
- C. Dispatch Notification
- D. Incident Maps
- E. Site Safety and Control Plan (ICS 208 HM) and Work Mission Duration Worksheet
- F. Invoice Request Form

**REPORT  
PREPARED BY:**



Trisha A. Johnson, Hazardous Materials Specialist II  
Contra Costa Health Services Hazardous Materials Programs (CCHSHMP)

# ATTACHMENT A

WILLIAM B. WALKER, M.D.  
HEALTH SERVICES DIRECTOR  
RANDALL L. SAWYER  
CHIEF ENVIRONMENTAL HEALTH AND  
HAZARDOUS MATERIALS OFFICER

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ENTERED

CONTRA COSTA  
HEALTH SERVICES

COMPLAINT, INCIDENT, AND NOTIFICATION REPORT FORM

Type (Circle One):  C  I  N

Received Date: 02/27/18 Received Time: 12:28 Received By: TAJ Lead: TAJ

Incident Date: 02/27/18 Incident Time: \_\_\_\_\_ Assigned to: \_\_\_\_\_ Assigned Date: \_\_\_\_\_

CASE NUMBER: 180227 -01

**COMPLAINANT / REPORTING PARTY:**

Name: CCCFPD (Con Fire) Dispatch  RP is from Facility  Anonymous

Organization: \_\_\_\_\_

Primary Phone Number: (925) 933-1313 Secondary Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**FACILITY / LOCATION OF INCIDENT:**

Name: Pittsburg Rail Yard (adjacent to N. Parkside Dr.) CUPA Facility I.D.: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_ Unit: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Location Description: Rail yard

**INITIAL INCIDENT DESCRIPTION:** Odors from possibly two rail cars, one containing sodium sulfide (residual) and the other containing picoline

**INCIDENT TYPE / DESCRIPTION:**

Community Warning System Level (Circle Highest Level):  N/A  0  1  2  3

FACILITY	ISO / MCAR	TRANSPORTATION	MISCELLANEOUS
<input type="checkbox"/> Fire or Explosion <input checked="" type="checkbox"/> Spill or Release <input type="checkbox"/> Startup or Shutdown <input type="checkbox"/> Flaring <input type="checkbox"/> Upset	<input type="checkbox"/> Fatality (one or more) <input type="checkbox"/> > 24 hrs. Hospital, 3 or more people <input type="checkbox"/> Flammable Vapor Cloud > 5,000 lbs.	<input type="checkbox"/> Tank Truck <input type="checkbox"/> Railroad <input type="checkbox"/> On Water <input type="checkbox"/> Pipeline <input type="checkbox"/> Fuel Tank	<input type="checkbox"/> Storm Drain/Creek <input type="checkbox"/> Drug Lab <input type="checkbox"/> Disposal/Abandonment <input type="checkbox"/> Odor Complaint <input type="checkbox"/> Other:

Time Enroute to Scene: 12:45 Time Arrived On Scene: 13:21 Time Departed From Scene: 15:55

**REFERRED TO OTHER AGENCY:**

**DTSC STATE FUNDING (if applicable):**

CLU/ERER Number: \_\_\_\_\_

**STORMWATER STATUS (if applicable):**

Actual Discharge  Potential Discharge



**AGENCIES ON SCENE OR NOTIFIED:**


<u>Agency Type</u>	<u>Agency</u>	<u>O/N</u>	<u>Contact Person</u>	<u>Phone Number</u>	<u>Case Number</u>
Fire Department	CCCFPD	O	BC Bob Atlas		#18021499
Law Enforcement	Pittsburg PD	O	Sgt. Mike Keefe	(925) 252-4980	#18-1298
Air District					
State OES					
Railroad	BNSF	O	James Farmer (was not on scene)	(909) 267-5167	
	Union Pacific	O			
Industry	DOW	O	Dennis Hawkins/Scott Etzel	(925) 432-5415	

**REPORT:**

See attached report narrative.

**Additional Required Items: Bill of Lading, Request for Invoice, and Site Safety Plan**

Report Prepared by: Trisha A. Johnson

  
3/7/12