

Event Investigation Report
EIR-2017-013
“Investigation of SX Change Trailer AOP-015 Event”
WRPS-PER-2017-0582



Event Investigation Team Lead Under Instruction

4/25/17

Date

Event Investigation Team Lead

4/25/17

Date

Responsible Manager

4/25/17

Date

Investigation Summary

At 0929 on March 30, 2017 the Central Shift Office (CSO) received notification that three Health Physics Technicians (HPT's) reported smelling strong odors in the SX-Farm Change Trailer, MO-298. The CSO initiated an AOP-15 event and sent notifications via the Shift Office Event Notification system (SOEN).



Aerial view of MO-298 in West Area

At approximately 0845 three HPTs were performing routine surveys at MO-298, SX-Farm change trailer. Two of the three HPTs were performing monthly routines surveying the inside of MO-298 and the third HPT present was performing weekly routines, surveying the perimeter of MO-298 and the two laundry trailers located just in front of MO-298. The HPTs surveying the inside of MO-298 entered the building around 0900 and noticed a strong odor most similar to a propane gas like smell. The HPTs called the third HPT to check if they also thought the odor was strange. All three HPTs verified that the odor was isolated to the inside of MO-298. The odor was described as being too strong to get dressed inside the trailer.

The HPT's immediately halted their jobs and began making notifications to ST Area Day Shift Management, direct line supervisors and operators at approximately 0904. The HPTs were offered Occupational Medical Service (HPMC) evaluations by management and all three declined.

The operators contacted responded immediately, arriving at about 0910 and posting red danger tape across both entrances into MO-298. At approximately 0950 the HPTs filled out Odor Response Cards (see Attachment 1). Event Investigation Report (EIR)-2017-013 was initiated at 1318 by CSO. At 1510, notification was sent by the responding Industrial Hygienist Technicians (IHTs) affirming that direct reading instrument (DRI) and hazardous air pollutants on site (HAPSITE) sampling resulted in no contaminants above Action Levels at MO-298. At approximately 1521 CSO confirmed exit of AOP-15 and access restored to MO-298.

End of Summary

No Fact Finding Meeting was held for this event.

Weather Information

Time	Temp	%RH	Pressure	Wind (mph)
0900	49	48	29.23	W @ 12 gust 24
1000	52	41	29.24	WNW @ 16 gust 27
1100	55	38	29.26	NW @ 17 gust 30

Event Timeline

3/30/17

- 0845: HPTs arrive on job site to perform routine surveys
- 0900: Two HPTs surveying MO-298 notice odor and ask third HPT to verify odor
- 0904: Notifications of strong odors made to management and operators. HPMC evaluations declined
- ~0910: Operators arrive and post red danger tape across both entrances into MO-298
- 0929: Enter AOP-015 initiated by CSO
- 0950: HPTs fill-out odor response cards
- 1029: IH perform official sampling
- 1318: EIR-2017-013 Initiated by CSO
- 1510: Notification sent by IH confirming DRI and HAPSITE sampling resulted in MO-298 showing no contaminants above Action Levels
- 1521: Exit of AOP-15 and access restored to MO-298

Preliminary Extent of Condition Review

This AOP-15 entry was specific to MO-298, SX-Farm change trailer and occurred outside of Tank Farm boundaries. Given the potential source and associated potential causes, the preliminary extent of condition is bound to the immediate area.

Discussion of Potential Causes

1. No potential causes identified however, MO-298 will need to be inspected for potential vermin infestation, specifically through entrance in the skirting.
2. The HVAC system in MO-298 is out of service, causing the condition for stagnant air to be present and potentially adding to odor.
3. Reviewed release work activities for ST Area confirmed that no work was being performed that could cause odor.

Recommendations/Proposed Corrective Actions

1. Conduct Industrial Health (IH) sampling of confined space area under MO-298.

Attachments:

1. Odor Response Cards, pages 4-7
2. Central Shift Office Log Book Entry AOP-15, page 8
3. Central Shift Office Log Book Exit AOP-15, page 9
4. WRPS-PER-2017-0582: SX Change Trailer AOP-015 Event, pages 10-12
5. Production Operations Release Sheet, page 13
6. Industrial Health Investigation Report, pages 14 -18

Attachment 1 - Odor Response Cards - 1 of 3

ODOR RESPONSE CARD - 241-SX FARM

Odors Detected with *NO* Immediate symptoms

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.
3. Complete map, return to Central Shift Office as soon as practicable.

Odors Detected *WITH* Symptoms

4. Notify Immediate Supervisor.
5. Contact CSM, [REDACTED], complete below bulleted information and map.
 - Your name and the work you were performing
 - Your symptoms (if any)
 - Date and time odor was noticed
 - Location of odors (mark area on map and the wind direction)
 - Describe the odor
 - Name of other in or near the affected area
 - Was an IHT present?
 - Possible source
6. Provide information on the back of card.
7. Send this card immediately to the Central Shift Office.

ODOR RESPONSE CARD - 241-SX FARM

1. Contact CSM, Complete below bulleted information and map.
 - Date and time odor was noticed 03/30/17 9:00 am
 - Your name and the work you were performing Routine surveys
 - Location of odors (mark area on map and wind direction) Change trailer Mn-208
 - Name(s) of others in or near the affected area _____
 - Was an IHT present? No
 - Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion Cleaning Solution Ammonia Other: propane like odor
 - Possible Source Unknown
 - Your symptoms (if any) Headache Dizziness/Light-Headed Nausea Cough Fatigue/Drowsiness/Weakness Sore/Burning Throat Difficulty Breathing Watery/Irritated Eyes/Trouble with Vision Tingling/Numbness/Paralysis Rash/Itching Other: _____
2. Send this card to the Central Shift Office.

Attachment 1 - Odor Response Cards - 2 of 3

ODOR RESPONSE CARD - 241-SX FARM

Odors Detected with *NO* Immediate symptoms

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.
3. Complete map, return to Central Shift Office as soon as practicable.

Odors Detected *WITH* Symptoms

4. Notify Immediate Supervisor.
5. Contact CSM, [REDACTED], complete below bulleted information and map.
 - Your name and the work you were performing
 - Your symptoms (if any)
 - Date and time odor was noticed
 - Location of odors (mark area on map and the wind direction)
 - Describe the odor
 - Name of other in or near the affected area
 - Was an IHT present?
 - Possible source
6. Provide information on the back of card.
7. Send this card immediately to the Central Shift Office.

241-SX FARM

Page 1 of 2 A-6006-937 (REV 0)

ODOR RESPONSE CARD - 241-SX FARM

1. Contact CSM, Complete below bulleted information and map.
 - Date and time odor was noticed 3-30-17 / 0900 ish
 - Your name and the work your were performing HPT Routines
 - Location of odors (mark area on map and wind direction) inside change trailer only 10-298
 - Name(s) of others in or near the affected area: _____
 - Was an IHT present? NO
 - Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion Cleaning Solution Ammonia Other: similar to propane
 - Possible Source unknown
 - Your symptoms (if any) Headache Dizziness/Light-Headed Nausea Cough Fatigue/Drowsiness/Weakness Sore/Burning Throat Difficulty Breathing Watery/Irritated Eyes/Trouble with Vision Tingling/Numbness/Paralysis Rash/Itching Other: _____
2. Send this card to the Central Shift Office.

Page 2 of 2 A-6006-937 (REV 0)

Attachment 1 - Odor Response Cards - 3 of 3

ODOR RESPONSE CARD - 241-SX FARM

Odors Detected with NO Immediate symptoms

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.
3. Complete map, return to Central Shift Office as soon as practicable.

Odors Detected WITH Symptoms

4. Notify Immediate Supervisor.
5. Contact CSM, [REDACTED], complete below bulleted information and map.
 - Your name and the work you were performing
 - Your symptoms (if any)
 - Date and time odor was noticed
 - Location of odors (mark area on map and the wind direction)
 - Describe the odor
 - Name of other in or near the affected area
 - Was an IHT present?
 - Possible source
6. Provide information on the back of card.
7. Send this card immediately to the Central Shift Office.

241-SX FARM

ODOR RESPONSE CARD - 241-SX FARM

1. **Contact CSM, Complete below bulleted information and map.**
 - Date and time odor was noticed 3/30/17 0845
 - Your name and the work you were performing HPT Routines
 - Location of odors (mark area on map and wind direction) Inside Change Trailer MO-298
 - Name(s) of others in or near the affected area ; _____
 - Was an IHT present? No
 - Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion Cleaning Solution Ammonia Other: propane
 - Possible Source unknown
 - Your symptoms (if any) Headache Dizziness/Light-Headed Nausea Cough None Fatigue/Drowsiness/Weakness Sore/Burning Throat Difficulty Breathing Watery/Irritated Eyes/Trouble with Vision Tingling/Numbness/Paralysis Rash/Itching Other: NA
2. **Send this card to the Central Shift Office.**

Attachment 2 - Central Shift Office Log Book Entry AOP-15

290
 3/30/17 A-Shift
 0830-Notified by: [redacted] that his electronic
 discovered an electrical box without a cover had
 exposed wiring, secured area, performed voltage
 check. wire had (discovered) w/120voltage
 by 277 A next to annex on eastside
 (ATCO bldg). An 8 pt entoria LOTO has
 been installed for relamping 277A which
 isolates power to the circuit.

1020 - Entered AOP-015 for SX-Form change trailer
 3 HOT'S [redacted]
 [redacted] - strong odors (undercarriage)
 no symptoms, offered HMTA all declined.
 HMTA Job was for routine static surveys
 In area not requiring SCBA or no HMT.
 Cleaned area & secured trailer.

1023 - Declared a Group 2 Subgroup E(2) SC3
 for "unexpected discovery of an uncontrolled
 electrical hazardous energy source outside
 277A (at Bldg)". Refer to entry #
 0830.

1024 - Declared a Group 10(2) SC4 "management
 concern for" 2025 E (ETF) for LOTO not meeting
 expectations. LOTO installed on 453 on
 1030/16 & safety work checks were completed,
 however management has determined
 that it does not meet expectations of the
 TAF for completeness of safe condition
 check information for location.

1036 - Entry @ 1023 & 1024 Notified DQEFR
 Vanessa Turner, EOC

→ 1137 - New Red Arrow. After re-examine the use of
 MSA Comfo combination cartridges with
 date codes from "3516" through "4011."

1149 - Entry @ 1137 Notified [redacted] SOEN

Attachment 3 - Central Shift Office Log Book Exit AOP-15

Employee was released to work w/ no restrictions. PO, HPT

1229- Notified by that (NCC)
 was taken to HPMC for evaluation & released to work without restrictions. Employee felt a discomfort while doing routines in HT-Farm w/ SCBA in Right knee on 3/29/17 @ 0900.

1313- Entry @ 1229 Notified DOE-FR
 Case report Lvl 1
 SOEN sent.

1317- Entry @ 1205 Employee did not go to HPMC for evaluation

1318- Initiated Event Investigation (EIR-2017-013)
 "SX change trailer AOP-015 event".
 (UI) w/

1329- Entry @ 1318 Notified DOE-FR
 SOEN sent.

1331- IHT completed Flammable Gas Surveillances on AY/AZ Farm DST all readings 0% LFL.

1333- Entered LEO 3.1.A on 7/24/15 @ 0845 hours for AY/AZ Farms In-Service VTP inoperable
 LEO 3.1.A.2.1 due NTP 4/02/17 @ 0845 hours.
 LEO 3.1.A.2.3 due 10/4/17 (PO-RP-17-01)
 LEO 3.1.A.2.3 due 4/10/17 (PO-RP-17-03).

1407 The use of "pressure sources" for calibrations on wet systems require the use of an approved water-trap in line to prevent contamination and/or equipment damage; unless being used by a procedure/instruction that prevents water intrusion (i.e. valve isolating "pressure source" from system while pressurized to prevent vacuum).

1409- Entry @ 1407 DOE-FR
 SOEN sent.

1521 Fixing AOP-015 for SX-Farm change to all readings below 100kPa.

Attachment 4-WRPS-PER-2017-0582: SX Change Trailer AOP-15 Event

PER

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Save

Problem Evaluation Request (PER)

WRPS-PER-2017-0582
In Process/Work

PER No	Date of Discovery	Time of Discovery (24:00)	Project
WRPS-PER-2017-0582	03/30/2017	09:00	RadCon
Location			
SX Farm			
How Was Problem Discovered			
Surveillance: Other			
Description of Concern or Problem			
HPTs (3) detected the odor of "propane" upon entering the 241-SX change trailer to prepare to perform the routine radiation and contamination surveys inside and outside of the farm.			
Requirement Not Satisfied		Source Document Number	
Equipment Identification Number		System Identification	
		Not Applicable	
Does issue require immediate actions?			
No			
Immediate actions Taken or Planned			
The HPTs immediately exited the trailer to move to a safe location outside of the trailer. Upon exit, they left the trailer door open to ventilate the trailer. Immediate notification was made to the RadCon FLM and the ST Team Day Shift Manager. Shift Manager authorized the entry into AOP-015 and restricted access to the change trailer pending investigation. None of the 3 HPTs displayed or experienced any symptoms from the odor. All 3 HPTs declined to go to 200W HPMC for medical evaluation.			
Recommended Corrective Actions			
All required actions were taken. No further actions required. Recommend this PER be tracked as a Trend Only.			
Originator Contact			
No			
Originators Name	Originators ID	Originators Phone	Date Initiated
			03/30/2017
SHIFT OPERATIONS REVIEW			
Title			
SX Change Trailer AOP-015 Event			
Reportability	SSC Operability	Operability Review	Comp Measures Req
Non-Reportable	N/A	N/A	
Describe actions Taken or Recommended			
Completed actions per TF-AOP-015. No additional actions taken or recommended by the POCSO.			
SO Reviewer Name	SO Reviewer ID	SO Reviewer Phone	SO Review Date
			03/30/2017
SCREENING			
PER Significance Level	Analysis Level	How Discovered	
PER with Resolution	Not Applicable	3 Self-Revealing	
Ind Assessment Rev	Occurrence Rpt #	DOE CAP Required?	
		No	
Assigned Responsible Manager	Facilities Rep / SSO	Safety Mgmt Rep	Potentially Recurring Issue

Attachment 4-WRPS-PER-2017-0582: SX Change Trailer AOP-15 Event

PER

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			No
Program		Requirements Area Manager (RAM)	
● ^N/A^		● IH230A - Industrial Hygiene / Odor/Vapor / AOP-15 / 115 Odor Event	
PER Screening Comments			
4-3-17 PER with Resolution to EIR-2017-013			
ORPS Code	Functional Area	Work Process	ISMS
Not Applicable	Operations	● Operator Rounds	
PER Screening Chair	PER Screening Chair ID	PER Screening Chair Phone	PER Screening Date
	H0054042	(509) 373-6756	04/03/2017
PAAA REVIEW			
PAAA Screening	PAAA Codes	Function Codes	
Not subject to PAAA			
PAAA Cause Analysis Review	NTS Report Number	NTS Report Date	
No			
PAAA Screening Comments			
1) Basis for PAAA screening is in file attached to PER. In file, see highlighted green text for non-compliance. 2) Approval per procedure TFC-ESHQ-PAAA-D-08 dated 7/19/2012 (paragraph 4.1.5-7).			
PAAA Reviewer Name	PAAA Review Date		
	04/03/2017		
PAAA Approver Name	PAAA Approve Date		
	04/03/2017		
CAUSE ANALYSIS			
Cause Analyst			
Problem Statement			
Compensatory Actions			
Cause Analysis			
Causes			
Extent of Condition			
HPI Error Precursors			
Task Demands	Work Environment	Individual Capabilities	Natural Tendencies/ Human Nature
Has the evaluation of this PER resulted in additional information that could affect the Central Shift Office (CSO) determination of operability or reportability?			
No			
Comments			
Submitter Name	Submitter ID	Submitter Phone	Initial Submit Date
CAUSE CODES			

Attachment 4-WRPS-PER-2017-0582: SX Change Trailer AOP-15 Event

PER

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ATTACHMENTS		
Link to PER		
PAAA_Screen_ 4-03-17.pdf		
AUDIT HISTORY		
Change Date	Auditor	Comments
03/30/2017 14:13		Initiator Tab initial submission.
03/30/2017 14:38		SO Tab initial submission.
04/03/2017 14:11		Screening Tab initial submission.
04/03/2017 14:36		PAAA Tab initial submission.
04/04/2017 10:30		'Assigned Responsible Manager Task Instructions' were changed.
04/04/2017 10:30		Responsible Manager Task Launched by

-- End of Report --
04/06/2017 09:35 AM

Attachment 5 - Production Operations Release Sheet

Team ST		PRODUCTION OPERATIONS RELEASE SHEET					Thursday, March 30, 2017 Washington River Protection Solutions	
Line	Facility	EAM	Activity	Supervisor	POD Comments	Release Authority Comments	Tag Out RFR	Fac Rel
1	MULT	292528	200 West Area Quarterly Portable tool inspection (2 qtr)				N/A	
2	Mult	289080	Repetitive Circuit Verification 200 West Area				N/A	
3	MULT	290941	200 West Area Monthly Emerg Light Inspections March				N/A	
4	MULT	291376	200 West Tank Farm Monthly GFCI Checks March				N/A	
5	U	161063	Walkdown for Arc Flash Cal/LOTO - 241-U, 271 MCC MAINTENANCE					
6	6241	161288	6241-A(SB-1) ELECTRICAL SWITCH BOARD INSPECTION				TSU-17-001	
7	Shop	Level 4	Prep (6) Be Sample Pumps for U203 ENRAF Replacement Scheduled OT on Friday					
8	U	219319	Mobilization equipment to support pumping at UX302A and SY off load			(2)		
9	U	Level 4	Install Cattleguard for UX302A			(2)		
10	U	277503	Prep for 203-U ENRAF Replacement				N/A	
11	MULT	203780	Required West Area Liquid Level Readings				N/A	

Attachment 6 - Industrial Health Investigation Report, Page 1 of 5

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
Time/Date & Event location: 0900 03/30/2017 SX Change trailer (MO-298)	EIR Number: EIR-2017-013
<p>1. <u>Event Summary (including number of workers involved and activity in progress):</u></p> <p>At approximately 0900 on Thursday the 30th of March 2017 3 Routines HPTs detected a "stronger than normal" and "propane-like" odor upon initial entry into the 241-SX Change Trailer (MO-298). All personnel involved did not experience symptoms. All employees declined precautionary medical evaluation at the on-site medical provider.</p> <ul style="list-style-type: none"> • <u>Was an IHT Present during initiating event?</u> [] Yes [X] No <p><u>IH Monitoring/ Sample Survey Reports:</u></p> <p style="padding-left: 40px;">17-02043 "AOP-015: MO-298/SX Change Trailer"</p> <p><u>Weather Conditions at Time of Event:</u></p> <ul style="list-style-type: none"> • Weather station: 19 • Wind Direction and Speed: 294° & 16mph • Barometric Pressure (<i>steady/rising/falling</i>): 29.227 "Hg and rising slightly • Temperature (F°): 51.8°F • Humidity: Unknown <p>Field Response Timeline:</p> <p>0915 AN Team IH arrives at CSO on other business, is notified of potential odor response by CSM</p> <p>0919 AN Team IH contacts EV Team IH for assistance</p> <p>0920 AN Team IH contacts Shift IHT Supervisor</p> <p>0921 EV Team IH arrives at CSO and is briefed by AN Team IH:</p> <ul style="list-style-type: none"> • 3 HPTs from rounds and routines group experiences stronger than normal odors in the SX Change trailer • Odor is "Indescribable" • No symptoms, precautionary medical evaluation was offered and all affected personnel declined. <p>0925 CSO makes decision to enter AOP-015 as entry criteria is met</p> <p>0926 AN Team IH notifies ST Team IH of AOP-015 entry and provides briefing</p> <ul style="list-style-type: none"> • Shift IHTs are going to be in route shortly • Please provide support at SX Change trailer location to facilitate changes in response that may occur due to new information acquired <p>0929 SOEN: "Entering AOP-015 for SX Change Trailer, Access is restricted. CSM"</p> <p>0930 Shift IHTs arrive at CSO and are briefed on response actions:</p> <ul style="list-style-type: none"> • Acquire SCBA as per RPF TF-AOP-015 Task 1 • Co-ordinate with ST Team IH who is at event location • Monitor into SX Change Trailer with MultiRAE and Lumex • Acquire a minimum of 2 grab samples from interior of SX Change Trailer • Analyze grab samples with MIRAN SapphiRe for N2O <p>0932 Projects IH accompanied with 3rd party reviewers arrives at CSO and is briefed on all of the above</p> <p>0935 PO IHT Lead warms up instruments and contacts Programs IHT Lead to ensure HAPSITE is prepared to provide analysis of pending grab samples</p> <p>0937 AN Team IH Contacts Hanford Weather Station</p> <p>0939 AN Team IH contacts PO IH Manager via phone and provides briefing</p> <p>0940 HAMTC Safety is briefed</p> <p>0943 PO Shift IHT notifies CSM that no masks of the size required by one of the PO Shift IHTs are available at the issuing station</p> <p>0944 AN Team IH contacts PO Shift IHT Supervisor to request additional IHTs so that someone who can fit whatever RPE the issuing station has can be found to provide response support</p>	

Attachment 6 - Official Industrial Health Investigation Report, Page 2 of 5

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: N/A
Time/Date & Event location: 0900 03/30/2017 SX Change trailer (MO-298)		EIR Number: EIR-2017-013
<p>0946 EV Team IH goes to issuing station and provides coaching so that "emergency response" RPE can be issued to the PO Shift IHTs.</p> <p>0947 AN Team IH contacts PO Shift IHT Supervisor to call off additional resources</p> <p>0955 ESHQ Manager arrives at CSO and is briefed</p> <p>0958 AYAZ Team IH arrives at CSO and is briefed</p> <p>0959 Odor Response Card arrives at CSO</p> <ul style="list-style-type: none"> • Odor is similar to Propane <p>1000 Case Manager contacts CSO</p> <p>1005 AN Team IH Contacts AOP-015 Programs SME and forwards odor response card</p> <p>1008 EV Team IH contacts ST IH and exchanges new information:</p> <ul style="list-style-type: none"> • Propane odor was known to be present about a week ago • Thought was dead animal related odor • IHTs are prepped and ready to enter SX Change Trailer <p>1015 2 additional Odor Response Cards arrive at the CSO. All described odors consistent with "propane-like"</p> <p>1016 IH Programs SME is updated with additional Odor Response Cards</p> <p>1019 ST team supervisor contacts CSO and informs communications specialist of appropriate supervisor contact to determine more information</p> <p>1022 Production Operations Manager arrives at CSO and is briefed</p> <p>1029 ST Team IH updates AN Team IH:</p> <ul style="list-style-type: none"> • Grab samples have been acquired and are in route to 2704 HV for HAPSITE analysis • NH3: 0 ppm (<LOD) • VOC: 0.000 ppm (<LOD) <p>1033 Communication specialist briefs CSM, AN Team IH, and EV Team IH:</p> <ul style="list-style-type: none"> • Odors were detected upon initial entry to MO-298 (before attempting to enter 241-SX Farm to do work), set instruments down, propped door open to ventilate, then called Area Dayshift Manager • Area Dayshift Manager dispatched IH to 241-SX area • HPTs called direct supervisor who offered voluntary precautionary medical evaluation at on-site medical provider. 2 HPTs declined, 1 was transported to 200W HPMC clinic for evaluation. • Evaluated employee was released to return to work without restriction <p>1053 AN Team IH updates the Programs SME with all available information</p> <p>1056 PO Shift IHT contacts AN Team IH and notifies that grab samples are delivered to 2704HV for HAPSITE analysis</p> <p>1058 WPRS General Communication: "Odors reported near SX Farm - 3/30/17"</p> <p>1243 CSM notifies AN Team IH that report of HPT voluntarily visiting the on-site occupational medical provider is false and that all 3 HPTs who experienced odors have declined precautionary medical evaluation at this time.</p> <p>1251 AN Team IH notifies Programs SME that information regarding on-site medical provider visit is false</p> <p>1319 Programs SME contacts AN Team IH to ask "were bag samples were taken?"</p> <p>1526 SOEN: "Exiting AOP-015 for SX Change Trailer, all readings below action levels, Access is restored. CSM"</p>		
<p>IH Author:</p> <p>_____ First Name and Last Name</p> <p style="text-align: right;">_____ Date</p> <p style="text-align: center;">_____ Phone No.</p>		

Attachment 6 - Official Industrial Health Investigation Report, Page 3 of 5

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
Time/Date & Event location: 0900 03/30/2017 SX Change trailer (MO-298)	EIR Number: EIR-2017-013

2. GCMS Sample Results:

TIC_Max = 2,009,139; TIC/TC_Max = 29% ; TIC = 488,325; Scan Set #1; Scan # 123; RT = 82.34.4

AOP 15 MO-298 SX Change trailer
 Sample Number 17-02043
 *All findings consistent with blank except for Trichloroethylene (solvent) below 1 ppb

17-02043_MO-298_SX Change Trailer_2 Min 200ml_33-250 Volatile Method_20170330_002.hps
 Blank with N2_2 Min 33-250 Volatile Method_20160329_002.hps

IH Author: _____

Date: 4/24/17

3. Additional Information:

- Odor Response Cards received:

ODOR RESPONSE CARD - 241-SX FARM

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ODOR RESPONSE CARD - 241-SX FARM

1. Contact CBM, Complete below bulleted information and map.

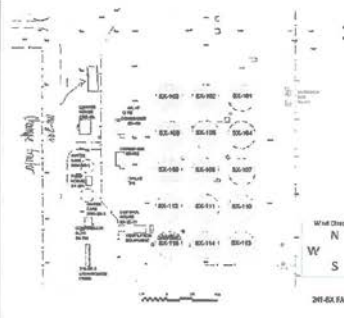
- Date and time odor was noticed: 3-30-17 / 0900 ish
- Your name and the work you were performing: RPT Rebuilds
- Location of odors (mark area on map and wind direction): inside change trailer only 10-29"
- Name(s) of others in or near the affected area: _____
- Was an IHT present? NO
- Describe the odor: Sweet Sour Musty Earthy Metallic Smoky Rotten Onion Cleaning Solution Ammonia SL-0816 (similar to propane)
- Possible Source: unknown
- Your symptoms (if any): Headache Dizziness/Light-Headed Nausea Cough Fatigue/Weakness/Unwellness Sore/Itching Throat Difficulty Breathing Water/Irritated Eyes/Trouble with Vision Tingling/Numbness/Paralysis Rash/Itching Other: _____

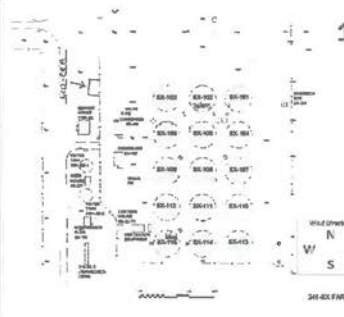
2. Send this card to the Central Shift Office.

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Attachment 6 - Official Industrial Health Investigation Report, Page 4 of 5

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: N/A
Time/Date & Event location: 0900 03/30/2017 SX Change trailer (MO-298)		EIR Number: EIR-2017-013

<p style="text-align: center;">ODOR RESPONSE CARD - 241-SX FARM</p> <p><i>Odors Detected with NO Immediate symptoms</i></p> <ol style="list-style-type: none"> Notify Immediate Supervisor. Contact Central Shift Manager. Provide the bulleted information. Complete map, return to Central Shift Office as soon as practicable. <p><i>Odors Detected WITH Symptoms</i></p> <ol style="list-style-type: none"> Notify Immediate Supervisor. Contact CSM, [redacted]. Provide the bulleted information and complete below information and map. <ul style="list-style-type: none"> Your name and the work you were performing Your symptoms (if any) Date and time odor was noticed Location of odors (mark area on map and the wind direction) Describe the odor Name of other in or near the affected area Was an IH present? Possible source Provide information on the back of card. Send this card immediately to the Central Shift Office.  <p style="text-align: right;">241-SX FARM</p> <p style="font-size: small;">Page 1 of 2 A-8008-037 (REV 0)</p>	<p style="text-align: center;">ODOR RESPONSE CARD - 241-SX FARM</p> <ol style="list-style-type: none"> Contact CSM, Complete below bulleted information and map. <ul style="list-style-type: none"> Date and time odor was noticed: 03/30/17 08:45 Your name and the work you were performing: <i>Solids transfer</i> Location of odors (mark area on map and wind direction): <i>Inside trailer MO-298</i> Name(s) of others in or near the affected area: Was an IH present? <i>No</i> Describe the odor: <input type="checkbox"/> Sweet <input type="checkbox"/> Sour <input type="checkbox"/> Musty <input type="checkbox"/> Earthy <input type="checkbox"/> Metallic <input type="checkbox"/> Smoky <input type="checkbox"/> Rotten <input type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input checked="" type="checkbox"/> Other: <i>propane like odor</i> Possible Source: <i>unknown</i> Your symptoms (if any): <input type="checkbox"/> Headache <input type="checkbox"/> Dizziness/Light-headed <input type="checkbox"/> Nausea <input type="checkbox"/> Cough <input type="checkbox"/> Fatigue/Drowsiness/Weakness <input type="checkbox"/> Sore/Burning Throat <input type="checkbox"/> Difficulty Breathing <input type="checkbox"/> Watery/Irritated Eyes/Trouble with Vision <input type="checkbox"/> Tingling/Numbness/Paralysis <input type="checkbox"/> Rash/Itching <input type="checkbox"/> Other: _____ Send this card to the Central Shift Office. <p style="text-align: right;">241-SX FARM</p> <p style="font-size: small;">Page 2 of 2 A-8008-037 (REV 0)</p>
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<p style="text-align: center;">ODOR RESPONSE CARD - 241-SX FARM</p> <p><i>Odors Detected with NO Immediate symptoms</i></p> <ol style="list-style-type: none"> Notify Immediate Supervisor. Contact Central Shift Manager. Provide the bulleted information. Complete map, return to Central Shift Office as soon as practicable. <p><i>Odors Detected WITH Symptoms</i></p> <ol style="list-style-type: none"> Notify Immediate Supervisor. Contact CSM, [redacted]. Provide the bulleted information and complete below information and map. <ul style="list-style-type: none"> Your name and the work you were performing Your symptoms (if any) Date and time odor was noticed Location of odors (mark area on map and the wind direction) Describe the odor Name of other in or near the affected area Was an IH present? Possible source Provide information on the back of card. Send this card immediately to the Central Shift Office.  <p style="text-align: right;">241-SX FARM</p> <p style="font-size: small;">Page 1 of 2 A-8008-037 (REV 0)</p>	<p style="text-align: center;">ODOR RESPONSE CARD - 241-SX FARM</p> <ol style="list-style-type: none"> Contact CSM, Complete below bulleted information and map. <ul style="list-style-type: none"> Date and time odor was noticed: 3/30/17 0845 Your name and the work you were performing: <i>HPT Routines</i> Location of odors (mark area on map and wind direction): <i>Inside Change Trailer MO-298</i> Name(s) of others in or near the affected area: Was an IH present? <i>No</i> Describe the odor: <input type="checkbox"/> Sweet <input type="checkbox"/> Sour <input type="checkbox"/> Musty <input type="checkbox"/> Earthy <input type="checkbox"/> Metallic <input type="checkbox"/> Smoky <input type="checkbox"/> Rotten <input type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input checked="" type="checkbox"/> Other: <i>propane</i> Possible Source: <i>unknown</i> Your symptoms (if any): <input type="checkbox"/> Headache <input type="checkbox"/> Dizziness/Light-headed <input type="checkbox"/> Nausea <input type="checkbox"/> Cough <i>NONE</i> <input type="checkbox"/> Fatigue/Drowsiness/Weakness <input type="checkbox"/> Sore/Burning Throat <input type="checkbox"/> Difficulty Breathing <input type="checkbox"/> Watery/Irritated Eyes/Trouble with Vision <input type="checkbox"/> Tingling/Numbness/Paralysis <input type="checkbox"/> Rash/Itching <input type="checkbox"/> Other: <i>N/A</i> Send this card to the Central Shift Office. <p style="text-align: right;">241-SX FARM</p> <p style="font-size: small;">Page 2 of 2 A-8008-037 (REV 0)</p>
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- Summary of IH Monitoring and Sampling Data:
 - a. Monitoring: Direct Reading Instruments did not detect any VOCs or ammonia.
 - b. Sampling: Bags samples were analyzed by GC/MS. Little was found other than 1 ppb trichloroethylene

4. Summary of Employee Reported Information (e.g., symptoms)

The three HPTs reported a strong, perhaps propane odor upon entering the change trailer. They did not relate any symptoms and all declined to go to HPMC. It was reported that there was a propane odor in the change trailer some days earlier.

Attachment 6 - Official Industrial Health Investigation Report, Page 5 of 5

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<p>5. Recommendations/Conclusions: Identification of Source of the Concern: [] Yes [x] No</p> <p>It is recommended that, when an AOP-015 event is reported in a building, the outside door(s) not be left open, as the IH response team will have difficulty in determining the strength or character of the odor.</p>		
<p>6. Other: Nothing else to report or consider.</p>		
_____ Print First and Last Name	_____ Signature	_____ Phone No.
		04/24/17 Date