

EVENT INVESTIGATION REPORT

Event Investigation Report, EIR-2019-014 244A AOP-015 Entry EIR-2019-014



Figure 1. 244-A Instrumentation Building

[REDACTED]
Event Investigator

4/10/19
Date

[REDACTED]
PER Responsible Manager

9/9/19
Date

PER No. WRPS-PER-2019-0574

244A AOP-015 Entry

AOP-015 Summary

Event	Abnormal Operations for Odors Reported Inside 244A
PER	WRPS-PER-2019-0574
Date/Time of Event	<ul style="list-style-type: none"> March 21, 2019 0945 hours
Location	<ul style="list-style-type: none"> Inside 244A Building
Personnel Affected	(3) WRPS personnel reported odors. Personnel and reported zero (0) symptoms and elected not to receive a medical evaluation
Odor / Taste	<p>Personnel described the odors as:</p> <ul style="list-style-type: none"> Musty Earthy Ammonia-like
Industrial Hygiene (IH) Investigative Monitoring / Sampling	<p>Monitoring and Sampling results:</p> <ul style="list-style-type: none"> Ammonia: <DL* Total VOCs: <DL Nitrous Oxide: <DL Mercury: 4 ng/m³ (actionable hazard level for Mercury in 12,500 ng/ m³)** <p>*DL – detectable level **Odorless</p>
Potential Source	<ul style="list-style-type: none"> Recent snow melt and warmer temperatures (48°F) may have created an environment for mold growth within the building.
Wind Speed / Direction	NW @ 4mph, barometric pressure at 29.3"
Waste Disturbing or Tank Work in Adjacent Area	No waste disturbing activities were occurring at the time.
Other Work in Adjacent Area	No adjacent work was being performed at the time.

Investigation Summary

On March 21, 2019, at 0945 hours, one (1) WRPS Instrument Specialist and two (2) WRPS Industrial Hygiene Technicians (IHT) encountered a musty, earthy, ammonia-like odor upon opening the door of the 244-A Instrument Building to perform quarterly weight factor (WFT) readings. Before proceeding further, an IHT took readings by placing a MultiRAE instrument through the cracked door. Readings from the instrument showed chemicals of concern to be below the detectable level. Personnel contacted the Field Work Supervisor (FWS). The FWS directed the personnel to secure the door and report to the AY/AZ Area Dayshift Manager (ADM).

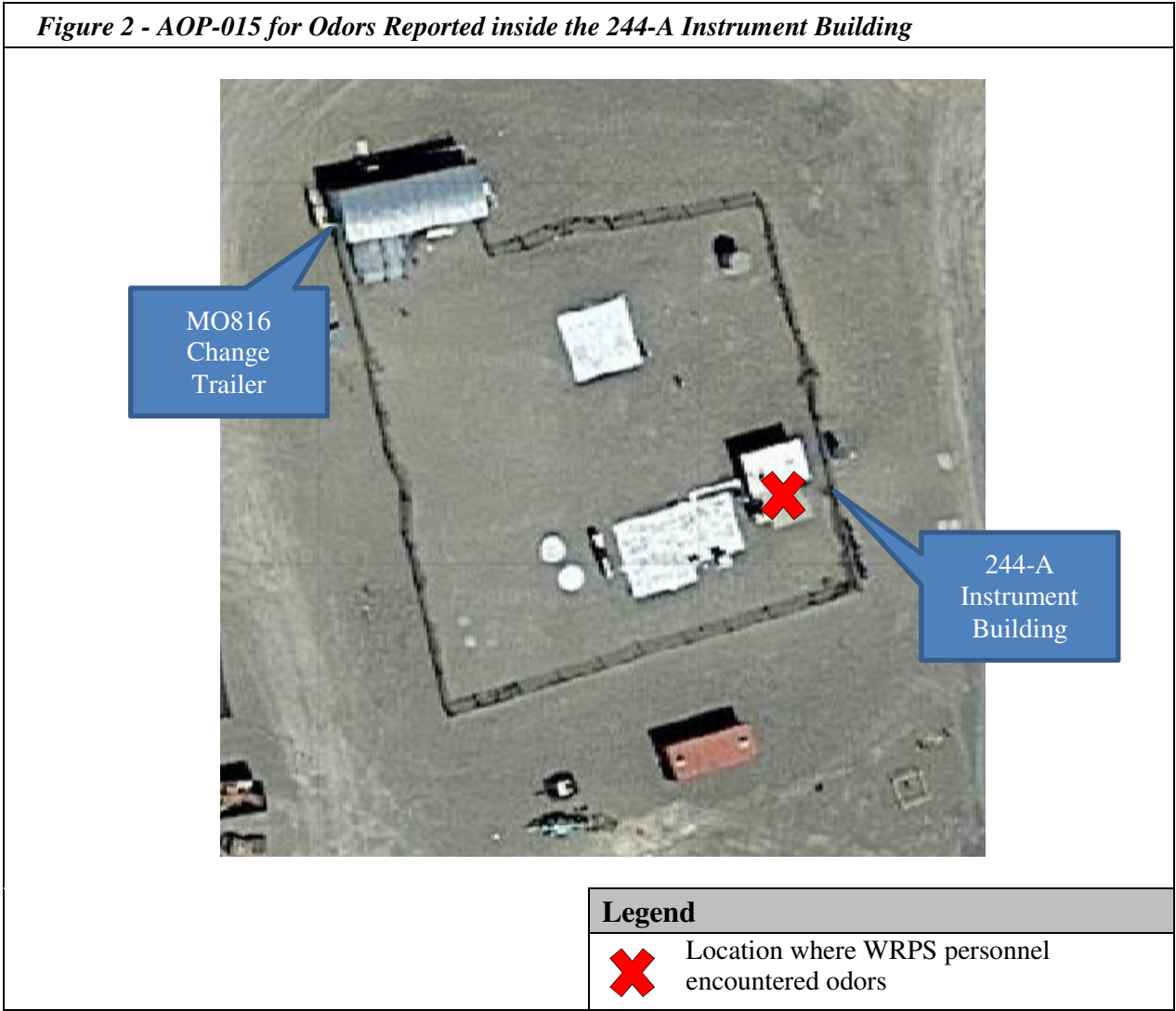
At 1000 hours, informed the ADM and the Production Operations Industrial Hygiene Manager of the event. Then the affected individuals reported to the Central Shift Office (CSO). At 1012 hours, Industrial Hygienists (IH) arrived at the CSO and were briefed. AN Field IH and COMS Field IH directed the affected personnel to fill out odor response cards. The affected personnel reported that they did not experience symptoms and all three (3) declined a medical evaluation. At 1017, the CSO sent out a shift office event notification (SOEN) to announce entry into procedure TF-AOP-015, *Response to Reported Odors or Unexpected Changes to Vapor Conditions* (AOP-015) for 244-A Instrument Building and to restrict access to the area surrounding the building.

At 1038 hours, Production Operations (PO) Shift IHTs, PO Shift Health Physics Technician (HPT), Effluent Treatment Facility (ETF) Field IH, and AY/AZ IHT Supervisor mobilized to 244-A at 1038 hours to perform monitoring and grab sampling. Grab sampling was performed both inside and outside the 244-A building. HAPSITE analysis was performed and chemicals of concern were found to be below background levels. Survey readings from direct read instrumentation (DRI) also exhibited chemicals to be below detectable levels (DL). Results of the testing were communicated to the Central Shift Manager (CSM). At 1626 hours, the AOP-015 was exited.

An Event Investigation was initiated at ~1200 hours. The affected personnel filled out odor response cards and one of the affected personnel was later interviewed. An official Event Investigation meeting was not held. Beyond the initial odor investigation, there was a concern as to whether or not an HPT was present when readings were being performed under low radiological risk work package #399165. Further, individuals who filled out the odor response cards did not mention other personnel to have been in the affected area. The HPT was later discovered to have been present but outside the fence and less than 10 feet away at the time. The procedure requires the HPT to provide continuous coverage when opening the contaminated or potentially contaminated systems. A performance evaluation request (PER) was issued to ensure work is being performed to the procedure.

Source of the odors was undetermined although not expected to be tank waste related. The 244-A Instrument Building houses the 244-A Air Compressor, including controls and instrumentation, to supply instrument air to the 244-A catch tank dip tubes. It is located within a contamination area and sump level readings are to be taken quarterly. The building relies on passive ventilation. Location of the building is ~300 meters southwest of the nearest tank in AN Farm. At the time of the event, there were zero (0) waste disturbing or tank-intrusive activities occurring in the nearby tank farms. Wind directions were from the northwest traveling at 4 mph with barometric pressure readings at 29.3". The temperatures were above freezing and had been above freezing for several days which led to considerable ice and snow melt. The increase in moisture and warmer

temperatures may have attributed to the growth of mold or mildew. On March 26, 2019, at ~1400 hours the 244-A building was accessed and it was noted by personnel that there were no significant odors.



Event Timeline

Field Response Timeline:

1000: AY/AZ ADM contacts PO IH Manager to notify of event.
1012: COMs Field IH, AN Field IH, ETF Field IH, 222S Field IH arrive at CSO and are briefed by affected individuals
1014: AN Field IH and COMs Field IH direct affected personnel to populate Odor Response Cards
1015: CSM 1 questions work crew on event and offers precautionary medical, all declined
1016: CSM 1 briefs COMs Field IH, AN Field IH, ETF Field IH, 222S IH
1017: CSM 1 enters TF-AOP-015
1017: SOEN: "Entering AOP-015 for 244A lift station. All personnel stay clear of 244A lift station. CSM"
1021: COMs Field IH contacts PO IH Manager to request support, IHTs, IH Programs notification
1023: CSM declares response actions as per TF-AOP-015 3.1.12
1024: PO Field IH arrives at CSO
1025: CSM 1 is notified that AY/AZ IHT (affected personnel) alarmed a PCM in AY2 Change Trailer (MO193) at 0955
1026: PO Shift IHTs arrive at CSO
1032: COMs Field IH contacts PO IHT Lead to begin warming up supporting IH instrumentation
1033: CSM 1 requests PO Shift NCOs perform access restriction
1034: PO IHT Lead confirms MIRAN SaphiRe and Ohio Lumex are warming up.
1034: PO Shift IHTs are briefed on response actions:

- RPE as per RPF TF-AOP-015 Task 2
- Monitoring as per IHP-09001
- Collect 2 grab samples: 1 from inside of 244A, 1 from area outside of 244A
- Analyze grab samples with MIRAN SaphiRe (N₂O), Ohio Lumex (Hg), MultiRAE (NH₃, VOC), HAPSITE® (VOC)

1036: PO Shift HPT 1 arrives at CSO to support response actions, and is briefed by AN Field IH
1038: PO Shift IHTs, PO Shift HPT, ETF Field IH, AY/AZ IHT Supervisor depart CSO to perform response actions
1047: COMs Field IH contacts AN IHT Supervisor to direct AY/AZ IHT (affected personnel) to post DRI instrumentation used during initiating event and to create DRI Survey
1052: One concerned HPT Supervisor and one concerned HPT inform CSM 1 that 244A is not routinely surveyed, and that additional HPT support for response actions is necessary.
1053: Concerned HPTs leave CSO to determine if appropriate HPT resources were allocated to evolution ongoing during initiating event.
1057: PO IHT Lead asks PO IH if Ohio Lumex and MIRAN SaphiRe are still needed to support response actions. PO IH informs PO IHT Lead that they are.
1059: COMs Field IH contacts ETF Field IH to relay grab sample monitoring expectations to PO Shift IHTs
1100: PO Shift HPT 2 arrives at CSO to support response actions and is briefed by COMs Field IH and PO Field IH.
1102: PO Shift HPT 2 leaves CSO to support response actions
1104: AN IHT supervisor arrives at CSO
1106: CSM 1 notified by Radcon Supervisor that AY/AZ IHT (affected personnel) alarmed PCM presumably due to radon on polyester jacket. Jacket is bagged awaiting further investigation by Radcon.
1106: ETF Field IH contacts COMs Field IH for further clarification on location and circumstances of initiating event.
1110: AY/AZ IHT Lead notified COMs Field IH that DRI Survey for the initiating event is DRI # 19-01848
1113: AN IHT Supervisor notifies AN Field IH that instrument from initiating event posted successfully.
1116: AN IHT Supervisor attempts to contact IH Programs IHT Lead, and is unsuccessful, then contacts IH Programs IHT Supervisor to request HAPSITE® be prepared to support analysis of grab samples.
1129: ETF Field IH, AY/AZ IHT Supervisor arrive at MO267 and brief AN Field IH and COMs Field IH on status of ongoing response actions.
1144: AY/AZ IHT Supervisor attempts to contact FWS for initiating event to determine whereabouts and health status of HPT and NCO who supported work evolution.
1148: AY/AZ IHT Supervisor contacts AY/AZ IHT (affected personnel) to inquire if the NCO and HPT assigned to the work evolution were present during the initiating event.
1151: AY/AZ IHT (affected personnel) notifies AY/AZ IHT Supervisor that "HPT and NCO were outside the fence, but less than 10 feet away".
1207: FWS contacts AY/AZ IHT Supervisor and notifies that NCO and HPT declined medical evaluation
1223: PO Shift IHTs arrive at MO267 and brief AN Field IH, COMs Field IH, ETF Field IH, and PO Field IH that all readings were <DL
1223: PO IHT Lead Notifies COMs Field IH that MIRAN SaphiRe in temporary 200E PO IHT Lab (MO511) is having trouble pre-function testing.
1233: COMs Field IH and AN Field IH brief CSM 2 on initial findings during response.
1236: EIR # was assigned by CSM 2
1238: CSM 2 contacts Contractor Assurance with EIR # and Title update
1626: SOEN: "Exiting AOP-015 for 244A DCRT. Sample results are below background levels. Normal access is restored to 244A. CSM"

Immediate Actions Taken

1. 3/21/2019 At ~0945 hours when personnel opened the door of the 244A Lift Station they encountered must, mildew, and ammonia-like odors. They proceeded to take a direct reading of the interior air through a crack in the door using a MultiRAE instrument. The MultiRAE indicated that hazardous chemical emissions were below detectable levels. The personnel proceeded to notify their FWS who directed them to close the door, exit the location, and report to the CSO.

A SOEN went out declaring an AOP-015 and access to the area was restricted. Monitoring and sampling inside and outside the 244A building occurred shortly thereafter. Results of the testing showed chemicals to be below background levels and normal access was resumed at 1626 hours.

Discussion of Potential Causes

Source of the odors was undetermined. At the time of the event, there were zero (0) waste disturbing or tank-intrusive activities occurring in the nearby tank farms. Wind directions were from the northwest traveling at 4 mph with barometric pressure readings at 29.3". The temperatures were above freezing and had been above freezing for several days which led to considerable ice and snow melt. The increase in moisture and warmer temperatures may have attributed to the growth of mold or mildew. On March 26, 2019, at ~1400 hours the 244A building was accessed and it was noted by personnel that there were no significant odors.

Recommended Actions

It is recommended that remote surveillance instrument be installed and run outside the fence to minimize the frequency of having to breach the instrument building and risk contamination.

Attachments:

1. WRPS-PER-2019-0574
2. Industrial Hygiene Investigative Report

Attachment 1 – WRPS-PER-2019-0574

PER

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Problem Evaluation Request (PER)		WRPS-PER-2019-0574	
		In Process/Work	
PER No	WRPS-PER-2019-0574		
Discovery Date/Time	03/21/2019 09:00		
Project	Production Operations: Tank Farms		
Location	Multiple Tank Farms		
How Discovered?	Routine Work/Maintenance		
Equipment ID Number			
Source Document			
PER Title	244A weight factor readings AOP15		
Description of Concern or Problem	On 03/21/19 AY/AZ team was performing a quarterly PM weight factor reading of 244a tank. While entering instrument building at 244a lift station a strong pungent chemical fertilizer smell was encountered by IH technician and instrument technician causing an AOP-15. In the past there have been LFL readings, odors and spider webs (inside CA boundary) all causing stop work incidents.		
Immediate actions Taken	Stop work and AOP-15.		
Recommended Corrective Actions	Reduce the exposure to potential hazards by installing remote access panel with instrument tubing and valves to preform repetitive work.		
Shift Office Contact	No Shift Office contact required.		
Originator Contact	No		
Originators Name	Originators ID	Originators Phone	Date Initiated
			03/26/2019
SHIFT OFFICE REVIEW			
Reportability	Non-Reportable		
SSC Operability	N/A		
Operability Review	N/A		
Compensatory Actions Taken	No compensatory measures implemented.		
Additional Actions Taken or Recommended	No additional actions taken by Shift Operations.		
SO Reviewer Name	SO Reviewer ID	SO Reviewer Phone	SO Review Date
			03/26/2019
SCREENING			
PER Significance Level	Analysis Level	How Discovered	
PER with Resolution	Not Applicable	4 N/A	
Ind Assessment Rev	Occurrence Rpt #	DOE CAP Required?	
		No	
Assigned Responsible Manager	Facilities Rep / SSO	Safety Mgmt Rep	Potentially Recurring Issue
			No
Program	Trend Codes		
<ul style="list-style-type: none"> • ^N/A^ 	<ul style="list-style-type: none"> • 000000 - Not Applicable / None / None • 1H230A - Industrial Hygiene / Odor/Vapor / AOP-15 		

4/2/2019

PER

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Tank Waste Odor/Vapor Event			
PER Screening Comments			
03-27-19 PER with Resolution to [REDACTED] EIR-2019-014			
ORPS Code	Functional Area	Work Process	ISMS
Not Applicable			
PER Screening Chair	PER Screening Chair ID	PER Screening Chair Phone	PER Screening Date
[REDACTED]	[REDACTED]	[REDACTED]	03/27/2019
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 9/12/2018 (paragraph 4.1.5-7).			
PAAA Reviewer Name	PAAA Review Date		
[REDACTED]	03/27/2019		
PAAA Approver Name	PAAA Approve Date		
[REDACTED]	03/27/2019		
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			
ATTACHMENTS			
Link to PER			

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PER

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PER Screening 03-27-19.pdf		
AUDIT HISTORY		
Change Date	Auditor	Comments
03/26/2019 07:53	[REDACTED]	Initiator Tab initial submission.
03/26/2019 10:47		SO Tab initial submission.
03/27/2019 13:22		Screening Tab initial submission.
03/27/2019 15:28		PAAA Tab initial submission.
03/28/2019 10:06		Responsible Manager Task Launched by [REDACTED]

-- End of Report --
04/02/2019 08:08 AM

[REDACTED]

4/2/2019

Attachment 2 – Industrial Hygiene Investigative Report

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574										
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014										
<p>1. <u>Event Summary (including number of workers involved and activity in progress):</u></p> <p>1 IT, 2 IHTs performing quarterly sump readings at 244A encountered odor (musty, earthy, ammonia, "fertilizer") upon opening door. The IHT stuck MultiRAE nozzle through crack in door and observed reading <DL. Personnel secured door and left the area.</p> <ul style="list-style-type: none"> • <u>Was an IHT Present during initiating event?</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <p><u>IH Monitoring/ Sample Survey Reports:</u></p> <p>Initiating Event 19-01848 "Repetitive Quarterly WFT Readings; 244-A" Event response 19-01873 "AOP-015 244-A DCRT"</p> <p><u>Weather Conditions at Time of Event:</u></p> <p>Ambient outside conditions:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">• Weather station:</td> <td>6 @ 0945</td> </tr> <tr> <td>• Wind Direction and Speed:</td> <td>NW @ 4mph</td> </tr> <tr> <td>• Barometric Pressure (steady/rising/falling):</td> <td>29.3" and steady</td> </tr> <tr> <td>• Temperature (F°):</td> <td>48°</td> </tr> <tr> <td>• Humidity:</td> <td>62.6%</td> </tr> </table>			• Weather station:	6 @ 0945	• Wind Direction and Speed:	NW @ 4mph	• Barometric Pressure (steady/rising/falling):	29.3" and steady	• Temperature (F°):	48°	• Humidity:	62.6%
• Weather station:	6 @ 0945											
• Wind Direction and Speed:	NW @ 4mph											
• Barometric Pressure (steady/rising/falling):	29.3" and steady											
• Temperature (F°):	48°											
• Humidity:	62.6%											

Washington River Protection Solutions		PER Number:
TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014

Field Response Timeline:

1000: AY/AZ ADM contacts PO IH Manager to notify of event.

1012: COMs Field IH, AN Field IH, ETF Field IH, 222S Field IH arrive at CSO and are briefed by affected individuals

1014: AN Field IH and COMs Field IH direct affected personnel to populate Odor Response Cards

1016: CSM 1 questions work crew on event and offers precautionary medical, all declined

1016: CSM 1 briefs COMs Field IH, AN Field IH, ETF Field IH, 222S IH

1017: CSM 1 enters TF-AOP-015

1017: SOEN: "Entering AOP-015 for 244A lift station. All personnel stay clear of 244A lift station. CSM"

1021: COMs Field IH contacts PO IH Manager to request support, IHTs, IH Programs notification

1023: CSM declares response actions as per TF-AOP-015 3.1.12

1024: PO Field IH arrives at CSO

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1033: CSM 1 requests PO Shift NCOs perform access restriction

1034: PO IHT Lead confirms MIRAN SaphiRe and Ohio Lumex are warming up.

1034: PO Shift IHTs are briefed on response actions:

- RPE as per RPF TF-AOP-015 Task 2
- Monitoring as per IHP-09001
- Collect 2 grab samples: 1 from inside of 244A, 1 from area outside of 244A
- Analyze grab samples with MIRAN SaphiRe (N₂O), Ohio Lumex (Hg), MultiRAE (NH₃, VOC), HAPSITE® (VOC)

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1104: AN IHT supervisor arrives at CSO

1106: CSM 1 notified by Radcon Supervisor that AY/AZ IHT (affected personnel) alarmed PCM presumably due to radon on polyester jacket. Jacket is bagged awaiting further investigation by Radcon.

1106: ETF Field IH contacts COMs Field IH for further clarification on location and circumstances of initiating event.


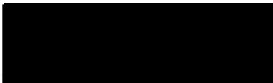

1110: AY/AZ IHT Lead notified COMs Field IH that DRI Survey for the initiating event is DRI # 19-01848

1113: AN IHT Supervisor notifies AN Field IH that instrument from initiating event posted successfully.

1116: AN IHT Supervisor attempts to contact IH Programs IHT Lead, and is unsuccessful, then contacts IH Programs IHT Supervisor to request HAPSITE® be prepared to support analysis of grab samples.

1129: ETF Field IH, AY/AZ IHT Supervisor arrive at MO267 and brief AN Field IH and COMs Field IH on status of ongoing response actions.

1144: AY/AZ IHT Supervisor attempts to contact FWS for initiating event to determine whereabouts and health status of HPT and NCO who supported work evolution.

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014
<p>1148: AY/AZ IHT Supervisor contacts AY/AZ IHT (affected personnel) to inquire if the NCO and HPT assigned to the work evolution were present during the initiating event.</p> <p>1151: AY/AZ IHT (affected personnel) notifies AY/AZ IHT Supervisor that "HPT and NCO were outside the fence, but less than 10 feet away".</p> <p>1207: FWS contacts AY/AZ IHT Supervisor and notifies that NCO and HPT declined medical evaluation</p> <p>1223: PO Shift IHTs arrive at MO267 and brief AN Field IH, COMs Field IH, ETF Field IH, and PO Field IH that all readings were <DL</p> <p>1223: PO IHT Lead Notifies COMs Field IH that MIRAN SapphiRe in temporary 200E PO IHT Lab (MO511) is having trouble pre-function testing.</p> <p>1233: COMs Field IH and AN Field IH brief CSM 2 on initial findings during response.</p> <p>1236: EIR # was assigned by CSM 2</p> <p>1238: CSM 2 contacts Contractor Assurance with EIR # and Title update</p> <p>1628: SOEN: "Exiting AOP-015 for 244A DCRT. Sample results are below background levels. Normal access is restored to 244A. CSM"</p>		
Field IH Author:		
 <small>Print First and Last Name</small>	 <small>Signature</small>	 <small>Phone No.</small>
		03/26/2019 <small>Date</small>

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014
2. GCMS Sample Results:		
<p>See Attachment A for HAPSITE (GCMS) results</p> <p>HASPITE Chromatographs are available in SWIHD survey number</p>		

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014

3. Additional Information:

- Odor Response Cards received:

ODOR RESPONSE CARD

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

- Date and time odor was noticed: 3-21-18
- Your name and the work you were performing: [REDACTED]
- Location of odors (mark area on map and wind direction): N/W - 4 miles
- Name(s) of others in or near the affected area: [REDACTED]
- Was an IHT present?: Yes
- Describe the odor: ☐ Sweet ☐ Sour ☒ Musty ☒ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion
☐ Cleaning Solution ☒ Ammonia ☐ Other: [REDACTED]
- Possible Source: Shuck
- 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: hoax

2. Send this card to the Central Shift Office.

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ODOR RESPONSE CARD

Odors Detected with NO Immediate symptoms

- Notify Immediate Supervisor.
- Contact Central Shift Manager. Provide the bulleted information below.
- Complete map, return to Central Shift Office as soon as practicable.

Odors Detected WITH Symptoms

- Notify Immediate Supervisor.
- Contact CSM. 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
- Provide information on the back of card.
- Send this card immediately to the Central Shift Office.

N

E

S

W

11:15 AM 3-21-18

Wind Direction

N
E
S
W

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Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014

ODOR RESPONSE CARD

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

- Date and time odor was noticed: 3/21/19 0945
- Your name and the work you were performing: [Redacted] 244A Level Readings/Gradient Readings
- Location of odors (mark area on map and wind direction): 244A NW Unit
- Name(s) of others in or near the affected area: [Redacted]
- Was an IHT present?: Yes
- Describe the odor: ☐ Sweet ☐ Sour ☒ Musty ☒ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion
☐ Cleaning Solution ☒ Ammonia ☐ Other: _____
- Possible Source: Mold, standing water, lat toilets
- 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: none at this time

2. Send this card to the Central Shift Office.

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ODOR RESPONSE CARD

Odors Detected with 244A immediate symptoms

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

Odors Detected 244A Symptoms

- Notify Immediate Supervisor.
- Contact GSM, [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

- Provide information on the back of card.
- Send this card immediately to the Central Shift Office.

Draw the Location of the Odors

Wind Direction
 N
 W S E

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A-6007-744 (REV 6)

Washington River Protection Solutions		PER Number: WRPS-PER-2019-0574
TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		EIR Number: EIR-2019-014
Time/Date & Event location: 0945 03/21/2019 244A lift station		

ODOR RESPONSE CARD

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

- Date and time odor was noticed: 5:19 4/5 am
- Your name and the work you were performing: [Redacted]
- Location of odors (mark area on map and wind direction): [Redacted]
- Name(s) of others in or near the affected area: [Redacted]
- Was an IHT present?: Yes
- Describe the odor: ☐ Sweet ☐ Sour ☒ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion
☐ Cleaning Solution ☐ Ammonia ☐ Other: Sulfur like
- Possible Source: mol. 4, 18, 21, 22
- 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.

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A-807-346 (REV 0)

ODOR RESPONSE CARD

Odors Detected with NO immediate symptoms

- Notify immediate Supervisor.
- Contact Central Shift Manager. [Redacted]
Provide the bulleted information below.
- Complete map, return to Central Shift Office as soon as practicable.

Odors Detected WITH Symptoms

- Notify immediate Supervisor.
- 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
- Provide information on the back of card
- Send this card immediately to the Central Shift Office.

Draw the Location of the Odors

Wind Direction

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A-807-346 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		PER Number: WRPS-PER-2019-0574
Time/Date & Event location: 0945 03/21/2019 244A lift station		EIR Number: EIR-2019-014

- Summary of IH Monitoring and Sampling Data:
 - a. Monitoring:

Event Initiation survey: 19-01848 "Repetitive Quarterly WFT Readings; 244-A"

DRI field readings:

VOC: <DL

NH3: <DL

Event Response: 19-01873 "AOP-015 244-A DCRT"

DRI field readings:

VOC: <DL

NH3: <DL

Grab samples:

VOC: <DL

NH3: <DL

N2O: <DL

Hg: 4 ng/m³
 - b. Sampling:

N/A

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

No symptoms were reported. Voluntary medical evaluation was declined by all employees.

5. Recommendations/Conclusions:

Identification of Source of the Concern: [] Yes [X] No

No recommendations at this time.

6. Other:

N/A

S&H Program Management:

Print First and Last Name

Signature

Phone No.

3/26/19

Date

Attachment A
GCMS Laboratory Results

HAPSITE GC-MS Bag Sample Results Survey 19-01873: AOP-15 at 244A DCRT

Two bag samples were collected in response to an odor reported at 244A DCRT. These samples were analyzed using an Inficon HAPSITE GC-MS on March 21, 2019. Data was interpreted on March 21, 2019, and reported the same day. Results for the Air Blank Sample were satisfactory. The same compounds were found in 244A DCRT Inside and 244A DCRT Outside at concentrations consistent with sample bag contaminants. No compounds were found at concentrations of concern. No compounds were found at concentrations above background.

Compounds Found in Samples

Compound	Clean Air Blank	244A DCRT Inside	244A DCRT Outside	Sample Bag Contaminant	Comments
Internal Standard #1	X	X	X		Added by instrument during analysis
Methyl Methacrylate		X	X	X	Not found above background
Toluene		X	X	X	Not found above background
Internal Standard #2	X	X	X		Added by instrument during analysis
Xylene		X	X	X	Not found above background
C9 Alkane Hydrocarbon		X	X	X	Not found above background
Substituted Benzene Compound		X	X	X	Not found above background
Substituted Benzene Compound		X	X	X	Not found above background
D-Limonene		X	X	X	Not found above background
Silane Compound		X	X	X	Not found above background
C11-15 Alkane Hydrocarbons		X	X	X	Not found above background

If you have questions contact