

Event Investigation Report

EIR-2017-035

“Investigation of AOP-015 Entry outside TX Change Trailer”



Aerial Shot of TX Farm, showing location where odors were reported and wind direction at odor report times.

[Redacted] 11/15/17
[Redacted] 11/15/17

Introduction

On October 18, 2017 at approximately 0815 three electricians, along with the coverage of two Health Physics Technicians (HPTs), entered TX Farm to perform lighting maintenance. Activities were being concluded for lunch at approximately 1015. Upon exit from the farm, two of the electricians, both HPTs and one Nuclear Control Operator (NCO 1) who was performing rounds outside of TX Farm, noticed an onion like odor just west of TX farm Change Trailer, MO-817, at approximately 1030. No reports were made at this time.

During lunch the electricians were talking amongst themselves and at approximately 1230, Electrician 1 decided to report the odor to ST Operations Engineer (ST OE). ST OE immediately reported this information to ST Area Dayshift Manager (ST ADM). ST ADM requested all five personnel having smelled the odor complete odor response cards. All personnel reported no symptoms and declined medical evaluation.

At 1255 ST ADM contacted the Central Shift Manger (CSM) to inform them of the odor report. Per procedure TF-AOP-015, "Response to Reported Odors or Unexpected Changes to Vapor Conditions", due to the fact that the report did not reach the CSM until 1257, approximately 2.5 hours after the odor was noticed at TX Farm, and because no symptoms were reported, entry into TF-AOP-015 was not made at this time.

Even though entry into TF-AOP-015 was not made, at approximately 1310 the CSM dispatched Shift Industrial Hygiene Technician 1 (Shift IHT 1) to perform Direct Reading Instrumentation (DRI) sweeps outside of TX Farm near MO-817, in the area where the odors were reported. At 1340 Shift IHT 1 reported DRI readings below action levels.

Because an entry into TF-AOP-015 was not made and because no verbal direction was provided to the crew returning to work at TX Farm, at 1330 the electricians and HPTs resumed their work at TX Farm, even though the same odor was present. The 3 electricians entered the farm to complete the 10-15 minute lighting maintenance and HPTs remained in the TX Change Trailer.

After exiting the farm and doffing their Self-Contained Breathing Apparatus (SCBA) in the change trailer, Electrician 1 called Field Work Supervisor (FWS) and notified them of the smell. FWS told the personnel to leave the area and come to 272WA to fill out odor response cards. FWS immediately went into ST ADM's office at 272WA and gave them the second report of odors at TX Farm. ST ADM contacted CSM and TF-AOP-015 was entered at 1410. All five personnel detecting odors for the second occurrence reported no symptoms and declined medical evaluation.

Having overheard conversations between ST ADM and ST Maintenance Manager and without formal direction from management, Industrial Hygienist 1 (IH 1) went to TX Farm to follow-up on odor reports with the crew. Upon arrival at TX Farm, IH 1 also noticed the odor outside of MO-817. IH 1 filled out an odor response card and reported no symptoms and declined medical evaluation.

At 1411 ST ADM reported that all personnel cleared the TX Farm area and are accounted for. At 1435 Relief Central Shift Manager (Relief CSM) reports that the affected area has been restricted and posted. Shift IHT 1 and Shift IHT 2 were dispatched at 1410 and reported DRI reading as below action levels at

1529. Shift IHT's also took two Tedlar bag samples and delivered them to the 2704HV lab for processing. Sample analysis of the bags was completed and reported as below action limits at 1823 on October 18, 2017. At this time TF-AOP-015 entry was exited. At 2148 the area outside of TX Change Trailer was down posted.

On October 19, 2017 Engineer 1 heard of the TF-AOP-015 entry and came to the Central Shift Office (CSO) to report that they too had smelled the odor occurring on October 18, 2017 at approximately 1100 when they were driving past TX Farm to head to lunch. Engineer 1 experienced no symptoms and declined medical evaluation.

AOP-015 Summary

Event	AOP-015 Entry outside of TX Change Trailer					
Date/Time of Event	October 18, 2017 First occurrence ~1030 Second occurrence ~1330					
Location	TX Farm, outside Change Trailer MO-817					
Personnel Affected	<u>1st Occurrence:</u> 2 Electricians 2 HPTs 1 NCO 1 Engineer			<u>2nd Occurrence:</u> 3 Electricians (same as first occurrence) 2 HPTs (same as first occurrence) 1 IH		
Odor/Taste	Odor described as onion, body odor (B.O.), earthy, musty and burnt rubber					
Symptoms	None					
Direct Reading Instrumentation (DRI) Result during Event	Shift IHT 1 performed DRI sweeps for first occurrence at ~1310 and completed at ~1340 with readings less than detectable. Shift IHT 1 and Shift IHT 2 dispatched for second occurrence at 1410 and reported their readings at 1529 as less than detectable					
Industrial Hygiene (IH) Investigative Monitoring/Sampling	~1410-1429 Shift IHTs deployed to obtain Respiratory Protection Equipment (RPE) and report to the field. Shift IHTs pulled 2 Tedlar bags and performed Ammonia (NH ₃) and total Volatile Organic Compound (VOC) monitoring. Bag samples were delivered immediately to 2704HV Lab. At 1823 sample analysis for the AOP-015 completed with results below action limits					
Possible Source(s)	Barometric pressure conditions combined with TX Farm tank vapors/tank waste, Pelletized herbicide application mixed with rain					
Weather Conditions on October 18, 2017	Time	Wind Dir °	Wind Spd (mph)	Temp (°F)	Pressure (inHg)	Humidity %
	0500	140 (SE)	1	46.4	29.29	58.5

Values taken from Station 19-Plutonium Finishing Plant (PFP). The stability class ranged from Stable to Neutral	0600	310 (NW)	3	45.7	29.28	59.3
	0700	60 (ENE)	2	46.2	29.26	62.6
	0800	30 (NNE)	4	46.0	29.25	67.7
	0900	350 (N)	3	46.3	29.25	73.2
	1000	350 (N)	4	49.4	29.24	65.6
	1100	60 (ENE)	3	51.6	29.22	38.1
	1200	30 (NNE)	4	53.1	29.20	68.4
	1300	10 (N)	4	54.6	29.17	53.7
	1400	360 (N)	4	54.4	29.13	68.1
	1500	20 (NNE)	4	56.0	29.10	64.7
	1600	110 (ESE)	6	58.5	29.07	64.1
	1700	230 (SW)	3	61.2	29.03	66.0
	Waste Disturbing or Tank Work in Adjacent Area	None present				
Other Work in Adjacent Area	Mission Support Alliance (MSA) Teamsters present at TX Farm picking up Genie lift					

Investigation Summary

On October 18, 2017 at approximately 0815 Electrician 1, Electrician 2 and Electrician 3 entered TX Farm to perform lighting maintenance along with two HPTs, HPT 1 and HPT 2, performing coverage for the work. Upon entry into the farm personnel noted there was a slight breeze heading from the direction described as blowing from NE to SW with no odors present. The morning work was being concluded for lunch at approximately 1015. At this time conditions were noted as having no wind present. HPTs were inside the farm surveying out the lift used for re-lamping activities of TX Farm's RBA. HPT 1 concluded surveying electricians and was exiting the farm through TX Farm change trailer, MO-817. HPT 2 was still inside TX Farm surveying the lift out of the Radiological Buffer Area (RBA) and across the gravel roadway into the fenced Radiological Materials Area (RMA). HPT 1 noted smelling an onion like odor as soon as they exited the change trailer. Upon exit from the farm two of the three electricians and HPT 2 also noted smelling the onion like odor, one electrician did not detect an odor. NCO 1 who was outside TX Farm performing routine Electronic Shift Operations Management System (eSOMS) rounds also noticed the odor. All personnel remarked the odor was detected at approximately 1030, however no reports were made at this time.

At approximately 1045, ST Maintenance Manager arrives at the RMA across from TX Farm to ensure a recall notification did not apply to a Genie lift. Electrician 1 stated in passing to ST Maintenance Manager, "Something smells kinda stinky out here." Their conversation was concluded and Electrician 1 followed suit of HPT 1, HPT 2, Electrician 2, Electrician 3 and NCO 1 to lunch. ST Maintenance Manager left the RMA shortly after checking the Genie lift and during interviews stated they never detected an odor. Follow-up interviews with Electrician 1 were conducted and they stated they did not believe the conversation they had with ST Maintenance Manager was notification of an event.

During lunch the electricians were discussing the odor and Electrician 1 walked to ST OE's office and reported the odor to them at approximately 1230. ST OE then immediately reported this information to

ST ADM. ST ADM requested all five personnel having detected the odor complete odor response cards. All five personnel smelling the odors, plus the two that did not report odors, had no symptoms and declined medical evaluation. (Odor response cards were sent to the CSM at approximately 1337.)

At 1255 ST ADM contacted the CSM to inform them of the odor report. CSM questioned why the odor had not been reported sooner. In interviewing ST ADM they stated that they may have been given a reason but due to their frustration with the situation they do not recall having been given a reason for the delay in the odor report.

From interviewing the CSM they stated that they did not enter TF-AOP-015, "Response to Reported Odors or Unexpected Changes to Vapor Conditions" which states;

2.0 Entry Conditions:

This AOP is for odors reported at the time the event occurred, so that timely data collection is achievable.

2.1.1 NOTIFICATION from personnel that odors are present and meet any of the following conditions:

Odors have caused symptoms of exposure (e.g., headaches, irritation of the skin, eyes, nose, or lungs, nausea, difficulty breathing, metallic taste in mouth)

A stronger than normal odor is detected by multiple personnel outside of areas where potential or actual vapor concerns are expected such as waste transfers, 242-A operations, or cover block removal.

TF-AOP-015 was not entered since the report did not reach the CSM until ~1257, approximately 2.5 hours after the odor was noticed at TX Farm, and because no symptoms were reported. Even though entry into TF-AOP-015 was not made, at approximately 1310, the CSM dispatched Shift IHT 1 to perform DRI sweeps outside of TX Farm near MO-817, in the area where the odors were reported. At 1340 Shift IHT 1 reported DRI readings below action levels.

Because an entry into TF-AOP-015 was not made and because no verbal direction was provided to the crew returning to work at TX Farm, at 1330 the electricians and HPTs resumed their work at TX Farm, even though the same odor was present. The 3 electricians entered the farm to complete the 10-15 minute lighting maintenance and HPTs remained in the TX Change Trailer. After exiting the farm and doffing their SCBA in the change trailer, Electrician 1 called FWS and notified them of the smell. FWS told the personnel to leave the area and come to 272WA to fill out odor response cards. FWS immediately went into ST ADM's office at 272WA and gave them the second report of odors at TX Farm. ST ADM contacted CSM and TF-AOP-015 was entered at 1410. All five personnel detecting odors for the second occurrence reported no symptoms and declined medical evaluation.

Having overheard conversations between ST ADM and ST Maintenance Manager and without formal direction from management, IH 1 went to TX Farm to follow-up on odor reports with the crew. When IH 1 reached TX Farm it was vacant. IH 1 called the Hanford Meteorological Station (MET Station) and asked for the wind and barometric pressure conditions of the area for the last 4 hours and was told that

the pressure was steadily dropping and wind was 0-2 MPH North to South. IH 1 stated that personnel reporting from the MET station concurred with IH 1 that the smell was common for those weather conditions and this area at this time of year. IH 1 reported smelling the odor at approximately 1410 just outside of MO-817. IH 1 was at TX Farm for a few minutes and returned to 272WA to fill-out an odor response card and reported no symptoms and declined medical evaluation. (Odor response cards were sent to the CSM at approximately 1450 for the second occurrence.)

At 1411 ST ADM reported that all personnel cleared the TX Farm area and are accounted for. At 1435 Relief CSM reported that the affected area has been restricted and posted. Two MSA teamsters were reported to have been outside MO-817 during the second entry into TX Farm, but it was confirmed with their manager that they had already cleared ST area and were in the east area when the TF-AOP-015 entry was made. The MSA teamsters reported having smelled no odors and declined medical surveillance.

Shift IHT 1 and Shift IHT 2 were dispatched at 1410 and at 1529 reported DRI readings as below action levels. Shift IHT's also took two Tedlar bag samples and delivered them to the 2704HV lab for processing. Sample analysis of the bags was completed and reported as below action limits at 1823 on October 18, 2017. At this time TF-AOP-015 entry was exited. At 2148 the area outside of TX Change Trailer was down posted.

On October 19, 2017 Engineer 1 heard of the TF-AOP-015 entry and went to the CSO to report that they too had smelled the odor occurring on October 18, 2017 at approximately 1100 when they were driving past TX Farm to head to lunch. Engineer 1 experienced no symptoms and declined medical evaluation. An odor response card was submitted by Engineer 1 to the CSO.

During interviews when asked if personnel had any indications as to where the smell was coming from it was noted that the odor experienced is common during the spring and fall months for this area. It was also mentioned that the smell could be a source from pelletized herbicide having recently been dispersed near the farm. It was confirmed on The Daily Report Sheet from October 5, 2017 that herbicide was applied to the 241TX Tank Farm Interior.

End of Summary

Personnel interviews were conducted in lieu of Fact Finding Meeting for this event.

Event Timeline

October 18, 2017

- ~0815: 3 Electricians & 2 HPTs arrived at TX Farm to perform lighting maintenance
- ~1015: 3 Electricians and 2 HPT exited TX Farm for lunch
- 1030: Odor detected outside of change trailer MO-817 by Electrician 1, Electrician 2, HPT 1, HPT 2 & NCO 1
- 1045: ST Maintenance Manager arrived at RMA across from TX Farm, Electrician 1 mentions odor

- 1230: Electrician 1 notified ST OE of 1030 odor at TX Farm
- ~1240: First odor report personnel to ST ADM office to fill out odor response cards
- 1255: CSM contacted by ST ADM regarding first odor report
- 1310: Shift IHT 1 dispatched from CSO to perform DRI sweeps where odor was reported near MO-817
- 1330: The 3 electricians and 2 HPTs returned to TX Farm to resume work prior to lunch
- 1337: Odor response cards from first report of odors sent to CSM
- 1340: Shift IHT 1 reported DRI readings from first odor report below action level
- ~1345: Electrician 1 called FWS and notified them of the smell. FWS directed personnel to leave the area and come to 272WA to fill out odor response cards
- 1410: IH 1 reported smelling the odor just west of MO-817 and returned to 272WA and filled out an odor response card
- 1410: Entered TF-AOP-015 for odors reported outside of TX Farm change trailer
- 1410: Shift IHT 1 and Shift IHT 2 dispatched from CSO to perform DRI sweeps where odor was reported near MO-817 and pulled 2 Tedlar bags to perform NH3 and total VOC monitoring
- 1411: ST ADM reported that all personnel cleared the TX Farm area and are accounted for
- 1435: Relief CSM reported that the affected area has been restricted and posted
- 1435: MSA supervisor confirmed with Relief CSM that MSA teamsters reported as being outside of MO-817 during the second entry were in east area prior to TF-AOP-015 entry
- 1450: Odor response cards from second report of odors sent to CSM
- 1529: Shift IHT 1 and Shift IHT 2 reported DRI readings from second odor occurrence as below action levels
- 1823: Sample analysis of the bags were completed and reported as below action limits
- 1823: Exited TF-AOP-015 for odors reported just west of TX Farm change trailer
- 2148: Area west of TX Change Trailer down posted

** Throughout the course of this event Department of Energy Facility Representative (DOEFR) was made aware of the events taking place.*

October 19, 2017

Initiated event investigation "AOP-015 entry outside TX change trailer."

After hearing a TF-AOP-015 entry was made Engineer 1 reported to the CSO that they too had smelled the odor occurring on October 18, 2017 at approximately 1100 when they were driving past TX Farm to head to lunch. Engineer 1 experienced no symptoms and declined medical evaluation. An odor response card was submitted by Engineer 1 to the CSO.

October 25, 2017

In response to this event WRPS-PER-2017-2434, "Odors were Reported by Five Individuals Outside TX Farm by the TX/TY Change Trailer", was generated.

November 2, 2017

WRPS-PER-2017-2491, "TX Farm Odor Response", WRPS-PER-2017-2492, "TX Farm Odor Response 2" and WRPS-PER-2017-2493, "TX Farm Odor Response", were generated as a result of the responses taking place during this event.

Preliminary Extent of Condition Review

This TF-AOP-15 entry was specific to the area outside of TX-Farm change trailer MO-817, and odors were detected 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. During interviews with IH personnel and information gathered from the MET Station it was determined that the barometric pressure conditions could be a contributing factor to the odor. Barometric pressure differences, in this case decreasing pressure, decreasing temperature outside due to seasonal changes and higher temperatures inside the tanks all combined can cause gas to escape from the tanks. (Attachment 1)
2. It was suggested during interviews that odors could have possibly come from a pelletized herbicide application stimulated by recent rain. Daily Report sheets document that a Non-Selective Herbicide was applied along the 241TX Tank Farm interior on October 5, 2017.

Immediate Actions

1. Shift IHT dispatched from CSO to perform DRI sweeps for 1030 odor report with readings reported below action levels.
2. Entered TF-AOP-015 for 1410 odor report, IHTs dispatched to perform DRI sweeps and pulled 2 Tedlar bags for NH3 and total VOC monitoring, with readings reported below action levels.
3. Following the second odor report all personnel were cleared from TX Farm area and accounted for. Affected area was restricted and posted.

Recommendations/Proposed Corrective Actions

1. Reinforce SWIM actions and warn/notify others at the presence of something such as abnormal odors present, see TF-AOP-015 ACTIONS below.
 - a) Stopping work and reporting needs to happen at the first sign of adverse conditions.
 - b) Management provide direction to workforce such as not entering areas where odors are being reported. Even though a TF-AOP-015 entry was not made, management still needed to communicate to the workforce the importance of stopping work immediately and notifying if any abnormal odors are present.
 - c) During events and developing events personnel are not to respond to areas of concern unless formal direction is given by management. The chain of command needs to be heeded by all and responded to accordingly, particularly during abnormal situations.

Response to Reported Odors or Unexpected Changes to Vapor Conditions

3.0 ACTIONS

3.1 Immediate Actions

Implement SWIM Response Actions at Event Scene

3.1.1 **ASSIGN** field lead to implement SWIM response actions.

NOTE- Evacuation does not include the Tank Farm change trailers or facilities such as the 242-A Evaporator building, unless odor issues are impacting the interior of the facility.

3.1.2 **ANNOUNCE** entering TF-AOP-015 over Tank Farms radio channel(s) **AND** SEND SOEN message that includes the following:

- Entry into TF-AOP-015
- Event and location
- Required actions for affected personnel/protective actions as applicable
- Access approval and authority as applicable.

3.1.3 **STOP** access to affected area except for activities required for safe operations or the TF-AOP-015 response.

3.1.4 **NOTIFY** other personnel as needed in adjacent work areas and/or other facilities that may not receive radio communication.

3.1.5 **IF** emergency assistance is required, **CALL** Hanford Fire Department (HFD) at 911 [REDACTED]

3.1.6 **IF** the odor could impact a large area, **CONSIDER** activating a take cover per TF-ERP-001 and RLEP 1.1.

3.1.7 **ISOLATE** area **AND**

MINIMIZE personnel exposure by preventing inadvertent entry into hazardous area.

3.1.8 **ENSURE** employees exhibiting symptoms report to Occupational Medicine for medical surveillance. (See TFC-ESHQ-S_CMLI-C-02).

3.1.9 **OFFER** medical surveillance to employees who detected odors.

3.1.10 **REQUEST** odor response card be completed and submitted to the Central Shift Manager.

Type	Document No.	Rev/Mod	Release Date	Page
REFERENCE	TF-AOP-015	G-3	03/16/2017	3 of 10

Documents Reviewed:

1. Odor Response Cards
2. Industrial Hygienist Investigation Report
3. TF-AOP-015, "Response to Reported Odors or Unexpected Changes to Vapor Conditions"
4. Daily Reports from October 2nd-19th 2017
5. CSM log entries
6. Annotated chromatogram of bag sample survey #17-09153, taken in TX-TY area in response to the AOP-15
7. RPP-22491, "Industrial Hygiene Chemical Vapor Technical Basis"
8. WRPS-PER-2017-2434, "Odors were Reported by Five Individuals Outside TX Farm by the TX/TY Change Trailer"
9. WRPS-PER-2017-2491, "TX Farm Odor Response"
10. WRPS-PER-2017-2492, "TX Farm Odor Response 2"
11. WRPS-PER-2017-2493, "TX Farm Odor Response"

Attachments:

1. RPP-22491 "Industrial Hygiene Chemical Vapor Technical Basis", Page 24
2. Industrial Hygienist Investigation Report, 28 pages
3. Pictures of TX Farm

Attachment 1: RPP-22491, "Industrial Hygiene Chemical Vapor Technical Basis", Page 24

RPP-22491 Rev. 1

3.0 MEASURED AND PROJECTED HEADSPACE COMPOSITIONS

Headspace gas and vapor characterization was systematically conducted in the 1990s on those SSTs thought to have the highest concentrations of noxious gases and vapors (WHC-EP-0562). Samples were collected from a majority of the SSTs and analyzed using robust methods that allowed the quantification of the major volatile waste species (e.g., hydrogen, nitrous oxide, ammonia) and the identification of a broad array of trace organic vapors to provide source term data to the IH program (WHC-SD-WM-ER-514). Vapor headspace sampling has continued through the present, and over 2,000 headspace samples have been collected and analyzed since 1994, and over 1,200 organic vapors have been identified in the waste tank headspaces (PNNL-13366). These headspace characterization data indicate the following:

- Which chemicals may be released into the worker breathing zone,
- Identification of tanks from which chemicals may be released, and
- Approximate maximum chemical concentrations at the point of release.

This section provides overviews of vapor sampling basics, sampling media and analytical methods, the characterization data, the observed variability in headspace compositions with time, and a discussion of the effects of waste-disturbing activities.

3.1 VAPOR SAMPLING BASICS

Vapor source characterization is best done by sampling the air inside the headspaces of the passively-ventilated tanks and at the exhaust stacks of the actively-ventilated tanks. Tank headspace air from passively-ventilated tanks should be collected from the headspace itself, far enough below the end of the riser to avoid air drifting down the riser. Samples collected directly from a riser may not be representative of the headspace. Source samples collected at likely points in the worker breathing zone (e.g., at the breather filter) should be accompanied by vapor monitoring (e.g., an ammonia monitor) to demonstrate that tank air was being emitted by the source.

As a general rule, it is desirable to minimize the tubing, valves, filters, etc. between the sampling devices (e.g. sorbent traps, SUMMA¹ canisters, bubblers) and the air being sampled. This reduces the loss of analytes via adsorption onto tubing walls, the filter, etc., and the potential for condensation of water vapor. Sampling manifold components that must be upstream of the sampling devices should be free of contaminants (such as plasticizers, perfluoroalkoxy, polyurethane foam; tubing is plasticizer-free) and chosen to minimize adsorption of analytes (e.g., C-Flex® and Tygon® are known to aggressively adsorb many analytes and should not be used). Cleaning of the manifold should be done with consideration of the analytes being sampled and any previous uses of the manifold. To ensure cleaning solvents do not get trapped in valves and at tubing connections, it is advisable to completely dismantle all manifold components before cleaning, and thoroughly dry all components before reassembly.

¹ SUMMA is a trademark of Moletrics, Inc., Cleveland, Ohio.

Attachment 2: TF-AOP-015 Industrial Hygiene Investigation Report

<p>Washington River Protection Solutions</p> <p>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</p>	<p>PER Number: WRPS-PER-2017-2491 WRPS-PER-2017-2492 WRPS-PER-2017-2493</p> <p>EIR Number: EIR-2017-35</p>
<p>Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm</p>	
<p>1. Field response actions:</p> <p>Event Summary (including number of workers involved and activity in progress):</p> <p>Event 1: 2 Electricians, 2 HPT's and 1 NCO performing re-lamping outside of TX change trailer noticed stronger than usual "onion, B.O., earthy, musty" odor at approximately 1030. Crew continued working and reported odors to CSO at 1250. CSM deployed IHT shift workers to perform DRI sweep of the area. DRI sweeps were less than (<) detectable for total VOC and NH₃. Workers were cleared to continue with work.</p> <p>Event 2: 2 Electricians and 2 HPTs from the 1st event crew, with 1 NCO experienced stronger than usual "onion, B.O., earthy, and/or musty" odor at approximately 1330. Additionally, during a follow-up to event 1 at approximately 1410, 1 IH documented odors near TX as "onion, B.O." According to the IH during phone turnover, odors are consistent with those experienced in the past for the location. CSM received report of odors at 1410 and entered AOP-15. No symptoms reported and all personnel declined medical.</p> <ul style="list-style-type: none"> • Was an IHT Present during initiating event? [] Yes [X] No <ul style="list-style-type: none"> ○ IH Monitoring/ Sample Survey Reports: <ul style="list-style-type: none"> - 17-09153 Odor Response Outside TX-Farm AOP-015 	
<p>Weather Conditions at Time of Event: 1030 10/18/2017</p> <ul style="list-style-type: none"> • Weather station: 19 • Wind Direction & Speed : 3mph ENE • Barometric Pressure (steady/rising/falling) : 29.22 inHg and steady • Temperature (°F) : 51.8 °F • Humidity: 38.1% 	
<p>Weather Conditions at Time 2nd of Event: 1230 10/18/2017</p> <ul style="list-style-type: none"> • Weather station: 19 • Wind Direction & Speed : 3mph ENE • Barometric Pressure (steady/rising/falling) : 29.05 inHg and falling • Temperature (°F) : 54.7°F • Humidity: 70% 	
<ul style="list-style-type: none"> • Field Response Timeline: <ul style="list-style-type: none"> 1410 CSO enters AOP-15 for odors outside the farm around the TX change trailer. SOEN issued: "Entering AOP-015 for odors outside the farm around the TX change trailer. Stay clear of this area and move to an upwind location. CSM" 1411 COMS/EV IHTs arrive at CSO and briefed by CSM. 1412 COMS IH notifies shift IHT supervisor. 1414 IHT supervisor arrives at CSO. 1415 IHT supervisor calls shift IHTs. 1416 AN IH calls EV IH: AN IH informs EV IH that IH Program Chemist and Instrument Custodian have been contacted and are preparing HAPSITE. 1419 Shift IHTs arrive at CSO. Inform CSO personnel that Direct Reading Instrumentation (DRI) sweeps for NH₃ and total VOC were completed in response to first event. Readings were all 	

<p>Washington River Protection Solutions</p> <p>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</p>	<p>PER Number: WRPS-PER-2017-2491 WRPS-PER-2017-2492 WRPS-PER-2017-2493</p> <p>EIR Number: EIR-2017-35</p>
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Time/Date & Event location:
1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

less than detectable with no detectable odors. Sweeps were performed at approximately 1310 and completed around 1340.

1420 COMS and EV IH brief IHTs.

1421 CSM briefs shift IHTs.

1423 Tank waste as possible odor source determined to be feasible by IH based upon odor history and odors reported.

1424 Shift IHTs deployed to obtain RPE and report to the field. IHTs instructed to pull 2 Tedlar bags and perform additional NH₃ and total VOC monitoring.

1428 IH manager updates IH programs AOP-015 SME. AOP-015 SME en-route to site to meet with IH Program Chemist

1433 CSM notified more than 3 personnel reported odors.

1436 CSM updated by shift NCO that barricades are in place.

1438 ST IH contacts EV IH with update. ST IH reported odors were typical for the area.

1503 Second set of Odor Response Cards arrive at CSO. 6 cards (2 Electricians, 2 HPTs, 1 NCO and 1 IH).

1528 IHT supervisor called COMS IH: DRI sweeps are completed with <detectable readings found. Tedlar bags are delivered to the IH lab at 2704HV. IH Program Chemist running 1mm/100mL method on HAPSITE.

1540 Shift IHTs post instrumentation. NH₃ and VOC pass post testing.

1555 IHT supervisor updates COMS IH on the need to call OT for HAPSITE analysis.

1558 IHT OT callout found no volunteers from all qualified IHT staff.

1559 IHT Supervisor contacts Instrument Custodian who is performing HAPSITE run. Approximately 12 min left on blank and should be able to complete run by end of shift. 1 Bag will be run tonight and 1 will be saved.

1600 IHT supervisor notifies IH Program Chemist of update and of approximate time results will be sent. IHT supervisor then attempts to contact CSO with update regarding cancellation of overtime.

1603 CSO contacts IHT supervisor and receives update.

2150 SOEN issued: "Sample analysis for the TF-AOP-015 event has been completed and the results are below action limits. Exiting TF-AOP-015. CSM"

10/19/2017

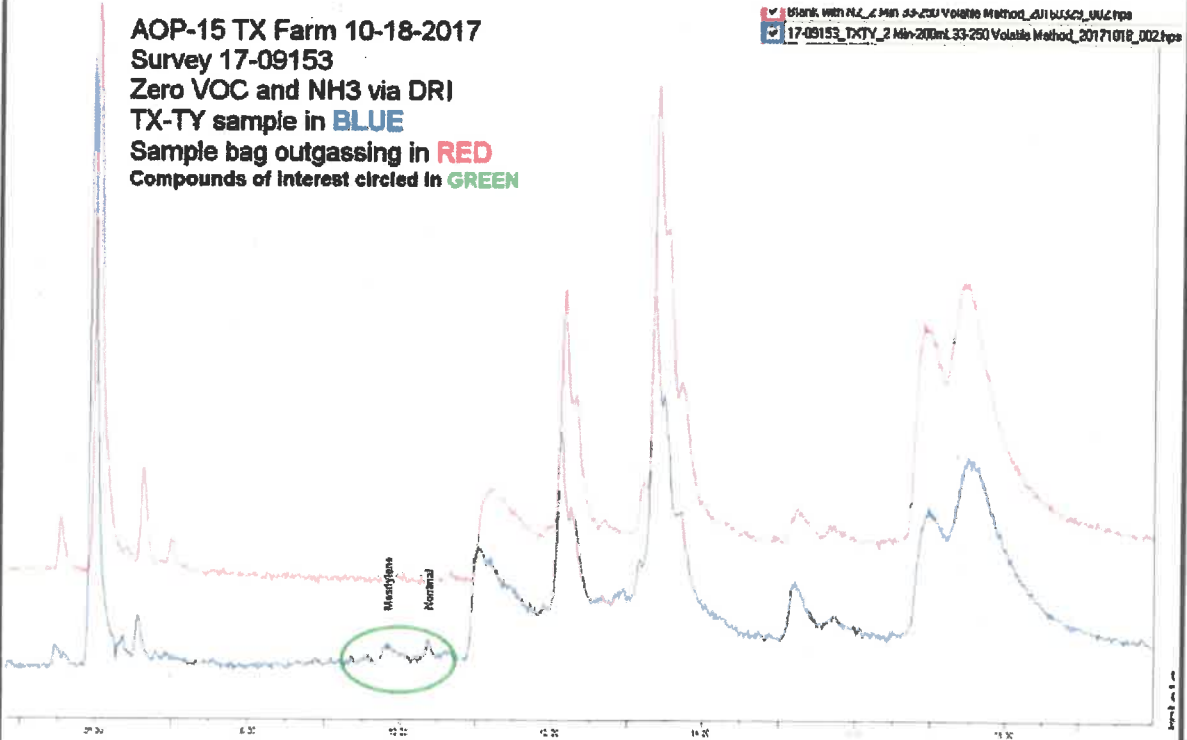
1503 Engineering support personnel driving to lunch near TX farm at time of AOP-015 (1100 on 10/18/2017) sends odor response card to CSO. Description includes "burnt rubber" odor with no symptoms.

<p>IH Author</p>	<p>(Print) [Redacted]</p> <p>(Sign) [Redacted]</p>	<p>[Redacted]</p> <p>Phone</p>	<p>11/13/2017</p> <p>Date</p>
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Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

2. GCMS Sample Results:



IH Author	(Print) (Sign)			Phone	Date 11-14-2017
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Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

3. Additional Information:
- Odor Response Cards received:

ODOR RESPONSE CARD - 241-TX FARM

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: [REDACTED] Symptoms: [REDACTED]

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-TX FARM

Page 1 of 2 A-6005-943 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulleted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>10-18-17 10:30 am</u> ● Your name and the work you were performing <u>[Redacted] lighting</u> ● Location of odors (mark area on map and wind direction) _____ ● Name(s) of others in or near the affected area _____ ● Was an IHT present? <u>NO</u> ● 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 checked="" type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input type="checkbox"/> Other: _____ ● Possible Source _____ ● 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: _____ <p>2. Send this text to the Central Shift Office. <u>NO SYMPTOMS</u></p>	
Page 2 of 2	A-6005-943 (REV 5)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A EIR Number: EIR-2017-35
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<ol style="list-style-type: none"> 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. <i>Odor Dispersal Path Diagram</i> 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED], complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. 7. Send this card immediately to the Central Shift Office. 	
Page 1 of 2	A-6005-943 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 10-18-2017 @ 1030
- Your name and the work you were performing [REDACTED] - HPT
- Location of odors (mark area on map and wind direction) Outside TX/TX Change Trailer
- Name(s) of others in or near the affected area [REDACTED] and electricians
- Was an IHT present? No
- Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion
 Cleaning Solution Ammonia Other: Body Odor
- Possible Source I don't know
- 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

2. Send this card to the Central Shift Office.

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulleted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>10-18-17, 10:30</u> ● Your name and the work you were performing <u>[REDACTED] - HPT</u> ● Location of odors (mark area on map and wind direction) <u>outside of the TX-TY change trailer</u> ● Name(s) of others in or near the affected area <u>[REDACTED]</u> ● Was an IHT present? <u>NO</u> ● 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 checked="" type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input type="checkbox"/> Other: _____ ● Possible Source <u>I do not know</u> ● 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: <u>NONE</u> <p>2. Send this card to the Central Shift Office.</p>	
Page 2 of 2	A-6005-943 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Notify Immediate Supervisor.</p> <p>2. Contact Central Shift Manager, [REDACTED] Provide the bulleted information below.</p> <p>3. Complete map, return to Central Shift Office as soon as practicable.</p> <p><i>Please describe your symptoms:</i></p> <p>4. Notify Immediate Supervisor.</p> <p>5. Contact CSN, [REDACTED] complete below bulleted information and map.</p> <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 this odor • Name of other in or near the affected area • Was an IHT present? • Possible source <p>6. Provide information on the back of card.</p> <p>7. Send this card to Washington River Protection Solutions, Central Shift Office.</p>	
Page 1 of 2 A-6005-043 (REV 0)	

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 10/18/17 1030 Am
- Your name and the work you were performing [Redacted] Round 2
- Location of odors (mark area on map and wind direction) [Redacted] east direction
- 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 stark farm
- 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

2. Send this card to the Central Shift Office.

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A-6005-043 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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.

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 effected 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.

Page 1 of 2

A-6008-041 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulleted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>10:39 am 10-18-17</u> ● Your name and the work you were performing <u>[Redacted]</u> ● Location of odors (mark area on map and wind direction) <u>By 110 517</u> ● Name(s) of others in or near the affected area <u>[Redacted]</u> ● Was an IHT present? <u>No</u> ● Describe the odor <input type="checkbox"/> Sweet <input type="checkbox"/> Sour <input checked="" type="checkbox"/> Musty <input type="checkbox"/> Earthy <input type="checkbox"/> Metallic <input type="checkbox"/> Smoky <input type="checkbox"/> Rotten <input checked="" type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input type="checkbox"/> Other: _____ ● Possible Source <u>Waste</u> ● 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: <u>None at the Time</u> <p>2. Sign this card to the Control Shift Office.</p> <p style="text-align: center;"><u>N</u></p>	
Page 2 of 2	A-6005-744 (REV 4)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p style="text-align: center;">Odors Detected with NO Irradiate symptoms</p> <ol style="list-style-type: none"> 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. <p style="text-align: center;">Odors Detected with IRRADIATE symptoms</p> <ol style="list-style-type: none"> 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED] and complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. 7. Sign and record location, date and time of collection. 	<p style="text-align: right;">241-TX FARM</p>
Page 1 of 2 A-6005-744 (REV 03)	

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 12/12/17 4:10
- Your name and the work you were performing [Redacted] IHT Follow-up
- Location of odors (mark area on map and wind direction) 30' West of TX/TY Change Trailer
- Name(s) of others in or near the affected area N/A
- Was an IHT present? No
- Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion
 Cleaning Solution Ammonia Other: B.O.
- Possible Source TX/TY
- 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

2. Send this card to the Central Shift Office.

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>Odors Detected with <i>NO</i> immediate symptoms</p> <ol style="list-style-type: none"> 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. <p>Circle Date and Time of Symptom</p> <ol style="list-style-type: none"> 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED]. Complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. 7. Send this card immediately to the Central Shift Office. 	
Page 1 of 2 A-6005-643 (REV 0)	

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulletted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>10-18-17 1:30 pm</u> ● Your name and the work you were performing <u>[Redacted] / Electrical Work</u> ● Location of odors (mark area on map and wind direction) <u>By 11/18/17</u> ● Name(s) of others in or near the affected area <u>[Redacted] [Redacted] [Redacted] [Redacted]</u> ● Was an IHT present? <u>No</u> ● Describe the odor <input type="checkbox"/> Sweet <input type="checkbox"/> Sour <input checked="" type="checkbox"/> Musty <input type="checkbox"/> Earthy <input type="checkbox"/> Metallic <input type="checkbox"/> Smoky <input type="checkbox"/> Rotten <input checked="" type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input type="checkbox"/> Other: _____ ● Possible Source <u>Leak Waste</u> ● 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: <u>None at the Time</u> <p>2. Send this card to the Central Shift _____ :</p>	
Page 2 of 2	A-6005-643 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A <hr/> EIR Number: EIR-2017-35
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p style="text-align: center;">Odors Detected with NO Immediate symptoms</p> <ol style="list-style-type: none"> 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. <p style="text-align: center;">Odors Detected WITH Symptoms</p> <ol style="list-style-type: none"> 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED]. Complete below bulleted 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 IHY present? • Possible source 6. Provide information on the back of card. 7. Send this card immediately to the [REDACTED] Office. 	
Page 1 of 2	A-6008-943 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A EIR Number: EIR-2017-35
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulleted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>1:30 pm 10-18-2017</u> ● Your name and the work you were performing <u>[Redacted] Electrode</u> ● Location of odors (mark area on map and wind direction) <u>MARKED</u> ● Name(s) of others in or near the affected area <u>[Redacted], [Redacted], [Redacted], [Redacted]</u> ● Was an IHT present? <u>NONE</u> ● 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 checked="" type="checkbox"/> Onion <input type="checkbox"/> Cleaning Solution <input type="checkbox"/> Ammonia <input type="checkbox"/> Other: _____ ● Possible Source _____ ● 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: <u>NONE THAT I KNOW OF AT THIS TIME.</u> <p>Send this card to the Central Shift Office.</p>	
Page 2 of 2	A-8005-043 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
ODOR RESPONSE CARD - 241-TX FARM	
<p>Odors Detected with NO immediate symptoms</p> <ol style="list-style-type: none"> 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. 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED]. Complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. <p>? See on this card immediately refer to Central Shift Office.</p>	<p style="text-align: right;">Wind Direction N W E S</p> <p style="text-align: right;">241-TX FARM</p>
Page 1 of 2	A-6008-643 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 10-18-17 1:30 PM
- Your name and the work you were performing _____ lighting
- Location of odors (mark area on map and wind direction) _____
- 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: _____
- Possible Source _____
- 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: _____

NO Symptoms

2. Signatures and dates to the local Staff Office

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
<p style="text-align: center;">Odors Detected with [redacted] immediate symptoms</p> <ol style="list-style-type: none"> 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. 4. Notify Immediate Supervisor. 5. Contact CSM, [redacted], complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. 	<p style="text-align: center;">ODOR RESPONSE CARD - 241-TX FARM</p> <p style="text-align: right;">241-TX FARM</p>
Page 1 of 2	A-6005-843 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 10-18-17, 10:30
- Your name and the work you were performing [REDACTED] HPT
- Location of odors (mark area on map and wind direction) outside of the TX/TX change trailer
- Name(s) of others in or near the affected area [REDACTED]
- Was an IHT present? NO
- Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion
 Cleaning Solution Ammonia Other: _____
- Possible Source I do not know
- 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

2. Send this card to the Control Shift Leader

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A-6005-744 (REV 0)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX 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 *NO*
Immediate 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 in box to Central Shift Office.

Wind Direction:
N
W E
S

241-TX FARM

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
	EIR Number: EIR-2017-35

Time/Date & Event location:
 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm

ODOR RESPONSE CARD - 241-TX FARM

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

- Date and time odor was noticed 10-18-2017 @ 1400
- Your name and the work you were performing [Redacted] - HPT
- Location of odors (mark area on map and wind direction) Outside Tx/Ty Change Trailer
- Name(s) of others in or near the affected area [Redacted], Electricians, Teamsters
- Was an IHT present? No
- Describe the odor Sweet Sour Musty Earthy Metallic Smoky Rotten Onion
 Cleaning Solution Ammonia Other: Body Odor
- Possible Source I don't know.
- 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

Send this card to the Central Shift Office

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A-6005-543 (REV 7)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A EIR Number: EIR-2017-35
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
The following odor response card was received from the shift office 10/19/2017@1503.	
ODOR RESPONSE CARD - 241-TX FARM	
<p>1. Contact CSM, Complete below bulleted information and map.</p> <ul style="list-style-type: none"> ● Date and time odor was noticed <u>10-18-17 1100</u> ● Your name and the work you were performing <u>[REDACTED] driving to lunch</u> ● Location of odors (mark area on map and wind direction) _____ ● Name(s) of others in or near the affected area <u>[REDACTED]</u> ● Was an IHT present? <u>NO</u> ● 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: <u>turd rubber</u> ● Possible Source <u>not known</u> ● 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 checked="" type="checkbox"/> Other: <u>No symptoms</u> 	
<p>2. Send this card to the Central Shift Office.</p>	
Page 2 of 2	A-8006-043 (REV 1)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: N/A
EIR Number: EIR-2017-35	
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm	
<p style="text-align: center; color: red;">Odors Detected with <u>NO</u> Immediate symptoms</p> <ol style="list-style-type: none"> 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. <p style="text-align: center; color: red;">Odors Detected <u>WITH</u> Symptoms</p> <ol style="list-style-type: none"> 4. Notify Immediate Supervisor. 5. Contact CSM, [REDACTED], complete below bulleted 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 IHT present? • Possible source 6. Provide information on the back of card. <p style="color: red;">7. Send this card immediately to the Central Shift Office.</p>	<p style="text-align: center;">ODOR RESPONSE CARD - 241-TX FARM X</p> <p style="text-align: right; font-size: small;">241-TX FARM</p>
Page 1 of 2.	A-8005-843 (REV 0)

• **Summary of IH Monitoring and Sampling Data:**


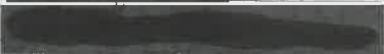


- a. **Monitoring:**
- b. **Sampling:** The Hapsite results indicated sub part per billion traces of acetone, 1, 3-dichloropropene, toluene, mesitylene, and nonanal. There were no chemicals that exceeded action levels. At these lower levels a person would be unable to sense the compounds reported.

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

Since the odors were noticed in the morning and again mid-afternoon, some employees turned in more than one odor response card. Eight employees filled out at least one card. One employee filled out two cards for the same time period. Reported odor in general was of an onion or body odor. One employee reported the odor as burnt rubber. No one experienced symptoms.

5. Recommendations/Conclusions:

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

Washington River Protection Solutions		PER Number: N/A
TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT		EIR Number: EIR-2017-35
Time/Date & Event location: 1030 10/18/2017 and 1330 10/18/2017 Outside 241-TX Farm		
The odor response cards did not offer information on a possible source. One employee thought it might be tank waste. There are no recommendations with regard to the event.		
<u>Other:</u> Strong onion odors were reported near Energy Northwest at 1500 hours and again later in the evening at 1833 hours.		
S&H Program Mgmt.	(Print)  (Sign) 	 Phone  Date

Attachment 3: Pictures of TX Farm





Picture facing south, TX Farm to the left, fenced in RMA on the right