EVENT INVESTIGATION REPORT

AOP-015 Event Outside U Farm Change Trailer Event Investigation Report 2018-039



U Farm (Odor Area in Red)

	11/28/18
Event Investigation Team Lead	Date
1	1/20/.
	11/28/18
Responsible Manager	Date

Executive Summary

At approximately 0850 on October 24, 2018, a team of craft personnel arrived outside of U Farm change trailer. They were preparing to enter the change trailer when six of the personnel smelled an odor described as a sweet onion smell. The field personnel decided to stop the work and the Field Work Supervisor (FWS) restricted access to the area. Field personnel notified the Central Shift Office (CSO), which made an AOP-015 entry. None of the field personnel exhibited any signs or symptoms and all declined evaluation by medical.

Investigation Summary

At 0700, Electrical craft personnel arrived for their morning briefing for work orders 351340 and 351341 *U Farm MCC Clean and Inspect*. The Field Work Supervisor (FWS) completed a pre-job brief then field personnel drove to outside the U-Farm change trailer. Just as all the field personnel exited their vehicles, one individual noticed the slight smell of sweet onions. Immediately after, five other personnel in the group smelled the same thing. The wind that morning was "dead calm" as described by one of the individuals. At Hanford Weather Station 40, which is located on the edge of the 200 West Area near U Farm, showed wind speeds below 3 miles per hour, confirming this assessment. The FWS decided to stop the work and instructed all personnel to leave the area. The personnel said that as they were returning to vehicles to leave the area, the smell grew in strength very rapidly. The FWS contacted the central shift office, and the CSO entered an AOP-015 for odors outside U Farm. The FWS then restricted access to the area around the U Farm change trailer.

All Craft personnel declined medical evaluation and none exhibited any signs or symptoms.

CSO sent out the Industrial Hygiene (IH) response team. All samples taken tested at less than detectable levels.

The Event Investigator conducted an informal interview with the six craft personnel and the FWS. All individuals that were in the area submitted completed Odor Response Cards and the Investigator received copies at that time.

Event Timeline

10/24/2018

- 0700 Pre-Job Brief conducted for U Farm work orders
- 0849 Field personnel arrive at U Farm outside of change Trailer
- One of the field personnel smells a "faint onion-onion like smell", then promptly by five more.
- Field personnel call and inform the FWS of the smell. FWS stops the work and instructs all the field personnel to return to 271S.
- O853 As the loading of the vehicles is completed, all the field personnel notice the smell has significantly built in strength

- 0900 Craft arrive back at 271S
- O908 Central Shift Office (CSO) enters AOP-015 for odors outside of U Farm. Access to U Farm was restricted. On-Call FacRep notified.
- 0917 SOEN for AOP-015 issued
- 0938 Completed odor response cards delivered to Central Shift Office
- O958 AOP-015 Event Investigation WRPS-EIR-2018-039 initiated. Notified On-Call FacRep.
- 1043 AOP-015 exited

Event	SX Farm	AOP-015 Event				
Date/time of event	October 2	24, 2018 0850				
Location	Outside U	Outside U Farm Change Trailer				
Odor	Sweet Onion					
Symptoms	None					
DRI results during event	Less than the Level of Detection (LOD) for ammonia (NH3) and Volatile Organic Compounds (VOCs) on sweep of reported odor location					
IH investigative monitoring/sampling	Readings from bag samples were at or below background levels.			vels.		
Possible source(s)	Fugitive 1	Emissions from I	J Farm			
Weather conditions on October 24, 2018	Time	Wind Dir (From)	Wind Speed	Ave Temp	Bar	RH
, , , , , , , , , , , , , , , , , , , ,	0830	126	2.3	47.1F	29.30	72.0
	0845	004	1.6	48.3F	29.30	69.8
	0900	047	2.3	50.2F	29.31	64.6
	0915	193	2.5	51.2F	29.31	64.7
Waste disturbing or tank work in adjacent area	No waste adjacent a	disturbing activi- reas.	ties or tank	work occur	ring in U F	arm or

Compensatory Measures

• The FWS stopped work in the field and the IH response team sampled to area. The results of all the sampling less than detectable levels.

IH Response Team Sample Results

Agent	Result	Action Limit
Ammonia	0.000 ppm	12 ppm
Carbon Monoxide	0.000 ppm	12.5 ppm
Flammable Gas	0.000 %	25 %
Oxygen	20.900 %	23.5 %
Volatile Organic Compound	0.000 ppb	2 ppm

Preliminary Extent of Condition Review

• No extent of condition exists for this investigation.

Discussion of Potential Causes

• No potential causes can be determined

Discussion of Barriers That Could Have Impacted the Cause

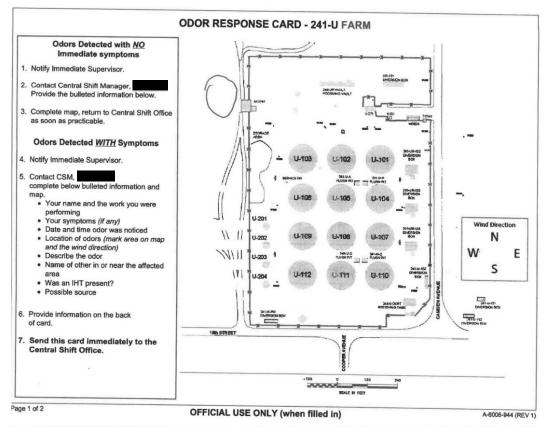
• There were no barriers that could have impacted the cause

Recommendations/Proposed Corrective Actions

• No recommendations or proposed corrective actions.

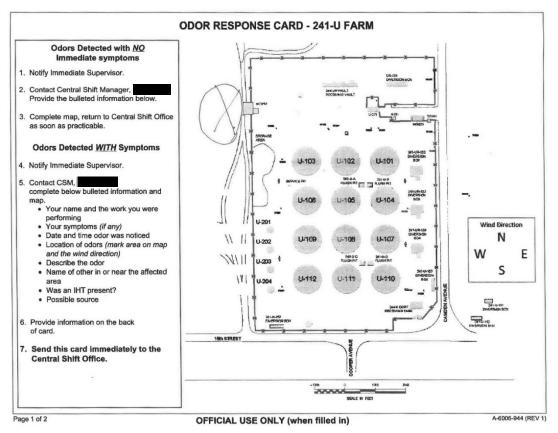
Attachments:

- 1 Odor Response Card
- 2 Odor Response Card
- 3 Odor Response Card
- 4 Odor Response Card
- 5 Odor Response Card
- 6 Odor Response Card
- 7 Industrial Hygiene Investigation Report (IHIR) (Page 5-16 Odor Response Cards Omitted)



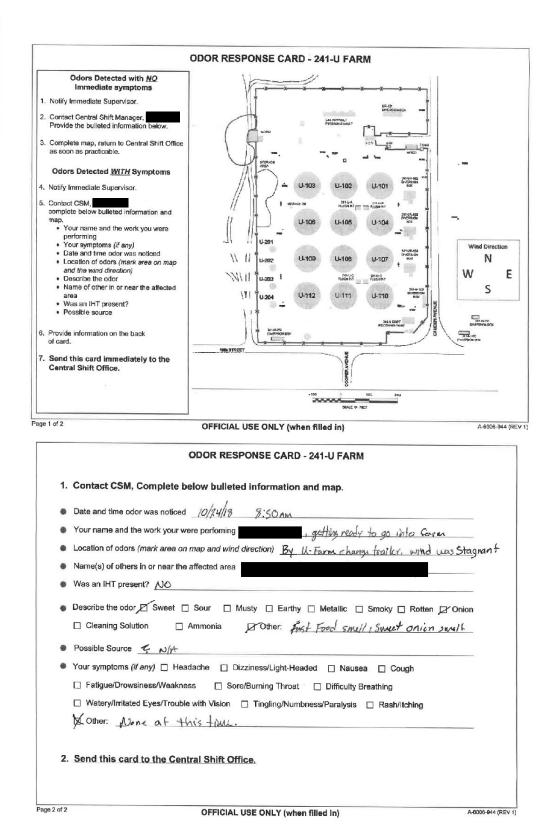
•	Date and time odor was noticed 8,50
D	Your name and the work your were perfoming Elec trical
•	Location of odors (mark area on map and wind direction)
•	Name(s) of others in or near the affected area 272 WA electricions and HPT'S
	Was an IHT present? NO
Ð	Possible Source
B	
9	Your symptoms (if any) ☐ 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: Not at this time

Attachment 1 – Odor Response Card

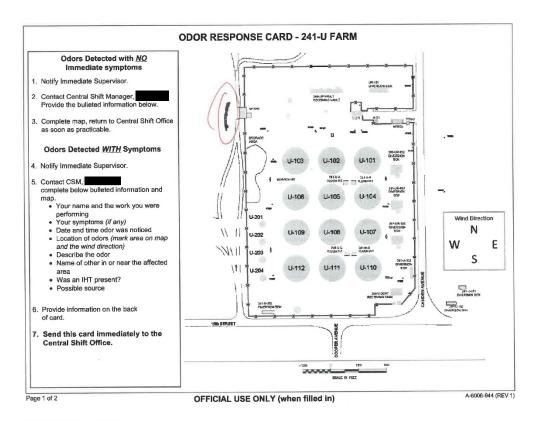


	ODOR RESPONSE CARD - 241-U FARM
1.	Contact CSM, Complete below bulleted information and map.
•	Date and time odor was noticed _/6/24//8
•	Your name and the work your were performing
	Location of odors (mark area on map and wind direction)
•	Name(s) of others in or near the affected area
•	Was an IHT present?
•	Describe the odor ☐ Sweet ☐ Sour ☐ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☒ Onion
	☐ Cleaning Solution ☐ Ammonia ☐ Other:
•	Possible Source Tank burg
•	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: Aug at the mament.
2.	Send this card to the Central Shift Office.

Attachment 2 – Odor Response Card

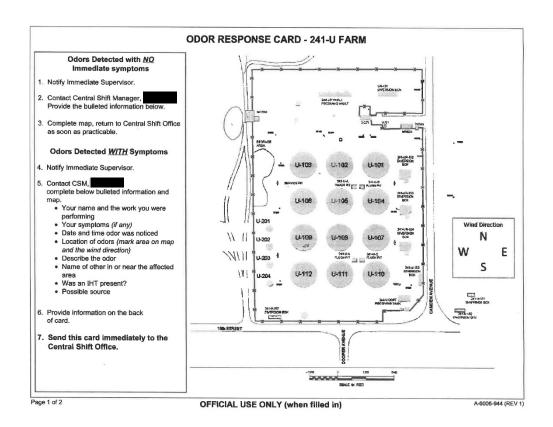


Attachment 3- Odor Response Card



	Contact CSM Complete heleve heller till for the
	Contact CSM, Complete below bulleted information and map.
	Date and time odor was noticed 10/24/18 0550
•	Your name and the work your were perfoming
•	Your name and the work your were perfoming
	Name(s) of others in or near the affected area
	Was an IHT present?
9 I	Describe the odor ☐ Sweet ☐ Sour ☐ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☑ Onion
	☐ Cleaning Solution ☐ Ammonia ☐ Other:
0	Possible Source UN KNOWY
	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.
2	OFFICIAL USE ONLY (when filled in)

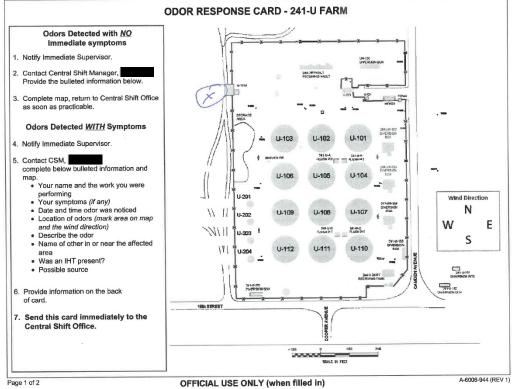
Attachment 4 - Odor Response Card



	Contact CSM, Complete below bulleted information and map.
	•
	Date and time odor was noticed 10.24.18 0950
	Your name and the work your were performing (HPT Change trailer U-Farm)
0	Location of odors (mark area on map and wind direction) <u>Dutside Change trailer</u>
•	Name(s) of others in or near the affected area 272 - WA LICHNGARS & HPTS
•	Was an IHT present? N♥
•	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
	SO Other: Nine at this time
2.	Send this card to the Central Shift Office.
f 2	
1 6	OFFICIAL LICE ONLY (set on Cillad La)

Attachment 5- Odor Response Card

	ODOR RESPONSE CARD - 241-U FARM
1.	Contact CSM, Complete below bulleted information and map.
•	Date and time odor was noticed 10/24/18 0850
	Your name and the work your were perfoming
•	Location of odors (mark area on map and wind direction)
•	Name(s) of others in or near the affected area 272 WA ELECTRICIANS & HP
	Was an IHT present?
•	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
9	☐ Watery/Irritated Eyes/Trouble with Vision ☐ Tingling/Numbness/Paralysis ☐ Rash/Itching
	□ Other:
2.	Send this card to the Central Shift Office.
2 of 2	OFFICIAL USE ONLY (when filled in) A-60006-944 (R)
	ODOR RESPONSE CARD - 241-U FARM
	Odors Detected with NO



Attachment 6- Odor Response Card

.Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: 2018-2795
Time/Date & Event location:	EIR Number:
0850 10/24/2018 U Farm	2018-039

1. Event Summary (including number of workers involved and activity in progress):

At approximately 0850 on Wednesday the 24th of October, 2018, 6 workers outside of U Farm due West of MO297 reported smelling "sweet, onion, fast food smell". No symptoms were reported. At the time of the odor event, the workers were performing or supporting the performance of electrical panel cleaning and inspections.

Was an IHT Present during initiating event? [] Yes [X] No

IH Monitoring/ Sample Survey Reports:

18-09567: "AOP-015 Response U Farm Parking Lot"

Weather Conditions at Time of Event:

Weather station:
Wind Direction and Speed:
Barometric Pressure (steady/rising/falling):
Temperature (F°):
Humidity:
7
N 1mph
29.29 inHg steady
46
82%

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: 2018-2795
Time/Date & Event location: 0850 10/24/2018 U Farm	EIR Number: 2018-039

Field Response Timeline:

0917: SOEN: "Entered AOP-015 for odors reported outside of U Farm, access to U Farm form 16th St. is restricted. CSM"

0921: AN Field IH, COMS Field IH, EV Field IH, AYAZ Field IH, ETF Field IH, PO Shift IHT Supervisor arrive at

0921: CSM briefs AN Field IH, COMS Field IH, EV Field IH, AYAZ Field IH, ETF Field IH, PO Shift IHT Supervisor:

- 6 persons, no symptoms, all decline medical
- Outside of U farm
- Sweet onion smell
- Suspect tank waste

0922: PO Shift IHT1 and PO Shift IHT2 arrive at CSO

0928: AN Field IH briefs PO Shift IHT1:

- AN Field IH briefs PO Shift IHT with physical copy of IHP-09001 and directs implementation as per TF-AOP-015 3.1.12.1
- AN Field IH Directs PO Shift IHT to acquire Respiratory Protection Equipment form RPF TF-AOP-015 Task 2 as per TF-AOP-015 3.1.12.3

0929: PO Shift IHTs depart CSO to retrieve instrumentation and RPE.

0932: CSM asks AN Field IH to contact ST Field IH and inquire about presence of personal sample pumps on affected personnel. AN Field IH contacts ST Field IH by telephone and is informed that personal sample pumps were not present at time of event initiation

0934: PO Shift IHT Supervisor calls COMS Field IH to inquire about possible additional IHT support. COMS Field IH declines additional support

0938: Odor Response Cards are delivered to CSO

0956: PO Shift IHT1 briefs COMS Field IH on response action status:

- NH3 and VOC readings <DL
- · Workers were present in the restricted area and were told to leave
- Persons present did not report any odors

1000: COMS Field IH briefs CSM on response action results

1020: CSM calls AN Field IH to confirm that TF-AOP-015 4.12 "Exit Criteria" have been met

1043: SOEN: "Sample analysis for the TF-AOP-015 event has been completed and the results are at or below background levels. Exiting TF-AOP-015. CSM"

Field IH Author:

Print First and Last Name / Signature Phone No. Date

Page 2 of 17

A-6005-744 (REV 5)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: 2018-2795
Time/Date & Event location:	EIR Number:
0850 10/24/2018 U Farm	2018-039

2. GCMS Sample Results:

N/A1

¹Bag samples were not collected for this AOP 015 investigation. As no source was identified and direct monitoring measurements for NH3 and VOC were less than the instrument's level of detection (DL). Sample Plan IHP-09001 R6 permits the responding industrial hygienist to collect bag samples at their direction. In this case the industrial hygienist did not give direction to collect bag samples.



Page 3 of 17

A-6005-744 (REV 5)

Attachment 7 – IHIR page 3

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number: 2018-2795	
ne/Date & Event location:	EIR Number:	
50 10/24/2018 U Farm	2018-039	
Additional Information: Odor Response Cards received:		

Page 4 of 17

A-6005-744 (REV 5)

Washington River Protection Solutions TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT	PER Number:
ime/Date & Event location:	2018-2795
850 10/24/2018 U Farm	EIR Number: 2018-039
727200	2019-039
 Summary of IH Monitoring and Sampling Data: 	
a. Monitoring:	
Event Response 18-09567	
NH3: 0 ppm	
VOC: 0 ppb	
b. Sampling:	
N/A	
Summary of Employee Reported Information (e.g., symptoms)	
No symptoms were reported, all employees declined medical evaluation.	
5. Recommendations/Conclusions:	
Identification of Source of the Concern: [] Yes [X] No	
No recommendations at this time.	
3. Other:	
N/A	
S&H Program Management:	
Contribution in a language of the language of	
	Date

Page 17 of 17

A-6005-744 (REV 5)

Attachment 7 – IHIR page 17