

WRPS-1603493
Reissued

Enclosure

INITIAL EVENT INVESTIGATION REPORT
EIR-2016-034

“EVENT INVESTIGATION REPORT, EIR-2016-034, AOP-015 FOR ODORS
REPORTED AT 4TH STREET AND 4TH STREET LOOP”

Consisting of 30 pages
Including cover sheet

EVENT INVESTIGATION REPORT

**Event Investigation Report, EIR-2016-034, AOP-015 for Odors
Reported at 4th Street and 4th Street Loop
EIR-2016-034**

Event Investigation Team Lead Under Instruction

8/4/2016

Date

Event Investigation Team Lead

8/4/2016

Date

PER Responsible Manager

8/4/2016

Date

PER No. WRPS-PER-2016-1423

AOP-015 for Odors Reported at 4th Street and 4th Street Loop

AOP-015 Summary

Event	EIR-2016-034, for Odors Reported at 4 th St. and 4 th St. Loop
Date/Time of Event	July 12, 2016 at ~0800 hours
Personnel Affected	Two (2) construction electricians subcontracted to WRPS
Odor / Taste	Sweet, Metallic (both persons) Cleaning Solution (one person) Smoky (one person)
Symptoms	Headache (experienced by 1 person)
Direct Read Instrumentation (DRI) Result During Event	<ul style="list-style-type: none"> • Ammonia: 0 ppm • VOCs: 0 ppm • Mercury: 0.000006 mg/m³
Industrial Hygiene (IH) Investigative Monitoring / Sampling	<p>Monitoring and Sampling data results:</p> <ul style="list-style-type: none"> • Ammonia: 0 ppm • Total VOCs: 0 ppm • Nitrous Oxide: 0 ppm • Mercury: 0.000006 mg/m³ (odorless)* <p>*No odor thresholds to report</p>
Other chemicals	<p>Herbicide application:</p> <ul style="list-style-type: none"> • Hardball, 2, 4-D Acid • Overdrive, SDS #000000057156 • Liberate, SDS #1000009716-14B-LPI <p>Scented additive from septic pumping:</p> <ul style="list-style-type: none"> • SH-32 from Summit Industrial Products, MSDS #071619
Potential Source	<ul style="list-style-type: none"> • MSA Sewer Pump Truck with scented oil additive • Herbicide applications (216-A-24/29)
Wind Speed / Direction	3-5 mph / NW direction and 1-2 mph / NE direction
Waste Disturbing or Tank Work in Adjacent Area	No waste disturbing activities at the time
Other Work in Adjacent Area	<ul style="list-style-type: none"> • Sewer pumping • Herbicide spraying

Investigation Summary

On July 12, 2016, at 0800 hours, two construction electricians experienced a stronger than normal sweet, metallic odor that resembled a cleaning solution smell near the intersection of 4th Street and 4th Street Loop just outside the northeast corner of AP Farm. One of the electricians experienced symptoms. The individuals were taken to HPMC for a medical evaluation. The Field Work Supervisor (FWS) contacted the Central Shift Manager (CSM) to report the odor event.

At 0820 hours, the Central Shift Manager (CSM) sent out a shift office event notification (SOEN) announcing the entry into procedure TF-AOP-015, *Response to Reported Odors or Unexpected Changes to Vapor Conditions* (AOP-015). The SOEN notice also directed all personnel to stay clear of the north side of AP Farm. At 0824, Industrial Hygiene Techs (IHT) were dispatched to support response actions; and at 0850 hours, they commenced sampling (see Attachment 2 for the full IH Sampling Report).

At 0911 hours, the IH sampling team completed their survey using direct read instruments (DRI) and two Tedlar bag samples. The samples and DRIs were analyzed for ammonia, volatile organic compounds (VOCs), mercury, and nitrous oxide. The results showed that none of these constituents were encountered at levels of concern. At 1438 hours, the CSM exited out of TF-AOP-015 and normal operations were resumed.

An Event Investigation was initiated at 0921 hours on 12 July 2016 and Office of River Protection (ORP) Facility Representative was informed. Interviews with affected parties were held over the next several days, but an official Fact Find Meeting was not held.

At the time of the event, there were zero (0) waste disturbing or tank-intrusive activities occurring in the nearby tank farms (i.e., A, AP, AW, AX, AY, AZ). Further, the odors were reported as having a “clean” smell which is uncharacteristic of tank waste odors. The event investigation looked at other possible sources of chemical releases (outside the tank farm fence boundaries) that may have attributed to these odors.

The investigation found that near the time of the event, two (2) site maintenance activities by Mission Support Alliance, LLC (MSA) were occurring north of AP Farm: 1) Herbicide application to control tumbleweeds was underway at 216-A-24 at ~1500 feet north of AP Farm and the herbicide tank truck was situated at ~500 ft. northeast of AP Farm. Two HAMTC representatives witnessed the presence of this truck at ~0800 hours on 12 July 2016 and they both noted that the fumes from the truck were very strong. 2) A septic tank was being pumped just ~200 feet northeast of where the workers reported odors. Both activities used chemicals that have a “clean” odor. The investigation found that four (4) chemicals were used that morning: Hardball, Overdrive, Liberate, and SH-32.

The IH sampling team was not directed to gather data on chemicals other than what the “Tank Waste Odor Sample Plan IHP-09001” and Form A-6005-744 “TF-AOP-015 Industrial Hygiene Investigation Report” already directs (i.e., ammonia, mercury, VOCs, nitrous oxide). Therefore, it cannot be determined if herbicides, cleaning agents, and deodorizers were present at the time of sampling. More technical data and analysis would be needed to draw a conclusion.

Figure 1 - AOP-015 for Odors Reported at 4th Street and 4th Street Loop

Activities in the Area at the Time of the Event that Involve Chemical Releases



Meteorological Data from Station 6 on 12 July 2016

Time	Mph	Direction
0730	4.8	NW ↘
0745	4.4	NW ↘
0800*	3.4	NW ↘
0815*	1.9	NE ↙
0830	2.7	NW ↘
0845	3.2	NE ↙

* Odors detected between 0800 and 0815 hours

Weather Information

According to the personnel who experienced the odors, the wind was coming from a NW direction at the time. Meteorological data was taken from the Hanford Weather Station: Met Station 6. Station 6 showed that between 0800 and 0815, the weather shifted slightly (see table below). The following data is for Tuesday, 12 July 2016. The highlighted rows indicate the approximate time when personnel detected odors:

Hanford Meteorological Station 6 for 12 July 2016

Time (PST)	Direction (degrees)	Speed (mph)	Pressure (Hgin)
0700	321.3 / from NW	6.1	29.187"
0715	309.2 / from NW	6	29.18"
0730	304.7 / from NW	4.8	29.185"
0745	326.1 / from NW	4.4	29.18"
0800*	317 / from NW	3.4	29.185"
0815	35.8 / from NE	1.9	29.19"
0830	219.9 / from NW	2.7	29.192"
0845	41.1 / from NE	3.2	29.206"
0900	65.4 / from NE	4.2	29.208"

* Odors detected between 0800 and 0815 hours

Herbicide Application Activities

Two HAMTC representatives witnessed the MSA weed control tanker truck northeast of AP Farm on the morning of 12 July 2016 and they noticed strong odors coming off of the truck. According to the Weekly Spray Schedule provided by MSA, two sites in the 200 Area with an "A" designation were scheduled to be sprayed Monday, Tuesday, and Wednesday. (See Spray Schedule, Attachment 4).

MSA was contacted to confirm the specific time and occurrence of spraying activities. The investigation learned that at some time prior to 0800 on 12 July 2016, MSA applied three (3) herbicides: 2,4-Dichlorophenoxyacetic Acid herbicide called "Hardball", a sodium dicamba called "Overdrive", and a chemical called "Liberate". The application was performed at site location, 216-A-24.

Septic Tank Pumping Activities

Other activity occurring in the area included septic tank pumping at 216-A-45F. A chemical scented oil was added to the solution for odor control. The MSA product used was SH-32 from Summit Industrial Products, MSDS #071619.

Event Timeline

07/12/16		
	~0700	MSA begins pumping activities at septic tank at 216-A-45F; the pumping solution that was used included a scented oil additive.
	~0800	Two HAMTC Representatives witness intense odors coming from the direction of MSA’s herbicide application vehicle which is situated north of the 4 th Street Loop. They noted wind directions were moving from the north to northeast and traveling south to southwest.
	TBD	At some point on 7/12 (time unknown), herbicide is applied to the 216-A-24 which is northeast of AP Farm.
	0800	Two construction electricians experience a chemical odor which they describe as “sweet, metallic, smoky, like a cleaning solution” near the intersection of 4 th Street and 4 th Street Loop, outside the Northeast corner of AP Farm. One of the electricians immediately develops a headache. Both individuals were sent to HPMC for evaluation.
	0815	Field Work Supervisor, _____ from Fowler Construction, contacts the Central Shift Manager to inform them that two personnel experienced a strong chemical odor and one experienced a headache.
	0820	Entering AOP-015 for North side of AP Farm. SOEN and radio announcement go out: “Entering AOP-015 on the north side of AP Farm. All personnel stay clear of the north side of AP Farm. CSM”
	0823	AN Team Industrial Hygiene Tech (IHT) is contacted by Production Operations Industrial Hygiene Supervisor requesting support for AOP-015 response at Central Shift Office (CSO).
	0824	AN Team IHT and EV Team IHT arrive at CSO. Production Operations Industrial Hygiene Supervisor directs IHTs to don SCBA.
	0827	DOE-ORP Facility Representative _____ is notified. _____ of Industrial Safety is notified.
	0831	Production Operations IHTs return to CSO with their SCBA and report that herbicide spraying has interrupted their Enhanced Monitoring rounds in that area the previous day.

	0833	AN Team Industrial Hygiene Tech briefs the Prod Ops Shift Industrial Hygiene Techs on response actions to 1) Survey area with direct reading instrumentation (NH3, VOC Hg). 2) Collect grab sample of affected area. 3) Collect additional grab samples if DRI indicates residual chemicals. 4) Analyze grab samples with Hapsite GCMS (VOC speciation) and Miran (N20).
	0834	Shift Production Team Manager notifies the Central Shift Manager that an AN Team NCO is in 241-AP instrument building without SCBA in restricted area. CSM orders instrument building ventilation shut down and awaits IHT escort to evacuation area.
	0835	Prod Ops IHT Supervisor contacted the Prod Ops Shift IHTs to direct escort out of restricted area.
	0849	Shift NCOs arrived at affected area to restrict access
	0850	PO Shift IHTs arrived at 241-AP Instrument Building
	0911	PO Shift IHTs completed field response actions and return to 272 AW
	0919	PO IHT supervisor contacted AN Team IHT to report 2 grab samples were collected: one at NE corner of 241-AP, one N of 241-AP where spraying had taken place.
	0925	Event Investigation is initiated.
	0937	PO IHT supervisor arrives at CSO to report initial DRI results
	1338	Industrial Hygiene Tech #1 provides results of the Hapsite analysis that “the HAPSITE did not generate any unexpected compounds other than bag remnants...No peaks observed that exceeded Action Levels.”
	1438	CSM Exits out of TF-AOP-015

Immediate Actions Taken

1. 7/12/2016 Access to the north side of AP Farm is restricted. All personnel are directed to stay clear of the north side of AP Farm. The Central Shift Manager is notified that an NCO is in the restricted area (241-AP Instrument Building) and does not have respiratory protective equipment (i.e., SCBA). The CSM orders that the instrument building ventilation be shut down. The NCO is instructed to wait until an IHT arrives to escort the NCO to the evacuation area.

Compensatory Measures

1. 7/12/2016, 0820 hours, entered into AOP-015.
2. 7/12/2016, 0827 hours, SOEN notification goes out; access to north of AP Farm is restricted
3. 7/12/2016, 0911 hours, IHTs complete sampling
4. 7/12/2016, 1438 hours, CSM exits out of TF-AOP-015 after IH report data shows no chemicals of potential concern to be at actionable levels.

Preliminary Extent of Condition Review

This investigation is similar to an event investigation performed in May 2016 (EIR-2016-025). A PER was issued from that event (WRPS-PER-2016-1078).

Discussion of Potential Causes

At the time of this investigation the cause is indeterminate.

A potential source of odors might include the herbicide applications or septic tank chemicals. The “Tank Waste Odor Sample Plan IHP-09001”, Form A-6005-744 “TF-AOP-015 Industrial Hygiene Investigation Report”, and Form A-6005-744i “TF-AOP-015 Industrial Hygiene Investigation Report Instructions” do not direct the detection of these types of chemicals and therefore it cannot be determined if these chemicals were present at the time of sampling. It is recommended that this be further investigated by Industrial Hygiene.

Discussion of Barriers That Could Have Impacted the Cause

At the time of this investigation, the cause, as well as any barriers, is indeterminate.

Recommendations/Proposed Corrective Actions

There are no proposed corrective actions as the cause of the odors is indeterminate.

Attachments:

1. Odor Response Cards
2. Industrial Hygiene Investigative Report
3. WRPS-PER-2016-1423
4. MSA Weekly Spray Schedule
5. Central Shift Office Log

Attachment 1 – Odor Response Cards

ODOR RESPONSE CARD - 241-AP FARM

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

- Date and time odor was noticed 7/12/16 8 AM
- Your name and the work your were performing ELECTRICAL
- 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: _____

2. Send this card to the Central Shift Office.

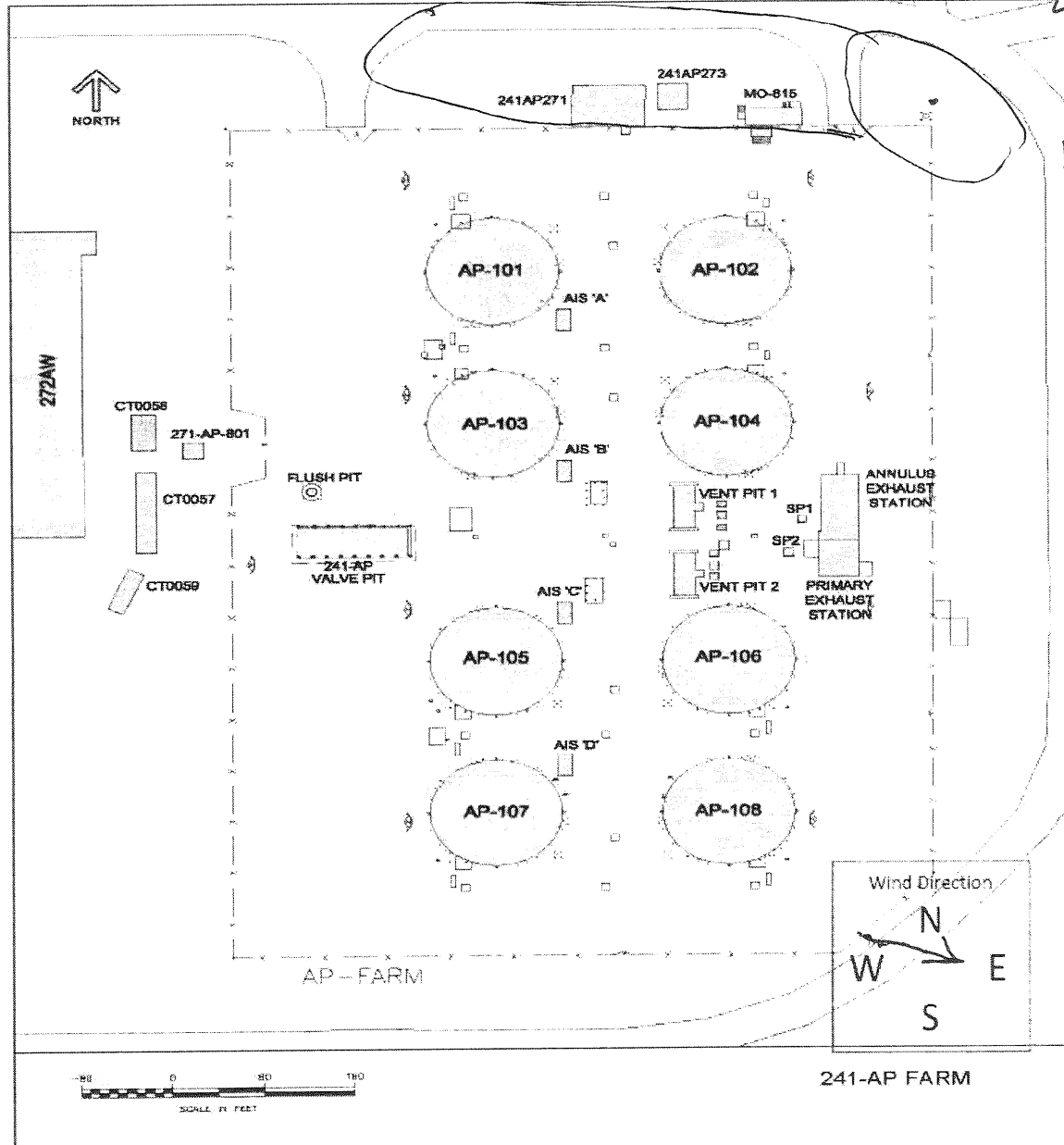
ODOR RESPONSE CARD - 241-AP FARM

Odors Detected with NO Immediate symptoms

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

Odors Detected WITH Symptoms

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



ODOR RESPONSE CARD - 241-AP FARM

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

- Date and time odor was noticed 7/12/2016 8:00 A.M.
- Your name and the work your were performing _____
- Location of odors (mark area on map and wind d _____)
- 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: None

2. Send this card to the Central Shift Office.

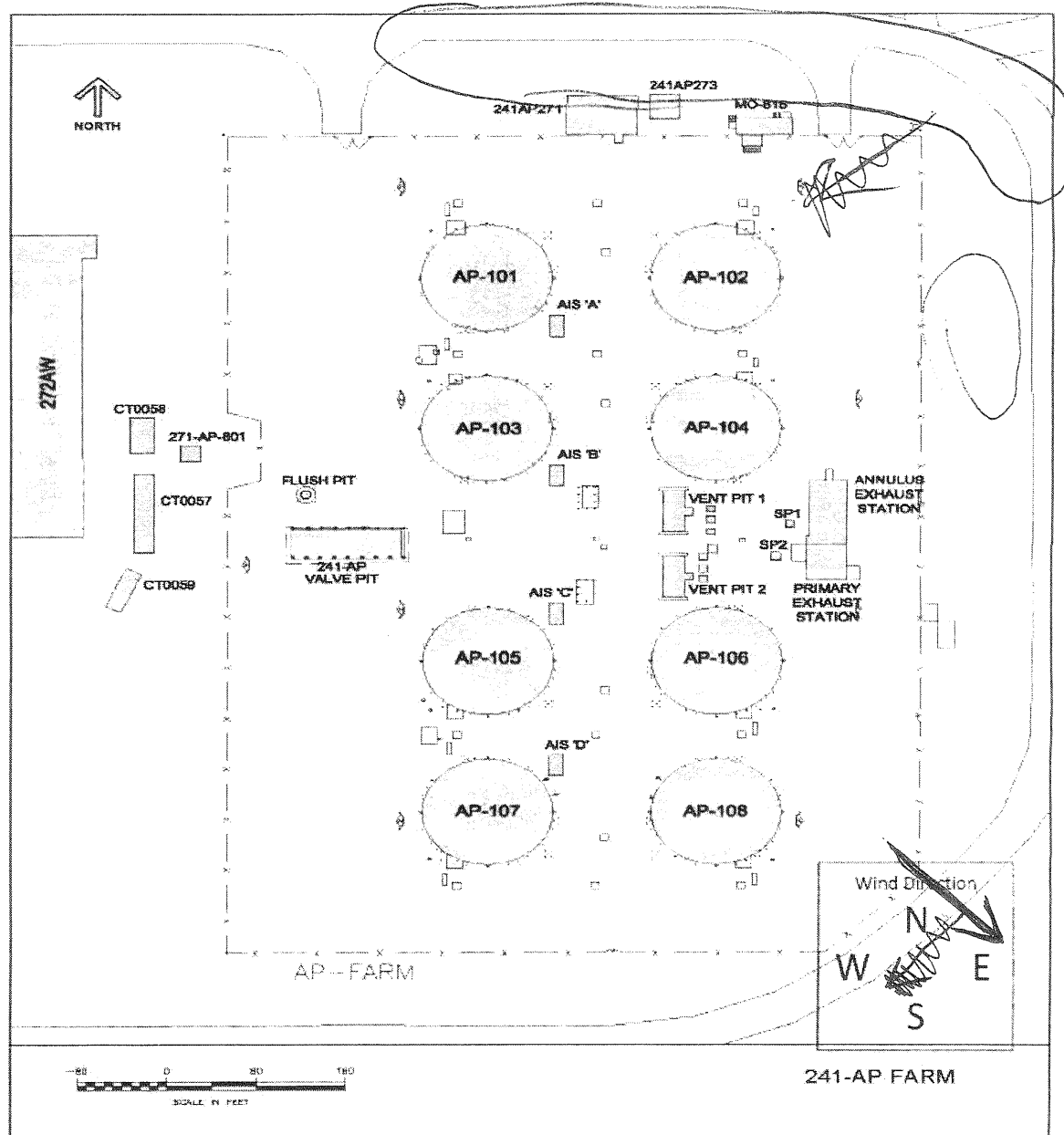
ODOR RESPONSE CARD - 241-AP FARM

Odors Detected with NO Immediate symptoms

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

Odors Detected WITH Symptoms

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



Attachment 2 – Industrial Hygiene Investigative Report

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

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

Two Townsend Electric (Fowler Construction) electricians smelled sweet, "clean" chemical odor NE of 241-AP.

- Was an IHT Present? [] Yes [X] No
- Was Respiratory Protection Being Worn by Affected Worker(s)? [] Yes [X] No

2. Summary of Employee Reported Information (e.g., symptoms): See Odor Response Cards below.

ODOR RESPONSE CARD - 241-AP FARM

Odors Detected with *NO* Immediate symptoms

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

Odors Detected *WITH* Symptoms

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

AP - FARM

241-AP FARM

SCALE IN FEET

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

ODOR RESPONSE CARD - 241-AP FARM

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

- Date and time odor was noticed 7/12/16 8 AM
- Your name and the work you were performing ELECTRICAL
- 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: _____

2. Send this card to the Central Shift Office.

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

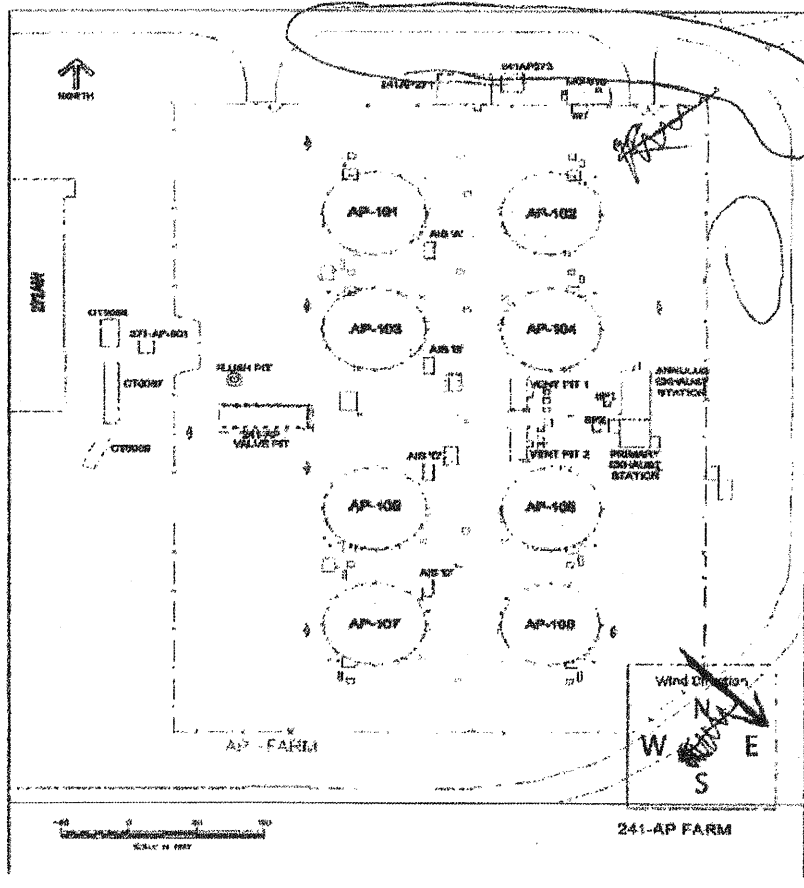
ODOR RESPONSE CARD - 241-AP FARM

Odors Detected with *NO* Immediate symptoms

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

Odors Detected *WITH* Symptoms

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



TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT

PER Number:

N/A

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

ODOR RESPONSE CARD - 241-AP FARM

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

- Date and time odor was noticed 7/12/2016 8:00 A.M.
- Your name and the work you were performing Electrical
- Location of odors (mark area on map and wind direction) Halsite Basic
- 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: None

2. Send this card to the Central Shift Office.

Page 2 of 2

A-6005-929 (REV 0)

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

At the approximate time of the event MSA workers were cleaning out a sewer and adding a scented oil, which may explain the sweet, metallic, cleaning odor reported. The MSA product used was SH-32 from Summit Industrial Products, MSDS #071619.

4. Time Line of the Event:

0823 AN Team field IH contacted by PO IHT supervisor requesting support for AOP-015 response at CSO

0824 AN Team field IH and EV team Field IH arrive at CSO, PO IHT supervisor dispatches IHTs to acquire SCBA

0827 SOEN: "Entering AOP-015 on the north side of AP Farm. All personnel stay clear of the north side of AP Farm. CSM"

0831: PO Shift IHTs return to CSO with SCBA and report that herbicide spraying had interrupted their Enhanced Monitoring rounds in that area the previous day.

0833: AN team field IH briefs PO Shift IHTs on response actions:

- Survey area with direct reading instrumentation (NH3, VOC, Hg)
- Collect grab sample of effected area
- Collect grab sample in area where spraying was taking place
- Collect additional grab samples if DRI indicates residual chemicals
- Analyze grab samples with HAPSITE GC/MS (VOC speciation) and MIRAN (N2O)

TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT

PER Number:

N/A

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

- 0834: Shift Production Team manager notifies CSM that AN Team NCO is in 241-AP instrument building without SCBA in restricted area. CSM orders instrument building ventilation shut down and await IHT escort to evacuation area.
- 0835: PO IHT supervisor contacted PO Shift IHTs to direct escort of NCO out of restricted area.
- 0849: Shift NCOs arrived at affected area to restrict access.
- 0850: PO Shift IHTs arrived at 241-AP Instrument Building.
- 0911: PO Shift IHTs completed field response actions and return to 272 AW.
- 0919: PO IHT supervisor contacted AN Team field IH to report 2 grab samples were collected: one at NE corner of 241-AP, one N of 241-AP where spraying had taken place. Initial IHT DRI readings:
 - NH3 0 ppm
 - VOC 0 ppb
 - Hg 6 ng/m³
- 0937: PO IHT supervisor arrives at CSO to report initial IHT DRI results
- 1002: AN Team field IH is contacted by _____ from Performance Assurance to determine if biological contaminants were considered for sampling during the AOP-015 response. She informed IH that accurate locations and times of spraying activities by Biological Controls (MSA) could be acquired from _____
- 1026: AN Team field IH attempts to contact MSA biological controls manager about pesticide/herbicide application near 241-AP farm.
- 1338: Programs IH 1 provided results of HAPSITE analysis.
- 1418: Programs IH 2 contacts AN Team field IH to determine status of AOP-015 and to inquire about Area RAE data from the transfer line.
- 1438: CSM Exits TF-AOP-015

5. Summary of IH Monitoring and Sampling Data:

SEE DRI SURVEY#16-06012 Odor Response outside AP Farm

a. Monitoring

AGENT	@ODOR	@SOURCE	EXPOSURE LIMIT	REPORTING LIMIT
Ammonia	0.00 ppm	N/A ppm	25 ppm OEL/35ppm STEL	>0 ppm
Total VOCs	0.000 ppm	N/A ppm	2 ppm AL	>0 ppm
Mercury	0.000006 mg/m ³	N/A mg/m ³	0.025 mg/m ³ OEL	0.000016 mg/m ³ (typical background)
Nitrous Oxide	0.0 ppm	N/A ppm	25 ppm AL	>0 ppm

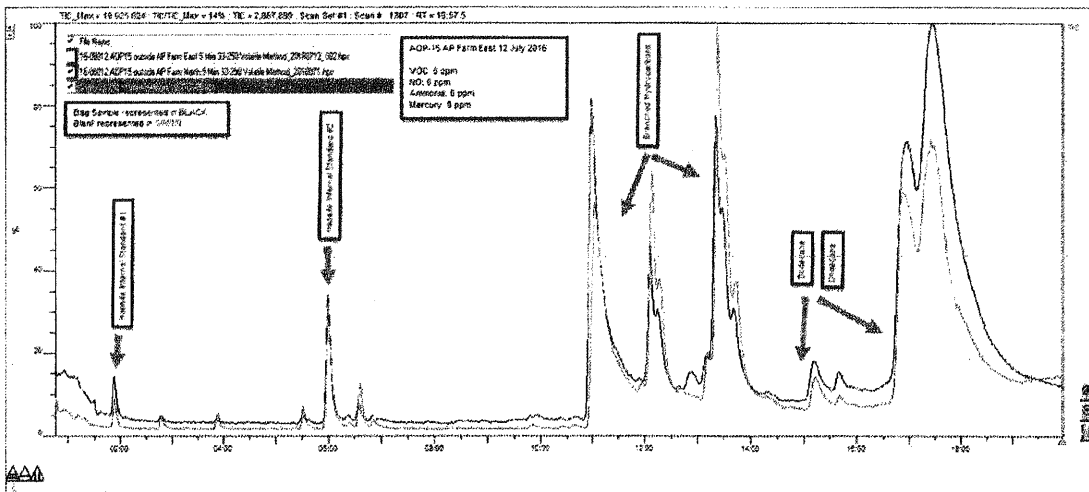
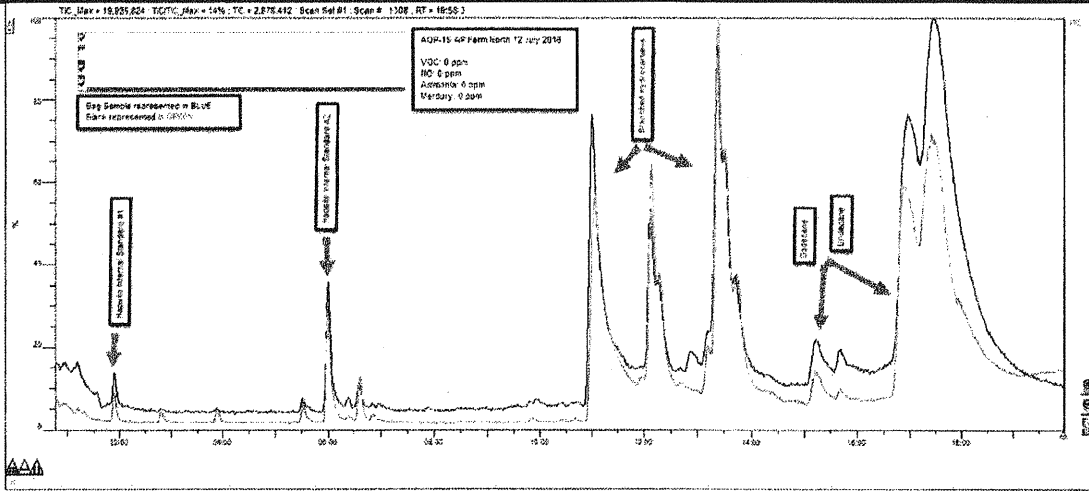
b. GCMS Sample Results:

Both Tedlar bag samples taken are a close match to the Blank N2 Sample. There were no peaks observed that exceeded Action Levels.

Washington River Protection Solutions
TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT

PER Number:
N/A

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP



Both samples taken at AP Farm had 0 ppm initial readings for VOC, Ammonia, Mercury, and N2O reported by direct reading instrument. The HAPSITE did not generate any unexpected compounds other than bag remnants. The spectrum analysis pictures attached show sample and blank similarities. There were no peaks observed that exceeded Action Levels.

c. Sampling:

- Source [] Yes [X] No
- Area [] Yes [X] No
- Personal [] Yes [X] No

6. Weather Conditions at Time of Event: Station 6 0800 07/12/2016

- Wind Direction & Speed WNW @ 6-10 mph
- Barometric Pressure 29.18 in Hg Rising
- Temperature (°F) 69.0 °F
- Humidity 44%

6. Recommendations/Conclusions: A source could not be identified for this AOP-015 event and follow-up sampling results were less than Action Levels, therefore no further actions were recommended.

7. Other: See EIR-2016-034 POC

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

8. Glossary:

IH: Industrial Hygienist
IHT: Industrial Hygiene Technician
CSO: Central Shift Office (274AW)
SCBA: Self Contained Breathing Apparatus
CSM: Central Shift Manager
DRI: Direct Reading Instrumentation
CGMS: Gas Chromatograph Mass Spectrometer
NCO: Nuclear Control Operator

TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT

PER Number:

N/A

Time/Date & Event location: 0815 07/12/2016 NE of 241-AP

IH (Print)
Author (Sign)
S&H (Print)
Program Mgmt. (Sign)

07/14/2016
Date

07/14/2016
Date

Attachment 3 – WRPS-PER-2016-1423

Save

Problem Evaluation Request (PER)**WRPS-PER-2016-1423**

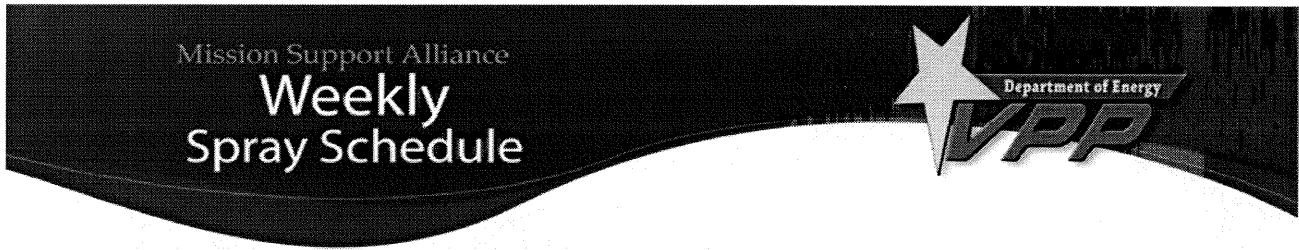
In Process/Work

PER No	Date of Discovery	Time of Discovery (24:00)	Project
WRPS-PER-2016-1423	07/12/2016	08:30	Tank Farm Projects
Location			
AP Farm			
How Was Problem Discovered			
Self-Revealing (Event)			
Description of Concern or Problem			
On the morning of 7/12/16, two construction electricians reported odors on the north side of AP Farm while supporting the vapor sample equipment installation project. They notified their supervision. The central shift office was also notified. One of the electricians reported symptoms.			
Requirement Not Satisfied		Source Document Number	
Equipment Identification Number		System Identification	
N/A		Not Applicable	
Does issue require immediate actions?			
No			
Immediate actions Taken or Planned			
The employees were taken to the site medical provider for evaluation and later returned to work. The Central Shift Office entered AOP-015 at approximately 8:30 am on the north side of AP Farm (4th Street and 4th Street Loop). AOP-015 was exited at approximately 2:40 pm with IH sample and monitoring results equal to or less than background.			
Recommended Corrective Actions			
Complete EIR investigation.			
Originator Contact			
No			
Originators Name	Originators ID	Originators Phone	Date Initiated
			07/19/2016
SHIFT OPERATIONS REVIEW			
Title			
7/12/16 AOP-015 Event			
Reportability	SSC Operability	Operability Review	Comp Measures Req
Non-Reportable	N/A	N/A	
Describe actions Taken or Recommended			
No action required at this time by CSO.			
SO Reviewer Name	SO Reviewer		
	H4706025		07/20/2016
SCREENING			
PER Significance Level	Analysis Level	How Discovered	
PER with Resolution	Not Applicable	3 Self-Revealing	
Ind Assessment Rev	Occurrence Rpt #	DOE CAP Required?	
		No	
Assigned Responsible Manager	Facilities Rep / SSO	Safety Mgmt Rep	Potentially Recurring

			Issue
			No
Program		Requirements Area Manager (RAM)	
<ul style="list-style-type: none"> • ^N/A^ 		<ul style="list-style-type: none"> • IH010A - Industrial Hygiene / AOPs / Exposure • IH010C - Industrial Hygiene / AOPs / Monitoring • IH210A - Industrial Hygiene / Communications / Event • IH010B - Industrial Hygiene / AOPs / Sampling 	
PER Screening Comments			
7/20/16 EIR-2016-034			
ORPS Code	Functional Area	Work Process	ISMS
Not Applicable	Project Management	<ul style="list-style-type: none"> • Routine Facility Operation 	
PER Screening Chair	PER Screening Chair ID	PER Screening Chair Phone	PER Screening Date
			07/20/2016
PAAA REVIEW			
PAAA Screening	PAAA Codes	Function Codes	
Not subject to PAAA			
PAAA Causal Analysis Review	NTS Report Number	NTS Report Date	
No			
PAAA Screening Comments			
1) Basis for PAAA screening is in file attached to PER. In file, see highlighted green text for non-compliance. 2) Approval per procedure TFC-ESHQ-PAAA-D-08 dated 7/19/2012 (paragraph 4.1.5-7).			
PAAA Reviewer Name	PAAA Review Date		
	PAAA Approve Date		
	07/20/2016		
CAUSE ANALYSIS			
Problem Statement			
Remedial Corrective Action			
Causal 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?		Comments	
No			
ATTACHMENTS			
Link to PER			
PAAA_Screen_ 7-20-16.pdf			
AUDIT HISTORY			

Attachment 4 – MSA Weekly Spray Schedule

Please share this schedule with your organization and facility manager so that all Hanford Site employees know when there is planned spraying in their work area.



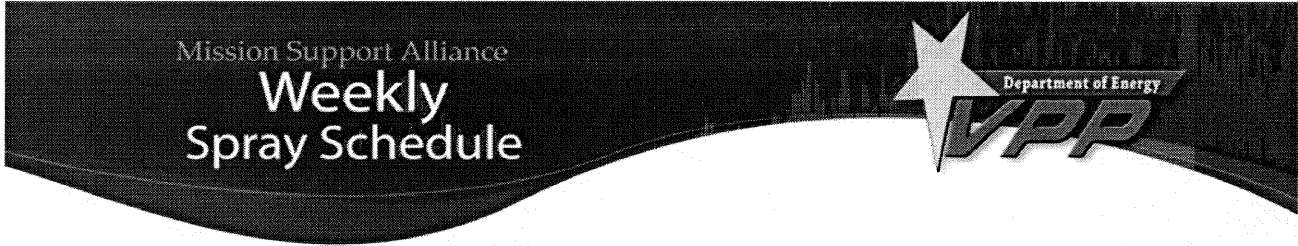
July 11 – July 17, 2016 Herbicide Spraying and Pest Control Schedule

HERBICIDE SPRAYING							
200 EAST	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Non-Selective Herbicide Application							
200E Interior Road Shoulder Touchup							
LERF Basin Compound							
2230E (East end of gravel area)							
218-E-12B							
ETF Perimeter fence							
6653							
6653A							
Baltimore Ave Road Shoulders							
Selective Herbicide Application							
218-E-12A (North Area only)							
216-B-3							
216-A-29 (Snow Canyon)							
216-A-24							
UPR-200-W-56							
216-B-3-3							
216-B-3-1							
216-B-3 (B-Pond)							
200 WEST	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Non-Selective Herbicide Application							
2719WB							
MO-412							
200-W-94							
216-U-10							
218-W-5							
200W Interior Road shoulder touchup							
Selective Herbicide Application							
NA							
Ground Water Non-Selective Herbicide Applications							
NA							
300 AREA	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Non-Selective Herbicide Application							
NA							
Selective Herbicide Application (Turf)							
NA							
400 AREA	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
NA							
600 AREA	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Non-Selective Herbicide Applications							
NA							
Noxious Weed Herbicide Application							
Hanford Townsite							
100 AREA	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Noxious Weed Herbicide Application							
100H Ave							

If you have questions regarding weekly spray schedules, please contact



Please share this schedule with your organization and facility manager so that all Hanford Site employees know when there is planned spraying in their work area.



July 11 – July 17, 2016 Herbicide Spraying and Pest Control Schedule

HERBICIDE SPRAYING							
100D Roadsides							
100 B/C Roadsides							
Non-Selective Herbicide Applications							
NA							
Ground Water Non-Selective Herbicide Applications 100H, 200E&W							
289T							
299-W13-1							
299-W6-11							
299-W15-11							
299-W11-88							
299-E33-34							
299-E33-26							
HX Pump and Treat							
PEST CONTROL							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Exterior Insecticide application							
100K Extrusion Well Panels							
100D Extrusion Well Panels							
100H Extrusion Well Panels							

Attachment 5 – Central Shift Office Log

- AU Farm. ventilation restored,
and VCZ downposted. SOEN complete.

AY/AZ Farms ventilation restored, sweeps
downposted. SOEN complete.

FR, [redacted] of 1239 ^{7:16} 1249 &
no announcement complete for 1249 & 1301 entries.

SOEN complete for 1239 entry.
top work on all work ^{activities} ~~activities~~ ^{see} 7/11/16

in fence line boundary that do not
- respiratory protection.

(WRPS-PER-2016-1369)

38 @ 0750)

- 1337 entry. Radio announcement
of ORP on-call FR,

for AU Farm. ventilation restored,
VCZ downposted. SOEN and
it complete. Notified ORP on-call

(on-call of unplanned
and subsequent restarts.

1 VTP was restarted, sweeps complete,
ed. Exiting AOP-02).

1 entry. Radio announcement complete.

1 FR,
gas surveillance of AY/AZ Farms
of the LFL.

OUTAGE SHUTDOWN UNPLANNED TODAY, SOEN SENT AND [redacted] NOTIFIED.

2248- DATA SHEETS 1 AND 2 OF TO-060-245 ARE SAT. SY IN-SERVICE VTP
IS OPERATING AND ^{OPERABLE} ~~OPERATIONAL~~. EXITING TIME MONITORING. SOEN
SENT AND [redacted] NOTIFIED.

2350- AP VTP TEMP POWER GENERATOR "WARN MAINTENANCE" IS ILLUMINATED.
NOTIFIED TO INVESTIGATE VIA EMAIL.

7/12/16 D-SWIFT

0501- RELIEVED AS CSM (BY)

0501- Relieved as CSM.

0755- Environmental notified WDOH of the multiple exhauster shutdowns
that occurred yesterday as a result of the unplanned
electrical outage. SOEN Complete.

0756- Environmental notified WDOH of the POR-107 unplanned
exhauster shutdown due to a failed stack flow transmitter.
SOEN complete.

0815 Fowler Const. FWS reports that I
and experienced a chemical odor near the
intersection of 4th St and 4th St Loop, outside the
NE corner of AP Farm.

developed a headache upon experiencing the headache ^{7/12/16} ~~see~~
odor. is taking the electricians to HPMC.
is taking odor response cards to HPMC
to be filled out.

0820- Entering AOP-015 for North side of AP Farm. SOEN and
radio announcement complete.

0827- notified of 0815 entry.

0921- Initiated Event Investigation for AOP-015 event. POC: