

WRPS-1605786

Enclosure

INITIAL EVENT INVESTIGATION REPORT  
EIR-2016-054

241-AX CHANGE TENT AOP-15 ENTRY

Consisting of 38 pages  
Including cover sheet

## EVENT INVESTIGATION REPORT

**241-AX Change Tent AOP-015 Entry**

**Event Investigation Report Number EIR-2016-054**

\_\_\_\_\_  
Event Investigation Team Lead

\_\_\_\_\_  
Date

12/27/2016

\_\_\_\_\_  
PER Responsible Manager

\_\_\_\_\_  
12/27/2016

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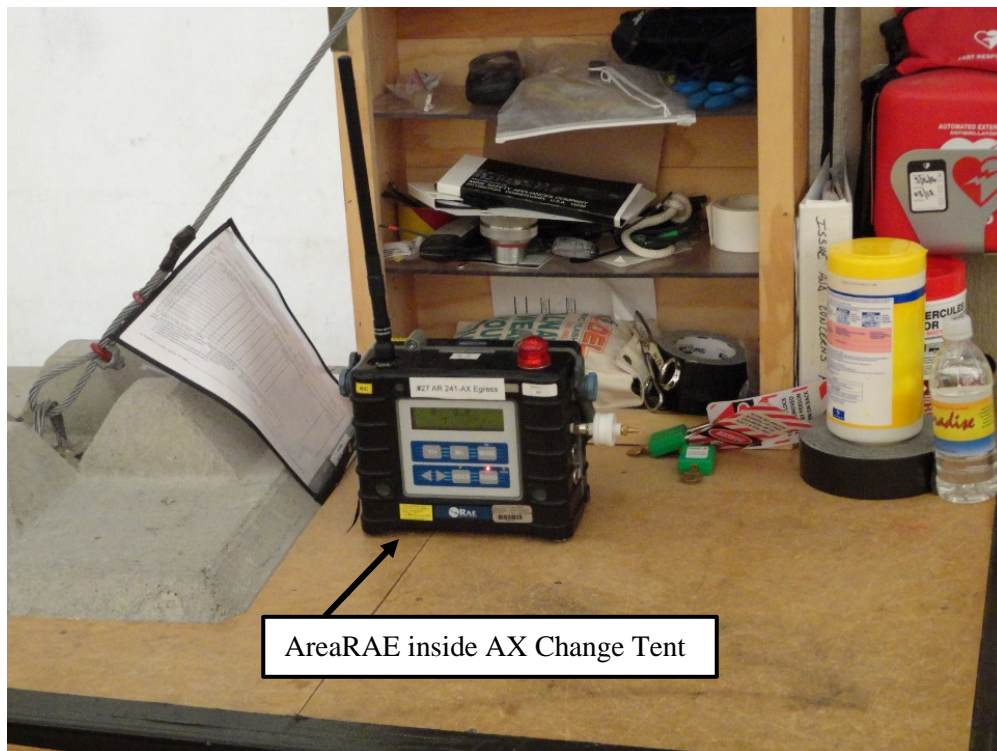
PER No. WRPS-PER-2016-2470

## 241-AX Change Tent AOP-015 Entry EIR-2016-054

### Investigation Summary

At approximately 0805 on Wednesday, November 30, 2016, American Electric, Inc. (AEI) reported that an AreaRAE located inside 241-AX Change Tent had alarmed.

Approximately 30 AEI and WRPS workers were in various stages of suiting up in personal protective equipment in preparation to enter AX Farm. Two AreaRAEs, industrial hygiene monitoring equipment, had been functionally tested and deployed inside and outside AX Change Tent on November 30, 2016. The AreaRAE inside AX Change Tent was reported as having been bumped when a Health Physics Technician (HPT) placed their instrument on the bench next to the AreaRAE. The AreaRAE alarmed and some of the workers indicated an unexpected/unusual odor similar to “cat urine.”



AEI workers notified the AEI Fieldwork Supervisor (FWS) of the alarm and the unusual ‘cat urine’ odor. The FWS notified WRPS Industrial Hygiene (IH) and Central Shift Office for response and/or direction. The Central Shift Manager entered Abnormal Operating Procedure TF-AOP-015, Response to Reported Odors or Unexpected Changes to Vapor Conditions (AOP-015) for AX Change Tent and surrounding area. Personnel in the immediate area were evacuated, the area was barricaded and Production Operations (PO) Industrial Hygiene (IH) personnel responded. PO industrial hygiene technician (IHTs) were dispatched to acquire respiratory protective equipment (RPE) and IHT equipment for response actions. Industrial monitoring sweeps of the area were performed with the results being less than instrument detection levels (instrument detection levels are below occupational exposure limits).

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Agent	Barricade to AX Change Tent	AX Change Tent-Clean Side	Exposure Limits
Ammonia	0 ppm	0 ppm	25 ppm OEL/35 ppm STEL
Total VOCs	0.000 ppb	0.000 ppb	2 ppm AL
Mercury	6 ng/m <sup>3</sup> (0.000006 mg/ m <sup>3</sup> )	4 ng/m <sup>3</sup> (0.000004 mg/ m <sup>3</sup> )	0.025 mg/m <sup>3</sup> OEL
Nitrous Oxide	N/A	0 ppm	25 ppm AL

A total of nine workers inside AX Change Tent reported smelling an unusual “cat urine” odor with some of the workers experiencing headaches. All workers that were inside the AX Change Tent when the AreaREA alarmed were offered the opportunity to have an evaluation. Six workers that smelled the unusual odor elected to have an evaluation performed and went to HPMC Occupational Medical Services (HPMC). The six workers were evaluated and released to return to work.

#### Weather Information

When odors were detected inside AX Change Tent (~0805 hours), winds were “swirling” at speeds of approximately 6 mph (gusts to 9 mph) blowing from the Southeast (SE) direction. The following data was provided by the Hanford Weather Station for Wednesday, November 30, 2106:

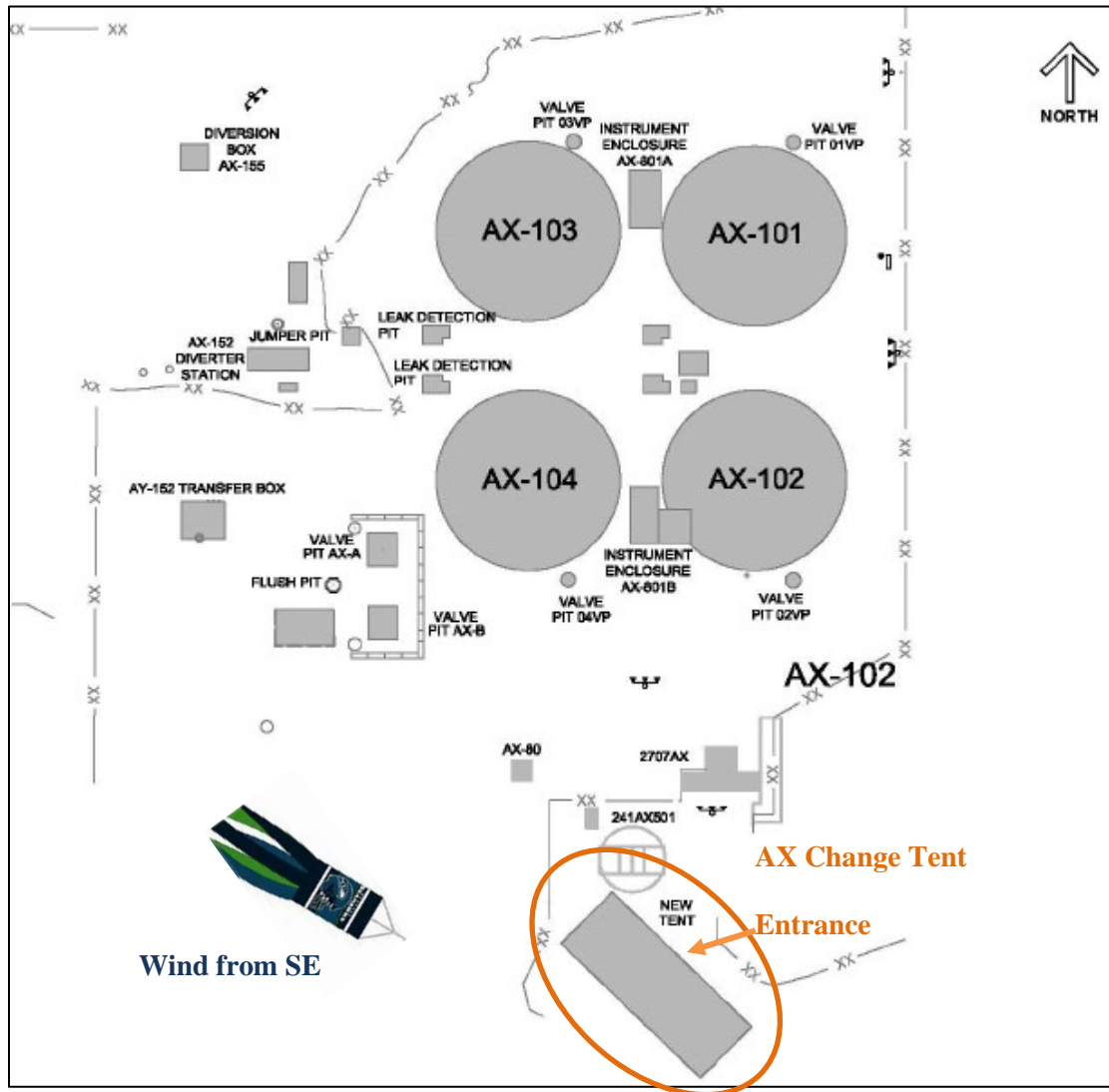
**200E/Station 6 Weather Data, November 30, 2016**

Time	Wind	Wind	Peak
Time (PST)	Wind Direction	Wind Speed	Peak Speed
6:00	186.5	0.7	1.6
6:15	151.1	2.3	3.4
6:30	150.4	3	4.7
6:45	207.1	2.7	4.1
7:00	179.4	3.8	5.3
7:15	175	4.8	5.5
7:30	164.8	4.9	6.4
7:45	149.8	6.2	9.1
8:00	160.5	6.7	9.3
8:15	154.1	5.1	7.7
8:30	107.4	4.3	5.8
8:45	71.4	3.9	6.4
9:00	39.8	3.2	4.5
9:15	75.7	3.3	5.5
9:30	75	3.5	5.8



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Map of Area  
241-AX Tank Farm



No tank waste disturbing activities were being performed on November 30, 2016, in or around AX Tank Farm.

On December 7, 2016, a meeting to review the time line and details of the data collected with the AEI involved workers, AEI S&H Manager, and WRPS construction managers was performed.

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**Event Timeline**

11/30/2016

- 0545 AreaRAEs spanned and bumped (pre-use test). AreaRAEs operational within tolerances.
- 0720 AreaRAEs (Inside and Outside AX Tent) swapped and completed tent sweep. AreaRAE Unit Id. #2432 was deployed inside of AX Farm Tent. Readings for the sweep were less than detectable for all (NH<sub>3</sub>, VOC and Hg). Survey ID: 16-10255 – AOP-015 In AX Tent (Attachment A).
- AreaRAE #2432 and AreaRAE Unit ID #2007 (outside of AX Farm Tent) were deployed. Both AreaRAEs were set to datalog and radio transmission was turned on and data was being viewed continuously at MO-598. Prior to deploying the AreaRAEs industrial hygiene technicians (IHTs) span tested and pre-use bump tested the instrumentation as stipulated in TF-OPS-IHT-011; both instruments were within tolerance of 10% of the calibration gas for ammonia and volatile organic compounds (VOCs).
- While deploying the AreaRAEs (@~0720), IHTs conducted an area sweep of the AX Farm Ingress/Egress tent for ammonia, VOCs, and mercury, all readings from the sweep were less than detectable.
- 0730 Construction started day shift. Pre-job held prior.
- 0805 AreaRAE was physically bumped when a HPT placed instrumentation next to it.
- 0805 Worker reported to AEI (AEI) Fieldwork Supervisor (FWS) that an AreaRAE is in alarm at AX Change tent. (see 0841 time entry)
- 0806 The unit alarmed inside AX Farm Ingress/Egress Tent and was also identified on the remote transmission screen at MO-598. (Note: AreaRAEs' alarm mode indicated by 3 beeps/flashes per second.).
- The AX Tent AreaRAE alarmed inside tent for VOC due to drift going into negative readings. The data stored on the AreaRAE peaked at .7 ppm VOC, 0 ppm NH<sub>3</sub> and when the alarm was reset the readings dropped immediately down to 0 ppm. The outside AreaRAE was 0 ppm VOC and 0.1 NH<sub>3</sub>, most likely drift. Survey ID: 16-10255 – AOP-015 In AX Tent.
- Reports of the AreaRAE inside AX Change tent was it was bumped when an HPT set their instrumentation next to it and/or the inlet flow was blocked.
- 0808 Central Shift Office (CSO) notified by FWS that an AreaRAE is in alarm at AX Change tent and workers smell cat urine inside the AX Change Tent. Central Shift Manager (CSM) directed workers to exit the tent and move to an upwind location. No personnel are experiencing symptoms at this time. CSM assigned lead to implement SWIMS.

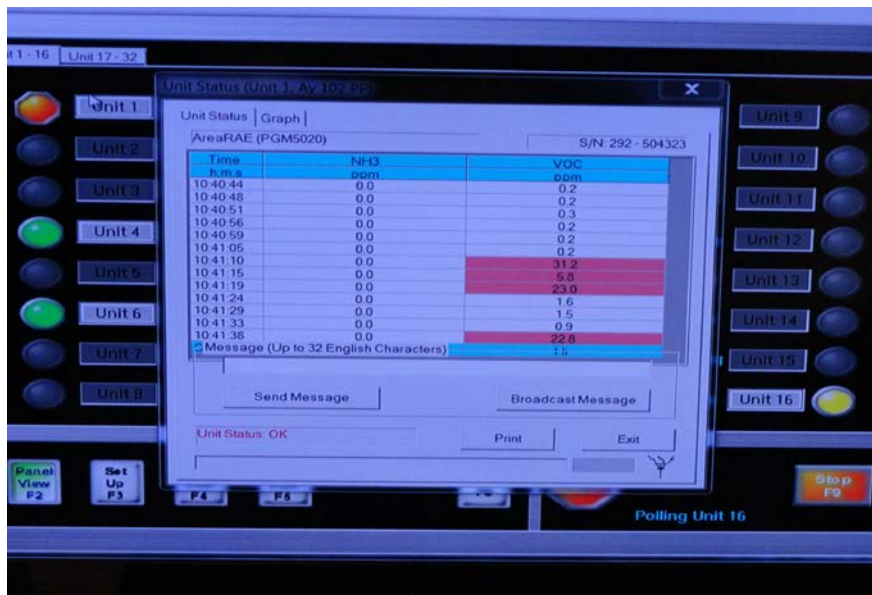
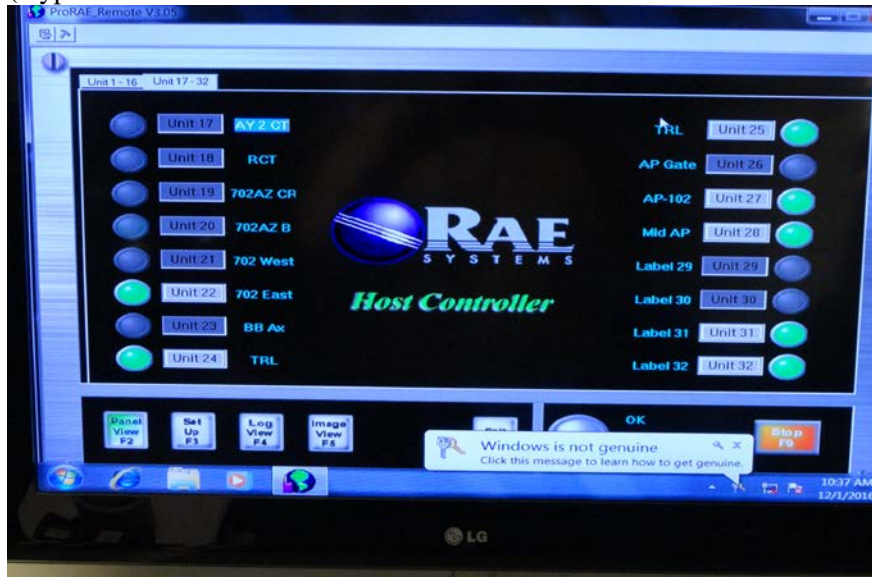
## 241-AX Change Tent AOP-015 Entry EIR-2016-054

- 0809 Retrieval Industrial Hygiene (IH) received a phone call from AEI S&H Manager, indicating that several of his employees smelled an odor and AOP-015 response would be entered.

Retrieval IHTs went to respond to the alarming instrumentation with handheld direct read instrumentation (DRI); however, the area was already barricaded for the AOP response. Although the IHTs were not able to get to their alarming instrumentation, they were still able to remotely monitor the results in MO-598. All readings were below the action limits.

### MO-598 AreaRAE Monitor

(“typical” views of the AreaRAE screen not the actual ones from the event)



- 0810 CSO entered Abnormal Operating Procedure TF-AOP-015, Response to Reported Odors or Unexpected Changes to Vapor Conditions (AOP-015) for AX Tent and surrounding area. Radio announcement complete.

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- 0812 Evaporator (EV) Team IH, AN Farm (AN) IH, Production Operations (PO) IHT Lead, PO S&H Manager briefed by CSM.
- 0813 All personnel safely evacuated/exited the AX Tent and personnel in anti-contamination clothing have been segregated.
- 0814 PO shift IHTs and PO IH and S&H manager arrived at the CSO. All personnel briefed on event details and status.
- 0818 PO S&H Manager contacts Retrieval S&H Manager. Retrieval S&H Manager sent IHTs to investigate AreaRAEs.
- 0820 Retrieval IHT Lead reports that AreaRAE alarm was due to negative (malfunction) value readings.
- 0821 PO IHTs are dispatched to acquire RPE and IHT equipment for response actions.
- PO S&H Manager notifies EV IH, AN IH, Central Operations and Maintenance Services (Coms) IH that PO shift IHTs were contacted by Retrieval IHT Lead and notified that AreaRAE alarm was due to negative value readings.
- 0821 242A notified of AX Tent AOP-015 entry.
- 0822 271AP notified of AX Tent AOP-015 entry.
- 0823 Coms IH contacted event scene IHT. Notified that event scene IHT was not actually at the event scene at the time of the event and had actually just arrived at evaporator parking lot.
- 0827 EV IH, AN IH, Coms IH ask Retrieval IHT to retrieve AreaRAE that alarmed and perform diagnostic.
- 0831 Construction Manager, AEI S&H, affected employees arrive at CSO and begin filling out odor response cards.
- 0826 Notified ORP On-Call FR, [REDACTED], of AOP-015 event.
- 0834 EV IH, AN IH, Coms IH, PO S&H Manager devise response plan:
- PO shift IHTs survey into AX tent with MultiRAE and Lumex pull a Tedlar™ bag for HAPSITE analysis.
  - Retrieval IHT will provide a replacement AreaRAE to be swapped out by PO Shift IHTs.
- 0837 Retrieval IHT asked to prepare replacement AreaRAE for swap of units in AX Farm.
- 0841 Affected work group FWS reports that odor originally reported to FWS at 0805, CSM was notified at 0808
- 0842 PO shift IHTs dispatched to perform response actions.

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- 0844 CSO entered AOP-015 for unexpected odor in AX Change Tent. All personnel stay upwind and clear of AX Change Tent. – SOEN Message.
- 0843 Construction workers report to MO-195. Medical surveillance offered to personnel associated with AOP-015 event. Some personnel declined medical surveillance.
- 0845 AEI S&H reports to CSM that the 5 affected employees all smelled the same odor and all have declined medical, no symptoms reported.
- 0845 Retrieval IH contacted PO S&H Manager.
- AreaRAE outside of AX Tent to be swapped.
- 0846 AEI S&H informs CSM that he will have a briefing with affected employees to clarify that they may go to HPMC voluntarily. Other 4 odor response cards will be filled out and sent to CSM.
- 0847 Barricade established restricting access to Canton Blvd. north of 4<sup>th</sup> Street.
- 0848 Retrieval IH contacted Retrieval IHTs to ensure data-log from both the AreaRAE inside of the AX Tent and the AreaRAE outside of the AX tent is acquired. No surveys have been started yet.
- 0850 Odor response cards have been submitted to the CSM.
- 0856 PO IHTs performing sweeps.
- 0857 Shift Ops Deputy at CSO to fill out attachment 1, Odor Response Plan form of TF-AOP-015.
- 0858 Shift Operations Manager is briefed by CSM and Coms IH of response actions.
- 0900 Spanned and bumped a new set of AreaRAE (Inside and Outside) and swapped them out. All readings were below the action levels. Survey ID: 16-10255 – AOP-015 in AX Tent.
- 0907 PO IHTs report initial sweep results
- Ammonia 0 ppm (< IDL\*)
  - VOCs 0.0 ppm (< IDL\*)
  - Mercury 3-4 ng/m<sup>3</sup> (< IDL\*)
- \* Instrument detection limit

Heading back into restricted area to place replacement AreaRAEs.

- 0914 AEI S&H Manager reports:
- Nine AEI employees smelled cat urine odor.
  - At least 30 employees were at the event location.
  - Six AEI went to HPMC for evaluation (one indicated headache also).
  - Three employees declined medical surveillance.

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- 0918 Retrieval IHT reports to CSO:  
- New AreaRAEs deployed to the field to replace the AreaRAEs inside and outside of the AX Farm Change Tent.
- 0919 CSO - Initiated Event Investigation for AX Change Tent AOP-015 Entry.  
POC: [REDACTED] - SOEN Message.
- 0924 PO Shift OE confirms that the workgroup IHT had not arrived at the AX Tent before the odor event. Workgroup HPTs also had not arrived. AEI S&H reports that no support crew in the tent reported smelling odors.
- 0928 Programs IS calls CSO and is briefed on number of people going to HPMC. Programs IS takes action to contact and update Case Manager.
- 0929 HPMC contacts CSO and updates Shift Operations Deputy:  
- 3 employees are being sent to HMPC downtown, 1979 Snyder Facility, due to 200W clinic being overloaded.
- 0936 AEI S&H Manager reports nine total workers smelled a cat urine odor inside AX-Tent
- Nine AEI Employees
- 1 electrician
  - 1 operator
  - 1 carpenter
  - 6 laborers
- Six went to HPMC, one of the six experienced symptom (headache).  
Three refused medical evaluation.  
Three of the six that went to HPMC 200W Area sent into town for evaluation.
- 1004 Construction FWS contacts CSM with additional updates on the six workers being evaluated by HPMC:  
- Three AEI employees now report experiencing a “headache”  
- One AEI employee reports nausea
- 1005 PO shift IHTs post DRI instrumentation checks have been completed satisfactorily.
- 1010 Bag samples delivered to 2704HV IH lab for HAPSITE analysis.
- 1013 Construction supervisor contacts CSM with update on affected employees:  
- 1 of the employees that experienced “headache” reported a new symptom of “nose burning” but it has since subsided.

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- 1014 Retrieval IH contacts Coms IH and confirms DRI Survey for AreaRAEs.
- 1024 CSM turnover occurred.
- 1029 HAMTC safety Rep contacts CSO for update on affected employees.
- Coms IH updated CSM on PO Shift IHT event response.
- 1033 Dispatched ER1 and ER2 to downpost event scene boundaries to the AX Tent with concurrence from PO IH. Area surrounding AX Tent was posted as a precaution and IHT DRI results showed no anomalies.
- 1036 ER1 and ER2 arrive at CSO to receive brief regarding boundary reduction by CSM.
- 1037 AY/AZ Team arrives at CSO to offer support.
- 1038 ER1 and ER2 leave CSO to reduce restricted access boundary and close the AX Farm gate.
- 1046 MSA Utilities contacts CSO to notify that septic pumping activities are to be performed N. of AP Farm. CSM briefs MSA Utilities personnel:
- AOP-015 event near area where septic pumping evolution is to take place. Septic tank is located in initial access restriction area.
  - Initial access restriction area has been reduced to AX Farm Change Tent.
- 1108 PO IHT notifies PO S&H Manager that grab sample from AX Change Tent has been processed through the HAPSITE and is awaiting analysis by Programs Chemist.
- 1110 MSA utilities contacts CSO to notify CSM that septic pumping activities are complete and they are leaving the area.
- 1220 AEI S&H Manager reports that all six AEI employees associated with the AX Tent AOP-015 event have been released to return to work.
- 1330 Programs Chemist delivers HAPSITE analysis and explanation to AN IH via email.
- 1334 AN IH briefs CSM on HAPSITE results.
- 1355 Notified by IH that sample analysis for AOP-015 event at the AX Change tent is complete and results are below action limits. Exiting AOP.

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- 1357 Sample analysis for the AOP-015 event has been completed and the results are below action limits. Exiting AOP-015. – SOEN Message.
- 1410 The six employees that went to HPMC were released for work. Air monitoring and sampling was done. The laboratory and direct reading instrument results did not exceed any action levels for AOP-015. AOP-015 was exited.

**Immediate Actions Taken**

1. The CSM entered AOP-015 for Abnormal Operating Procedure TF-AOP-015, Response to Reported Odors or Unexpected Changes to Vapor Conditions (AOP-015) for AX Tent and surrounding area. Radio announcement completed.
2. Personnel evacuated from the area and personnel in anti-contamination clothing were segregated.
3. The area was cleared and access was restricted (barricaded).
4. Personnel who experienced odors and/or symptoms were offered the opportunity to be evaluated by HPMC. Six workers elected to be evaluated.
5. Notifications were made to WRPS Management and DOE Facility Representatives.
6. Initiated EIR-2016-054, “AOP-015 Entry for AX Farm Change Tent.”

**Compensatory Measures**

1. Prior to exiting AOP-015, the CSM validated that the readings were at or below background.
2. AX Tank Farm was later down-posted following final IH monitoring and sampling data results being below action limits.
3. Safety Flash Industrial Hygiene, AreaRAE Gas Monitor – Alarm Actions, issued December 8, 2016, to all WRPS employees and WRPS subcontract employees. Communication included audio of the AreaRAE alarm.

**Preliminary Extent of Condition Review**

The AOP-015 entry was specific to the AX Change Tent area and ongoing vapor monitoring was in progress.

**Discussion of Potential Causes**

Based on a review of the following, the source of the odors encountered by nine workers in the AX Change Tent, was not able to be definitively determined.

1. Review of information and investigative IH monitoring and sampling of the area. All samples came back below background/action levels.
2. Input from affected workers described the odor as “cat urine.” Past vapor odor events at tank farms have not identified “cat urine” as the odor.



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3. Workers checked outside the AX Change Tent at the time of the event looking for smoke or dead rodents or signs of urine. No evidence of any smoke, rodents or urine.
4. Worker(s) thought possibly a co-worker had urine odor on their personal clothes. No evidence was found to support this.
5. No tank waste disturbing activities were being performed on November 30, 2016, in or around AX Tank Farm.
6. A garbage can lined with a bag was located in the AX Change Tent at the time of the event. The contents were removed and disposed of prior to learning that it was a potential source. Based on personnel statements and followup interviews the location of the garbage can was not identified as the probably location of the odor.

In addition, the AreaRAE appears to have alarmed due to being bumped as was reported. Staging location(s) and/or an enclosure to protect the AreaRAE(s) should be evaluated to minimize non-chemical/non-vapor related alarms.

**Discussion of Barriers That Could Have Impacted the Cause**

1. During the investigation process, some of the AX Change Tent workers identified the AreaRAE was alarming for a period of time prior to the FWS contacting the CSM for response guidance. The FWS had contacted IH with the understanding that an IHT would come and reset the negative flow alarm on the AreaRAE as the AreaRAE had been bumped when a worker placed their instruments by the AreaRAE. Workers understanding/knowledge on response expectation/requirements for alarming AreaRAE appears to be less than adequate.
2. Impacting barriers with respect to the odor origination/cause are unknown because the cause of the odors was not able to be definitively determined. Activity-specific vapor monitoring will continue

**Recommendations/Proposed Corrective Actions**

Based on input regarding response to the AreaRAE alarm, recommended corrective action is to provide training and/or periodic communication/awareness regarding AreaRAEs alarm response actions and expectations.

AreaRAEs staging location(s) and/or an enclosure to protect the monitoring equipment from an inadvertent bump/inlet flow restriction to minimize non-chemical/non-vapor related alarms should be evaluated.

The source/cause of the odor(s) was not definitively determined; therefore, there is no proposed corrective action(s) to mitigate/eliminate the odor.

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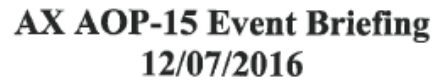
**Attachments (as they apply):**

1. Attachment 1 - List of personnel contacted and those that attended time line briefing
2. Attachment 2 - Odor Response Cards (With Personal Identifiable Information Redacted), 9 sets
3. Attachment 3 - AX Change Tent AreaRAE Data Logging for November 30, 2016
4. Attachment 4 – Safety Flash Industrial Hygiene, AreaRAE Gas Monitor – Alarm Actions, issued December 8, 2016, to all WRPS employees and WRPS subcontract employees. Communication included audio of the AreaRAE.

**Attachment 1 - List of personnel contacted and those that attended time line briefing**

Date \_\_\_\_\_

**Attachment 1 - List of personnel contacted and those that attended time line briefing**

[illegible]

Date \_\_\_\_\_



241-AX Change Tent AOP-015 Entry  
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Attachment 2 – Odor Response Cards

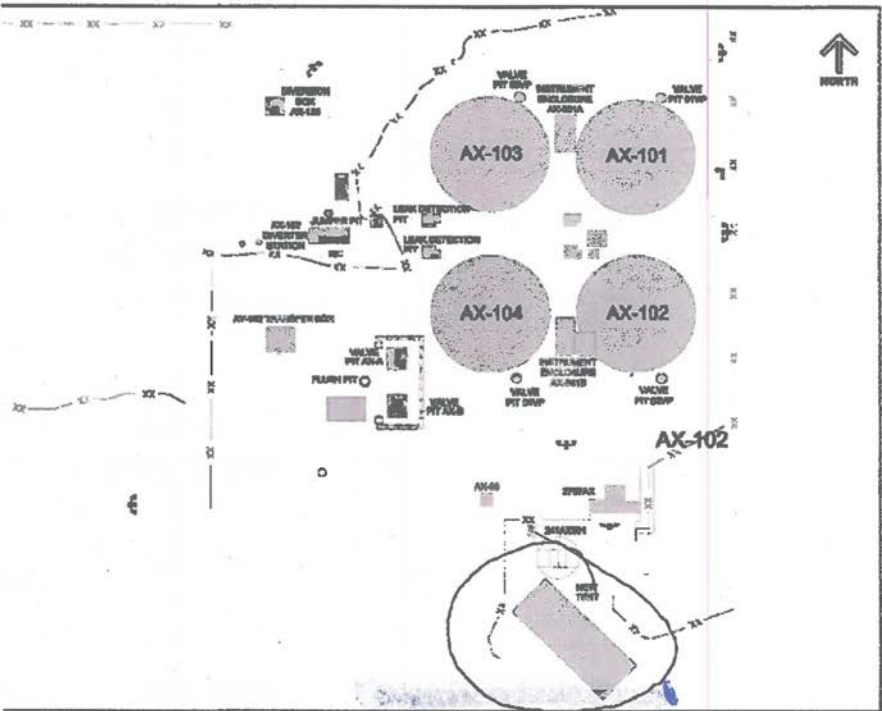
**ODOR RESPONSE CARD - 241-AX FARM**

**Odors Detected with NO Immediate symptoms**

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

**Odors Detected WITH Symptoms**

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



241-AX FARM  
(FEET)

Wind Direction

	N	
W		E
	S	


# ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 8:20 i.e.
- Your name and the work you were performing
- Location of odors (mark area on map and wind direction) Ax tent
- 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 Cat piss
- Your symptoms (if any) ☐ Headache ☐ Dizziness/Light-Headed ☐ Nausea ☐ Cough  
☐ Fatigue/Drowsiness/Weakness ☐ Sore/Burning Throat ☐ Difficulty Breathing  
☐ Watery/Irritated Eyes/Trouble with Vision ☐ Tingling/Numbness/Paralysis ☐ Rash/Itching  
☐ Other:

## 2. Send this card to the Central Shift Office.

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<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED] Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED] complete below bulleted information and map.               <ul style="list-style-type: none"> <li>• Your name and the work you were performing</li> <li>• Your symptoms (if any)</li> <li>• Date and time odor was noticed</li> <li>• Location of odors (mark area on map and the wind direction)</li> <li>• Describe the odor</li> <li>• Name of other in or near the affected area</li> <li>• Was an IHT present?</li> <li>• Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li>7. Send this card immediately to the Central Shift Office.</li> </ol>	 <div style="text-align: right; margin-top: 10px;"> <p><b>241-AX FARM</b> (FEET)</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">             Wind Direction              N W      E S           </div> </div>



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ODOR RESPONSE CARD - 241-AX FARM

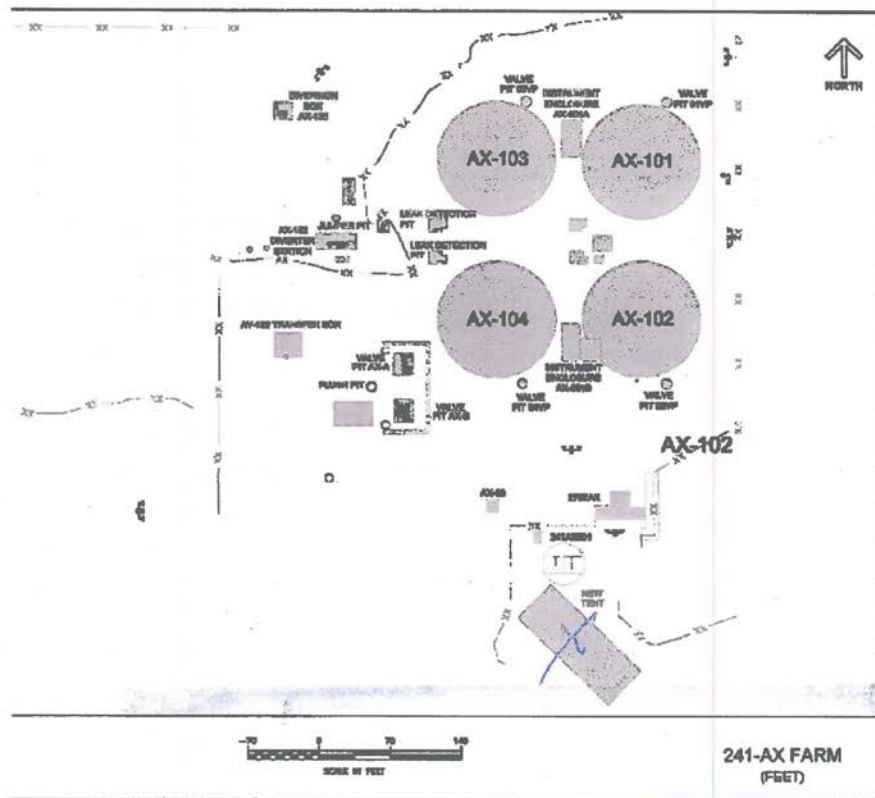
1. Contact CSM, Complete below bulleted information and map.

- Date and time odor was noticed 11-30-16 - 8:05 AM
- Your name and the work you were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) AX Tent
- Name(s) of others in or near the affected area A Few different Crews
- Was an IHT present? No
- Describe the odor ☐ Sweet ☐ Sour ☐ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion  
☐ Cleaning Solution ☐ Ammonia ☐ Other: Cat Pee
- 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-AX FARM

- 7. Send this card immediately to the Central Shift Office.**



Wind Direction

W	N	E
	S	

241-AX Change Tent AOP-015 Entry  
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ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11-30-16 8:15 AM
- 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? 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.

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EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p style="color: red; text-align: center;"><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED] Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED], complete below bulleted information and map.               <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li>7. Send this card immediately to the Central Shift Office.</li> </ol>	<div style="position: absolute; top: 240px; right: 100px; text-align: center;">       NORTH ↑     </div> <div style="position: absolute; bottom: 50px; right: 50px; border: 1px solid black; padding: 5px; width: fit-content;">       Wind Direction        N W      E S     </div>
<div style="display: flex; justify-content: space-between;"> <span>Page 1 of 2</span> <span>A-6006-936 (REV 0)</span> </div>	

241-AX Change Tent AOP-015 Entry  
EIR-2016-054

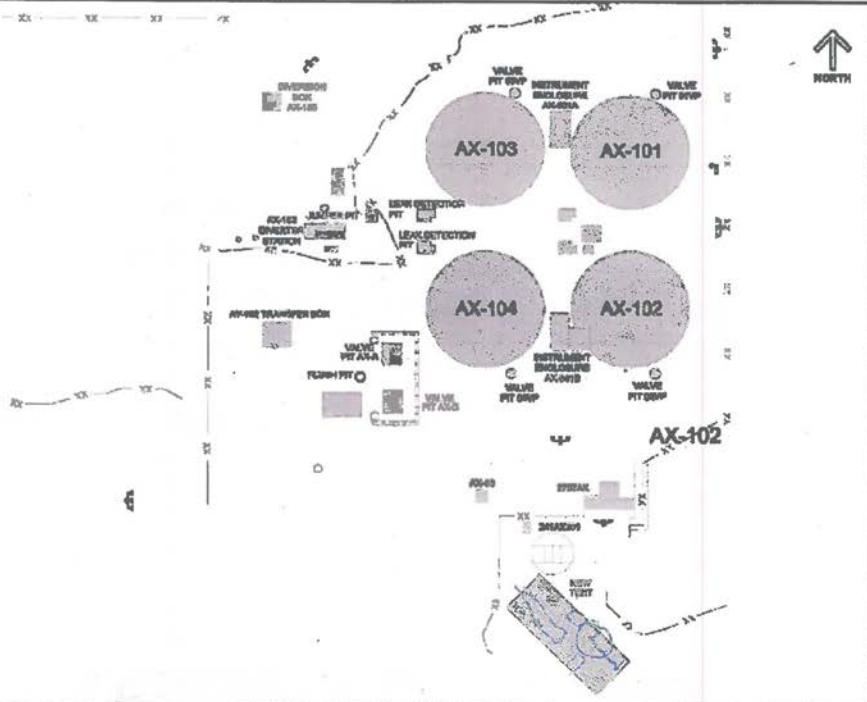

ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11.30.16 around 8:10
- Your name and the work your were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) By survey tables on CA side + clean side
- Name(s) of others in or near the affected area \_\_\_\_\_
- Was an IHT present? Nope
- Describe the odor ☐ Sweet ☐ Sour ☐ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion  
☐ Cleaning Solution ☒ Ammonia ☐ Other: Cat urine
- Possible Source Bags near wall?
- Your symptoms (if any) ☐ Headache ☐ Dizziness/Light-Headed ☐ Nausea ☐ Cough  
☐ Fatigue/Drowsiness/Weakness ☐ Sore/Burning Throat ☐ Difficulty Breathing none yet  
☐ Watery/Irritated Eyes/Trouble with Vision ☐ Tingling/Numbness/Paralysis ☐ Rash/Itching  
☐ Other: \_\_\_\_\_

2. Send this card to the Central Shift Office.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p style="color: red; text-align: center;"><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED], complete below bulleted information and map. <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> </ol> <p style="color: red; text-align: center;"><b>7. Send this card immediately to the Central Shift Office.</b></p>	 <div style="text-align: center; margin-top: 10px;">  <p>SCALE IN FEET</p> </div> <div style="text-align: right; margin-top: 10px;"> <p><b>241-AX FARM</b> (FEET)</p> </div> <div style="border: 1px solid black; width: 100px; height: 100px; margin-top: 10px; position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background: linear-gradient(to right, transparent 49%, black 49%, black 51%, transparent 51%); background-size: 10px 10px;"></div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-weight: bold; font-size: 24px;">N</div> <div style="position: absolute; top: 0; right: 0; font-weight: bold; font-size: 18px;">E</div> <div style="position: absolute; bottom: 0; left: 0; font-weight: bold; font-size: 18px;">S</div> <div style="position: absolute; top: 0; left: 0; font-weight: bold; font-size: 18px;">W</div> </div>



241-AX Change Tent AOP-015 Entry  
EIR-2016-054

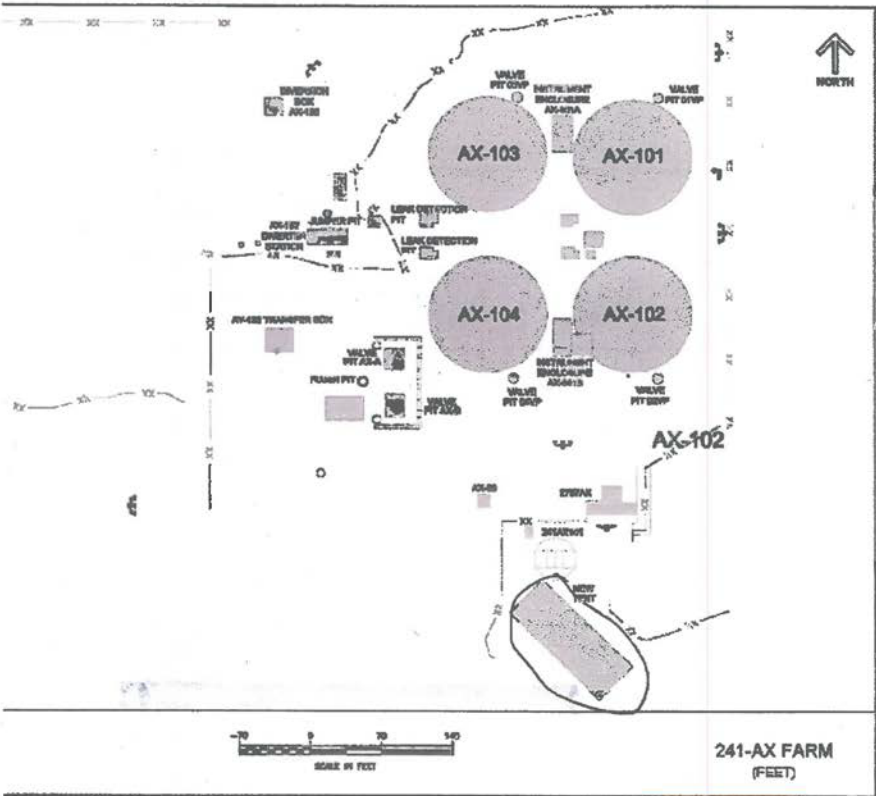
ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11/30/16 8:10 AM
- Your name and the work you were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) AX Tent
- 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: Cat Piss
- 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.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p style="color: red; text-align: center;"><b>Odors Detected with <i>NO</i> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <i>WITH</i> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED], complete below bulleted information and map.               <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li style="color: red;"><b>7. Send this card immediately to the Central Shift Office.</b></li> </ol>	 <p style="text-align: right; margin-top: 10px;"><b>241-AX FARM</b> (FEET)</p> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 10px auto; position: relative;"> <div style="position: absolute; top: 0; left: 0;">W</div> <div style="position: absolute; top: 0; right: 0;">E</div> <div style="position: absolute; bottom: 0; left: 0;">S</div> <div style="position: absolute; top: 0; right: 0;">N</div> </div>



241-AX Change Tent AOP-015 Entry  
EIR-2016-054

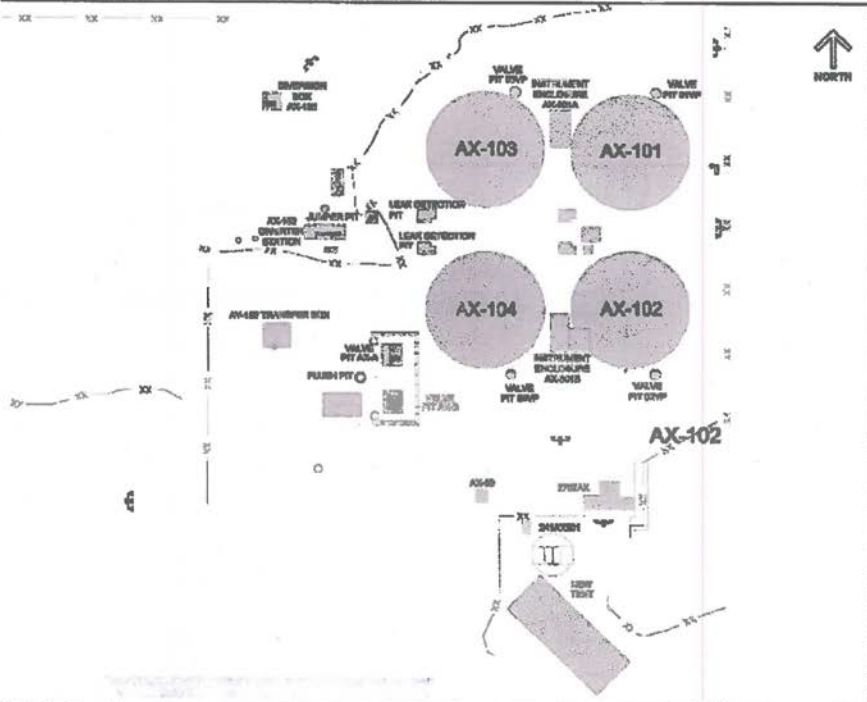
ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11-30-16 8:10
- Your name and the work your were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) AX tent
- 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: Cat PISS
- 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.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>										
<p style="color: red; text-align: center;"><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED] Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED] complete below bulleted information and map.               <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li>7. Send this card immediately to the Central Shift Office.</li> </ol>	 <div style="text-align: right; padding-top: 10px;"> <p><b>241-AX FARM (FEET)</b></p> <div style="border: 1px solid blue; padding: 5px; display: inline-block;"> <p style="color: blue; font-size: small;">Wind Direction</p> <table style="margin: 0 auto; text-align: center;"> <tr><td></td><td>N</td><td></td></tr> <tr><td>W</td><td></td><td>E</td></tr> <tr><td></td><td>S</td><td></td></tr> </table> </div> </div>		N		W		E		S	
	N									
W		E								
	S									

241-AX Change Tent AOP-015 Entry  
EIR-2016-054

ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11-30-16 @ approx. 8:20 AM
- Your name and the work you were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) AX tent
- 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: cat urine
- Possible Source N/A
- 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.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p style="color: red; text-align: center;"><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED], complete below bulleted information and map.               <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li style="color: red;">7. Send this card immediately to the Central Shift Office.</li> </ol>	<div style="text-align: right; margin-bottom: 10px;">  NORTH         </div> <div style="text-align: right; margin-top: 10px;"> <b>241-AX FARM</b> (FEET)         </div> <div style="border: 1px solid black; width: 100px; height: 100px; margin-top: 10px; position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background: linear-gradient(to right, transparent 49%, black 49%, black 51%, transparent 51%); background-size: 10px 10px;"></div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-weight: bold; font-size: 24px;">N</div> <div style="position: absolute; top: 0; left: 50%; transform: translate(-50%, 0); font-weight: bold; font-size: 24px;">W</div> <div style="position: absolute; top: 50%; left: 100%; transform: translate(0, -50%); font-weight: bold; font-size: 24px;">E</div> <div style="position: absolute; bottom: 0; left: 50%; transform: translate(-50%, 100%); font-weight: bold; font-size: 24px;">S</div> </div>

241-AX Change Tent AOP-015 Entry  
EIR-2016-054

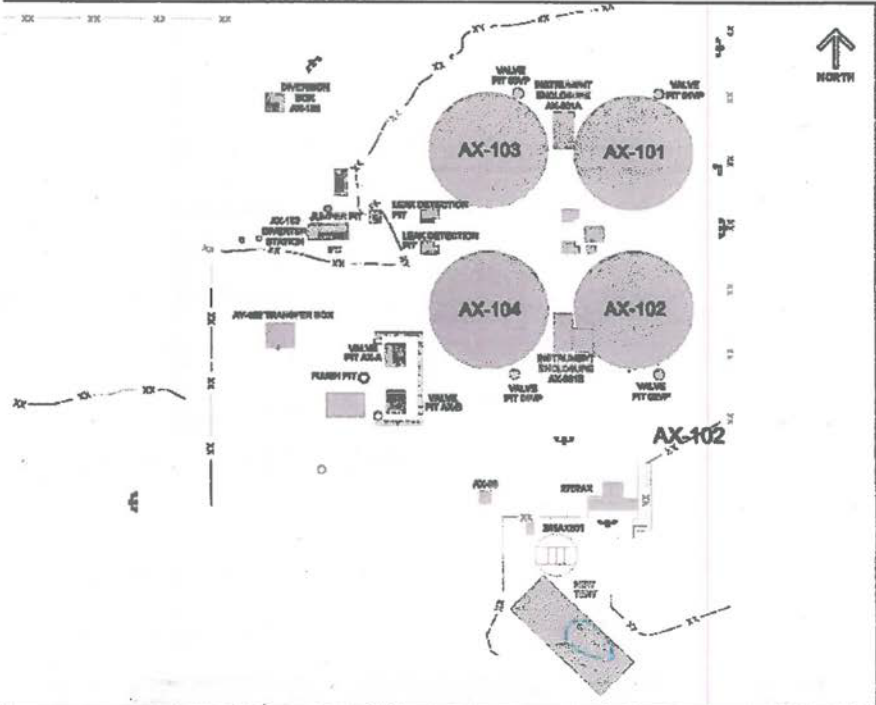
ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11.30.2016
- Your name and the work your were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) DILLING AREA
- Name(s) of others in or near the affected area \_\_\_\_\_
- Was an IHT present? NOT SURE
- Describe the odor ☐ Sweet ☐ Sour ☐ Musty ☐ Earthy ☐ Metallic ☐ Smoky ☐ Rotten ☐ Onion  
☐ Cleaning Solution ☐ Ammonia ☐ Other: Like CAT URINE
- Possible Source \_\_\_\_\_
- Your symptoms (if any) ☒ Headache <sup>Slight</sup> ☐ 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.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

<b>ODOR RESPONSE CARD - 241-AX FARM</b>	
<p style="color: red; text-align: center;"><b>Odors Detected with <u>NO</u> Immediate symptoms</b></p> <ol style="list-style-type: none"> <li>1. Notify Immediate Supervisor.</li> <li>2. Contact Central Shift Manager, [REDACTED]. Provide the bulleted information below.</li> <li>3. Complete map, return to Central Shift Office as soon as practicable.</li> </ol> <p style="color: red; text-align: center;"><b>Odors Detected <u>WITH</u> Symptoms</b></p> <ol style="list-style-type: none"> <li>4. Notify Immediate Supervisor.</li> <li>5. Contact CSM, [REDACTED], complete below bulleted information and map.               <ul style="list-style-type: none"> <li>Your name and the work you were performing</li> <li>Your symptoms (if any)</li> <li>Date and time odor was noticed</li> <li>Location of odors (mark area on map and the wind direction)</li> <li>Describe the odor</li> <li>Name of other in or near the affected area</li> <li>Was an IHT present?</li> <li>Possible source</li> </ul> </li> <li>6. Provide information on the back of card.</li> <li style="color: red;"><b>7. Send this card immediately to the Central Shift Office.</b></li> </ol>	 <div style="text-align: right; margin-top: 10px;"> <p><b>241-AX FARM</b> (FEET)</p> <div style="border: 1px solid blue; padding: 5px; display: inline-block;">             Wind Direction  <div style="display: flex; flex-direction: column; align-items: center;"> <span>N</span> <span>W</span> <span>E</span> <span>S</span> </div> </div> </div>



241-AX Change Tent AOP-015 Entry  
EIR-2016-054

ODOR RESPONSE CARD - 241-AX FARM

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

- Date and time odor was noticed 11:30-16 8:30ish
- Your name and the work your were performing \_\_\_\_\_
- Location of odors (mark area on map and wind direction) Ax tent \_\_\_\_\_
- 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: Cat piss
- 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.

**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

**Attachment 3 – AX Change Tent AreaRAE Data Logging  
for November 30, 2016**

Instrument: AreaRAE			Serial Number: 504592			
User ID: 00000001		Site ID: 00000001				
Data Points: 105		Data Type: Avg		Sample Period: 60 sec		
Last Calibration Time: 11/30/2016 06:46						
=====						
Gas Type:	NH3 (ppm)	VOC (ppm)	NONE (ppm)	LEL (%)	OXY (%)	
High Alarm Levels:	25.0	10.0	-----	-----	-----	
Low Alarm Levels:	12.0	2.0	-----	-----	-----	
=====						
Line#	Date Time	NH3 (ppm)	VOC (ppm)	NONE (ppm)	LEL (%)	OXY (%)
=====						
1	11/30/2016 07:17	0.0	0.0	-----	-----	-----
2	11/30/2016 07:18	0.0	0.0	-----	-----	-----
3	11/30/2016 07:19	0.0	0.0	-----	-----	-----
4	11/30/2016 07:20	0.0	0.0	-----	-----	-----
5	11/30/2016 07:21	0.0	0.0	-----	-----	-----
6	11/30/2016 07:22	0.0	0.0	-----	-----	-----
7	11/30/2016 07:23	0.0	0.0	-----	-----	-----
8	11/30/2016 07:24	0.0	0.0	-----	-----	-----
9	11/30/2016 07:25	0.0	0.0	-----	-----	-----
10	11/30/2016 07:26	0.0	0.0	-----	-----	-----
11	11/30/2016 07:27	0.0	0.0	-----	-----	-----
12	11/30/2016 07:28	0.0	0.0	-----	-----	-----
13	11/30/2016 07:29	0.0	0.0	-----	-----	-----
14	11/30/2016 07:30	0.0	0.0	-----	-----	-----
15	11/30/2016 07:31	0.0	0.0	-----	-----	-----
16	11/30/2016 07:32	0.0	0.0	-----	-----	-----
17	11/30/2016 07:33	0.0	0.0	-----	-----	-----
18	11/30/2016 07:34	0.0	0.0	-----	-----	-----
19	11/30/2016 07:35	0.0	0.0	-----	-----	-----
20	11/30/2016 07:36	0.0	0.0	-----	-----	-----
21	11/30/2016 07:37	0.0	0.0	-----	-----	-----
22	11/30/2016 07:38	0.0	0.0	-----	-----	-----
23	11/30/2016 07:39	0.0	0.0	-----	-----	-----
24	11/30/2016 07:40	0.0	0.0	-----	-----	-----
25	11/30/2016 07:41	0.0	0.0	-----	-----	-----
26	11/30/2016 07:42	0.0	0.0	-----	-----	-----
27	11/30/2016 07:43	0.0	0.0	-----	-----	-----
28	11/30/2016 07:44	0.0	0.0	-----	-----	-----
29	11/30/2016 07:45	0.0	0.0	-----	-----	-----
30	11/30/2016 07:46	0.0	0.0	-----	-----	-----
31	11/30/2016 07:47	0.0	0.0	-----	-----	-----
32	11/30/2016 07:48	0.0	0.0	-----	-----	-----
33	11/30/2016 07:49	0.0	0.0	-----	-----	-----
34	11/30/2016 07:50	0.0	0.0	-----	-----	-----
35	11/30/2016 07:51	0.0	0.0	-----	-----	-----
36	11/30/2016 07:52	0.0	0.0	-----	-----	-----
37	11/30/2016 07:53	0.0	0.0	-----	-----	-----
38	11/30/2016 07:54	0.0	0.0	-----	-----	-----
39	11/30/2016 07:55	0.0	0.0	-----	-----	-----
40	11/30/2016 07:56	0.0	0.0	-----	-----	-----
41	11/30/2016 07:57	0.0	0.0	-----	-----	-----
42	11/30/2016 07:58	0.0	0.0	-----	-----	-----
43	11/30/2016 07:59	0.0	0.0	-----	-----	-----
44	11/30/2016 08:00	0.0	0.0	-----	-----	-----
45	11/30/2016 08:01	0.0	0.0	-----	-----	-----
46	11/30/2016 08:02	0.0	0.0	-----	-----	-----
47	11/30/2016 08:03	0.0	0.0	-----	-----	-----
48	11/30/2016 08:04	0.0	0.0	-----	-----	-----
49	11/30/2016 08:05	0.0	0.0	-----	-----	-----
50	11/30/2016 08:06	0.0	0.0	-----	-----	-----
51	11/30/2016 08:07	0.0	0.0	-----	-----	-----
52	11/30/2016 08:08	0.0	0.0	-----	-----	-----
53	11/30/2016 08:09	0.0	0.1	-----	-----	-----
54	11/30/2016 08:10	0.0	0.1	-----	-----	-----
55	11/30/2016 08:11	0.0	0.2	-----	-----	-----
56	11/30/2016 08:12	0.0	0.2	-----	-----	-----
57	11/30/2016 08:13	0.0	0.2	-----	-----	-----
58	11/30/2016 08:14	0.0	0.2	-----	-----	-----



**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**


**Attachment 3 – AX Change Tent AreaRAE Data Logging  
for November 30, 2016**

59	11/30/2016 08:15	0.0	0.3	-----	-----	-----
60	11/30/2016 08:16	0.0	0.3	-----	-----	-----
61	11/30/2016 08:17	0.0	0.3	-----	-----	-----
62	11/30/2016 08:18	0.0	0.3	-----	-----	-----
63	11/30/2016 08:19	0.0	0.3	-----	-----	-----
64	11/30/2016 08:20	0.0	0.3	-----	-----	-----
65	11/30/2016 08:21	0.0	0.4	-----	-----	-----
66	11/30/2016 08:22	0.0	0.4	-----	-----	-----
67	11/30/2016 08:23	0.0	0.4	-----	-----	-----
68	11/30/2016 08:24	0.0	0.4	-----	-----	-----
69	11/30/2016 08:25	0.0	0.4	-----	-----	-----
70	11/30/2016 08:26	0.0	0.4	-----	-----	-----
71	11/30/2016 08:27	0.0	0.5	-----	-----	-----
72	11/30/2016 08:28	0.0	0.4	-----	-----	-----
73	11/30/2016 08:29	0.0	0.5	-----	-----	-----
74	11/30/2016 08:30	0.0	0.5	-----	-----	-----
75	11/30/2016 08:31	0.0	0.5	-----	-----	-----
76	11/30/2016 08:32	0.0	0.5	-----	-----	-----
77	11/30/2016 08:33	0.0	0.5	-----	-----	-----
78	11/30/2016 08:34	0.0	0.5	-----	-----	-----
79	11/30/2016 08:35	0.0	0.5	-----	-----	-----
80	11/30/2016 08:36	0.0	0.5	-----	-----	-----
81	11/30/2016 08:37	0.0	0.5	-----	-----	-----
82	11/30/2016 08:38	0.0	0.5	-----	-----	-----
83	11/30/2016 08:39	0.0	0.5	-----	-----	-----
84	11/30/2016 08:40	0.0	0.5	-----	-----	-----
85	11/30/2016 08:41	0.0	0.5	-----	-----	-----
86	11/30/2016 08:42	0.0	0.6	-----	-----	-----
87	11/30/2016 08:43	0.0	0.6	-----	-----	-----
88	11/30/2016 08:44	0.0	0.6	-----	-----	-----
89	11/30/2016 08:45	0.0	0.6	-----	-----	-----
90	11/30/2016 08:46	0.0	0.6	-----	-----	-----
91	11/30/2016 08:47	0.0	0.6	-----	-----	-----
92	11/30/2016 08:48	0.0	0.6	-----	-----	-----
93	11/30/2016 08:49	0.0	0.6	-----	-----	-----
94	11/30/2016 08:50	0.0	0.6	-----	-----	-----
95	11/30/2016 08:51	0.0	0.6	-----	-----	-----
96	11/30/2016 08:52	0.0	0.6	-----	-----	-----
97	11/30/2016 08:53	0.0	0.7	-----	-----	-----
98	11/30/2016 08:54	0.0	0.6	-----	-----	-----
99	11/30/2016 08:55	0.0	0.7	-----	-----	-----
100	11/30/2016 08:56	0.0	0.7	-----	-----	-----
101	11/30/2016 08:57	0.0	0.7	-----	-----	-----
102	11/30/2016 08:58	0.0	0.7	-----	-----	-----
103	11/30/2016 08:59	0.0	0.7	-----	-----	-----
104	11/30/2016 09:00	0.0	0.7	-----	-----	-----
105	11/30/2016 09:01	0.0	0.7	-----	-----	-----


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**241-AX Change Tent AOP-015 Entry  
EIR-2016-054**

Attachment 4 – Safety Flash Industrial Hygiene, AreaRAE Gas Monitor – Alarm Actions, issued December 8, 2016, to all WRPS employees and WRPS subcontract employees. Communication included audio of the AreaRAE.



## Safety Flash Industrial Hygiene



December 8, 2016


**AreaRae Gas Monitor – Alarm Actions**

The AreaRAE is commonly used to detect gas or vapor releases

The AreaRAE detects organic vapors with a photoionization detector and can be equipped with additional sensors, such as for ammonia, carbon monoxide, oxygen and/or flammable gas

**If you see/hear an alarming AreaRAE you should:**

- Always respond to an alarm appropriately, even if you think it may be a false alarm
- Initiate SWIM – Stop, Warn, Isolate, Minimize exposure(s)
- Move upwind to a safe area, at least 25-50 ft. away or as directed by the IHT, IH, FWS, Shift Manager, etc.
- Notify the Field Work Supervisor/ Central Shift Office
- Additional actions will be directed by Industrial Hygiene in order to clear the area for return to work



Contact [REDACTED] for more information

