

Washington River Protection Solutions  
**EVENT SUMMARY**

**NOTE:** This form provides timely notification to management and documents preliminary information of an event that may require a more formal investigation. Details may change upon further examination and analysis. The following is a current status of available information:

- 1. Project:** Tank Farm Projects **2. Report Date:** 01/11/2024
- 3. Investigation Title:** TF-AOP-015 Entry for 217-AW-1
- 4. Investigation Report Number:** EIR-2024-001
- 5. Responsible Manager:** [REDACTED]
- 6. Event Investigator:** [REDACTED]
- 7. Area / Building / Location:** 200E/217-AW-1/Change Tent NW Corner of 241 AW
- 8. Date and Approximate Time of Event:** **Date:** 01/03/2024 **Time (military):** 10:52 Hours
- 9. Associated Action Request (AR) Number:** WRPS-AR-2024-0664
- 10. Associated Occurrence Report Number (if applicable):** N/A
- 11. Event Investigation Meeting Held:** Yes [ ] or No [X] **Date:** N/A **Time (military):** N/A

**12. Activity in Progress:** (What activity was under way, include procedures and work order numbers, as applicable)

The work crew was supporting pit work at AW05A (WO# 947717) and had exited the farm, doffed their monitoring devices and Respiratory Protective Equipment (RPE) for survey by Radiological Control Technicians (RCTs) and proceeded to egress.

**13. Personnel Involved:** (Job positions, number of personnel, identify any support organizations or subcontractors)

6- Radiological Control Technicians (RCTs)

**14. What Happened:** (Provide a short discussion of what happened)

On 01/03/2024, at approximately 11:00 hours, a Ventis Pro5 personal ammonia monitor (PAM) went into alarm and then suddenly stopped alarming.

While surveying equipment, an RCT notices that a Ventis Pro is alarming. The RCT picked up the RPE (FF-APR mask) and the personal ammonia monitor stopped alarming. The RCT noted that the PAM placed under the mask was alarming and notified the Field Work Supervisor (FWS). Once the mask was lifted the alarm quickly dissipated back to 0 ppm. At the time of the event the RCTs inside 217-AW-1 Change tent did not report experiencing symptoms and were offered, yet declined, precautionary medical evaluation.

**15. Where Did It Happen:** (Description of work area and working conditions. Include information on weather conditions, PPE, Postings, etc.)

The PAM alarmed inside the 217 AW-1 Change Tent.

At the time the PAM alarmed all RCTs were not in an area requiring the use of management-directed respiratory protection or a personal ammonia monitor (e.g., ToxiRAE or VentisPro).

Information from the Hanford Site Meteorological Station #6 and Data Fusion and Advisory System (DFAS) application, powered by SmartSite™, were utilized for outdoor weather details at the time of the Ventis Pro personal ammonia monitor alarm. Although weather conditions did not play a role in this event. The Hanford Site Meteorological Station #6 indicated at approximately 1052 hours on 01/03/2024:

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- Mixing Height - 600 m
- Stability Class - D
- Barometric Pressure and trend - 29.346 rising
- Temperature - 40
- Relative Humidity - 84 %
- Wind speed and Direction - SW 2 mph (230 degrees)

**16. Impact to Facility:** *(Caused by the event or a description of known consequences)*

Access was restricted to 217-AW-1 Change Tent for approximately 1 hour. No operational impacts, impacts to facility safety status, or facility reliability occurred.

**17. Immediate Actions Taken:** *(List immediate actions taken to stabilize the scene or respond to the event)*

- Entered TF-AOP-015 "Response to Personal Ammonia Monitor Alarm," for 217-AW-1 due to personal ammonia monitor Response Level (6ppm) alarm or reading. All personnel had already exited the change tent at the time of the initial notification.
- The Central Shift Manager (CSM) notified Field Work Supervisor (FWS) requesting Odor/Vapor Response Cards from workers.
- CSM notified DOE Field Representative (FR) of TF-AOP-015 Entry and made required TF-AOP-015 notifications.
- Ventis Pro Alarm log was reviewed showing high of 6ppm, Industrial Hygiene Technicians (IHTs) were briefed and dispatched to sweep 217 AW-1.
- Initiated Event Investigation EIR-2024-001 "TF-AOP-015 Entry for 217-AW-1."
- IH responded to the area and took direct-reading instrument (DRI) readings, DRI readings were at or below action levels and the IH instruments passed the post-use function test, the area was allowed to be released from restricted access.
- Exited TF-AOP-015 for "Response to Personal Ammonia Monitor Alarm," for 217-AW-1 normal access restored.

**18. Compensatory Actions Taken:**

None.

**19. Remedial Actions Taken:**

None.

**20. Key Elements of the Investigation:** *(Key investigation points)*

To summarize the conclusion of IHIR-00087 "TF-AOP-015 Response to Personal Ammonia Monitor Alarm," investigation and DRI monitoring could not readily identify the direct cause of the alarm, however, it was determined the most likely cause was resultant of the instrument sensor becoming obstructed.

Direct reading instrument (DRI) monitoring performed during TF-AOP-015 response actions did not indicate further action was necessary with regard to a worker safety and health occupational exposure limit standpoint. As a result, the area was released from restricted access.

The following considerations support the IHIR-00087 conclusion:

- (1) At the time of the alarming event, there were several other Personal Ammonia Monitors on the survey table, none of which had an alarm event.

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- (2) The PAM was not being worn by personnel at the time of the alarm event. It was noted an FF-APR mask had covered the PAM and, once the mask was lifted off the PAM, the response alarm stopped, and readings immediately dissipated (Approximately 29 seconds later) back to 0 ppm.
- (3) Evaluation of the weather details determined the cause of the alarm event was unlikely to be resultant of Tank Farms exhauster emissions based on the wind direction, wind speed, mixing height, and stability class.

The Hanford Site Meteorological Station #6 and DFAS dashboard indicated the following weather conditions at 1052 hours on 01/03/2024:

- Mixing Height - 600 m
- Stability Class - D
- Barometric Pressure and trend - 29.346 rising
- Temperature - 40
- Relative Humidity - 84 %
- Wind speed and Direction - SW 2 mph (230 degrees)



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- (4) Due to the proximity of 217-AW-1 to the Tank Farms, monitoring for Tank Waste Chemical Vapors was conducted during the TF-AOP-015 response.

Because nitric acid was utilized in nearly all production processes that generated tank waste, and the most common byproduct of those processes was reduction of nitrate ion to ammonia during the dissolution (oxidation) of irradiated fuel, ammonia is the most prevalent chemical of potential concern (COPC) found in all tanks. Therefore, ammonia is utilized as a sentinel indicator for Tank Waste Chemical Vapor COPCs, thus DRIs equipped with an ammonia sensor are utilized at a minimum when monitoring for tank waste chemical vapors/COPCs.

Investigative TF-AOP-015 DRI monitoring in the general areas inside the 217-AW-1 Change Tent indicated less than detectable concentrations for ammonia (< 0 ppm), which is below anticipated background levels. Providing indication the cause of the instrument alarm was unlikely to be resultant of Tank Farm exhauster emissions.

- (5) In addition to the lack of resulting ammonia data on the nearby devices, there were no reports of odors associated with Ammonia- typically a pungent odor detected at low concentrations. Workers were not wearing Respiratory Protective Equipment at the time the device alarmed and would likely be aware of Ammonia concentrations approaching 6 parts per million.
- (6) Memo WRPS-1904672.1, "TANK FARM EXHAUST STACK CONCENTRATION ALARM/ACTION LEVELS FOR AMMONIA" establishes ammonia concentration stack alarm/action set points for tank farm exhausters based on the predicated ammonia concentration at unspecified ground receptors utilizing the Quantitative Risk Assessment (QRA) model. The exhauster high level alarm was established at concentrations where the predicted ground receptor ammonia concentration of 2.5 ppm (or 10% of the established Occupational Exposure Limit for ammonia) could be observed.

The exhauster high level alarm conservatively established for A Complex (excluding A farm) is 460 ppm. According to the Vapor Monitoring and Detection System (VMDS), the ammonia concentration observed at the time of event occurrence was 0 ppm at the 241-AW exhauster, 0 ppm at the POR-126 exhauster, 31.631 ppm at the POR-127, and 12.619 ppm at 702-AZ exhauster. The AP exhauster is not currently connected to VMDS, issues have been identified with the therefore, readings are acquired once per calendar day in accordance with TF-OPS-IHT-037 when ammonia stack monitoring via VMDS is unavailable. The highest ammonia concentrations observed between 01/02/2024 and 01/03/2024 was 6 ppm at the AP Exhauster. Conservatively utilizing the higher ammonia concentration observed in the POR 127 exhauster, a predicted ground receptor ammonia concentration of 0.171 ppm (or 0.68% of the established Occupational Exposure Limit for ammonia) would be expected if AP, AY/AZ, AX tank, or AW farm exhauster emissions were present.

The exhauster high level alarm conservatively established for A farm is 160 ppm. According to the Vapor Monitoring and Detection System (VMDS), the ammonia concentration observed at the time of event occurrence was 2.978 ppm at the POR-518 exhauster and 0.767 ppm at the POR-519 exhauster. Conservatively utilizing the higher ammonia concentration observed in the POR-518 exhauster, a predicted ground receptor ammonia concentration of 0.046 ppm (or 0.18% of the established Occupational Exposure Limit for ammonia) would be expected if A tank farm exhauster emissions were present.

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Therefore, providing additional indication the instrument alarm was unlikely to be resultant of Tank Farms exhauster emissions.

**21. Positive Aspects Identified:**

Personnel responded promptly to the event implementing the applicable procedure(s).

**22. Key Take Aways / Learning Opportunities:**

None.

**23. Event Investigation:**

- An Event Investigation will be completed per [TFC-OPS-OPER-C-14](#).
- This event will be managed by another process, i.e., Operability Evaluation, Engineering Technical Evaluation, etc.
- This event does not require continuation of the Event Investigation process.

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**Responsible Manager Approval:**

\_\_\_\_\_  
Name (First, Middle Initial, Last)

\_\_\_\_\_  
Digitally signed by \_\_\_\_\_  
Date: 2024.01.11 15:43:44 -08'00'  
\_\_\_\_\_  
Signature / Date

**CAS Manager Approval:**

\_\_\_\_\_  
Name (First, Middle Initial, Last)

\_\_\_\_\_  
Digitally signed by \_\_\_\_\_  
Date: 2024.01.11 15:44:12 -08'00'  
\_\_\_\_\_  
Signature / Date

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**INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT**

<b>Event Title:</b>  TF-AOP-015 Personal Ammonia Monitor Response Alarm at 217AW1 Change Tent	<b>PER Number:</b> WRPS-AR-2024-0664
	<b>IHIR Number:</b> IHIR-00087

<b>Date:</b> 01/03/2024	<b>Time:</b> 10:51	<b>Location:</b> 241-AW Farm Change Trailer, 217AW1
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**Event Summary and Timeline:**

**Event Summary:**  
 On Wednesday, January 3rd, 2024 at approximately 12:28 PM, TF-AOP-015 was entered for Personal Ammonia Monitor (PAM) response alarm in 241-AW Farm Change Tent. The work crew was supporting pit work at AW05A (WO# 947717) and had exited the farm, doffed their monitoring devices and Respiratory Protective Equipment (RPE) for survey by Radiological Controls Technicians (RCTs), and proceeded to egress. After the RCT picked up the RPE (FF-APR mask), it was noted that the PAM placed under the mask was alarming and notified the Field Work Supervisor (FWS). After the FWS called the Central Shift Office (CSO), the Shift Manager declared TF-AOP-015 at 12:28 PM.

**Field Response Timeline:**

10:40 AM Workers start to exit 241-AW Farm, and begin entering the 217AW1 Change Tent, removing RPE and monitoring equipment to be surveyed by RCTs, and proceed to doff anti-contamination clothing.

10:52 AM While surveying equipment, RCT notices that a Ventis Pro is alarming and notes the FF-APR mask the worker was wearing had covered the PAM. Once the mask was lifted off the PAM the response alarm quickly dissipated back to 0 ppm. RCT continued surveys of masks and equipment and exited change trailer.

11:41 AM Shift Manager (SM) calls Production Operations East (POE) Industrial Hygiene (IH) for support entering AOP-015 criteria.

11:49 AM POE IH support (Industrial Hygienists and Industrial Hygiene Technicians) arrive at the Central Shift Office (CSO). POE IH begins gathering data for AOP-015 timeline.

12:02 PM POE IHT Supervisor contacts Tank Farm Projects (TFP) IHT Supervisor to coordinate the delivery of the event-initiating device so the datalog can be downloaded.

12:23 PM POE IH Manager contacts TFP IH Manager to have project IH support response actions. CSM contacts Field Work Supervisor (FWS) to request Odor/Vapor Response Cards (OVRC) be filled out by everyone in the vicinity of the alarming device and offer medical screenings. All declined medical.

12:28 PM SM Enters TF-AOP-015 for Personal Ammonia Monitor Response Alarm at 217AW1 Change Tent.

12:37 PM TFP IHTs arrive at CSO with event-initiating device to be downloaded at Ventis Pro docking station. No peak readings, device was reading 0 ppm.

12:41 PM TFP IH arrives at CSO, and gets briefing from POE IH. Datalog from event-initiating device return with a peak reading of 6 ppm.

12:44 PM TFP IH and POE IHTs depart CSO and head to 217AW1 Change Tent to perform clearance with DRI monitoring per IHSP-PROG-MULTI-015.

13:06 PM POE IHTs performed post-use function test to validate readings (SWIHD 24-00070).

13:07 PM TFP IH arrives back at the CSO. All readings at 217AW1 were below background levels in the Radiological Buffer Area (RBA) and Contaminated Area (CA) portion of the change tent.

13:17 PM OVRCs and Personal Ammonia Monitor Issues and Concerns forms arrive at the CSO. No reported odors, sources, or symptoms.

13:29 PM SM reviewed checklist and exited AOP-015.

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**INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT**(Continued)

**Sampling/Monitoring Results:**

Ventis Pro 5 Personal Ammonia Monitor data log from alarming device:

Instrument ID Number: 22033PE-122 (alarming device)  
 Peak Reading: 6 ppm for 26 seconds  
 Last Calibration: 12/27/2023 06:29:31AM (passed)  
 Last Bump Test: 01/02/2024 05:43:60AM (passed)  
 Data Log Readings: (all other readings were 0ppm for Ammonia)

Time	Temp (C)	Ammonia (ppm)	Ammonia-TWA (ppm)	Ammonia-STEL (ppm)
10:50:39AM	19.00	2.00	0	0.02
10:50:49AM	19.00	3.00	0	0.06
10:50:59AM	19.00	3.00	0	0.09
10:51:09AM	19.00	4.00	0	0.13
10:51:19AM	19.00	4.00	0.01	0.18
10:51:29AM	19.00	5.00	0.01	0.23
10:51:39AM	19.00	5.00	0.01	0.29
10:51:49AM	19.00	5.00	0.01	0.34
10:51:59AM	19.00	6.00	0.01	0.41
10:52:09AM	19.00	6.00	0.01	0.48
10:52:19AM	19.00	6.00	0.02	0.54
10:52:29AM	19.00	5.00	0.02	0.6
10:52:39AM	19.00	4.00	0.02	0.64
10:52:49AM	19.00	3.00	0.02	0.68
10:52:59AM	19.00	3.00	0.02	0.71
10:53:09AM	19.00	3.00	0.02	0.74
10:53:19AM	19.00	3.00	0.02	0.78
10:53:29AM	19.00	2.00	0.03	0.8
10:53:39AM	19.00	2.00	0.03	0.82
10:53:49AM	19.00	2.00	0.03	0.84

TF-AOP-015 Response Production Operations IHT Sweep (SWIHD Survey 24-00070)

POE IHTs and TFP IH entered change tent 271AW1 at approximately 12:00 PM and conducted sweep inside the change tent. IHT performed Direct Reading Instrument (DRI) monitoring throughout the sweep on the RBA and CA sides of the change tent, and all readings were below background detection.

Date:	Time:	Ammonia (ppm):	VOC (ppm):
01/03/2024	12:00PM	0.000	N/A

DRI Monitoring in 241-AW Farm for the morning of 01/03/2024 (SWIHD Survey 24-00086)

**Time of Work Activity:**

08:40AM Workers entered AW-farm.  
 09:00AM AW-105 Pump Pit opened.  
 09:05AM Opened Pac-Tec bag for PBIC Shield Plugs  
 09:19AM Lowered rattle gun to remove nozzle on jumper from A-line (LEL Reading Taken)  
 09:24AM Removed rattle gun to fix broken tie rod.  
 09:42AM Removed Pump line jumper nozzle (LEL Reading Taken)  
 09:47AM Removed nozzle on A-G pump 70445 port (LEL Reading Taken)  
 09:54AM Moved jumper to temporary spot within the pit  
 10:11AM Bagged Removed rattle gun.  
 10:29AM installed rubber plugs on openings.  
 10:32AM Temp covers installed  
 10:40AM Workers left farm

**Readings:**

Date:	Time:	Ammonia (ppm):	VOC (ppm):
01/03/2024	09:00AM	0.000	0.000
01/03/2024	09:24AM	0.000	0.000
01/03/2024	09:30AM	0.000	0.000
01/03/2024	09:44AM	0.000	0.000

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**INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT**(Continued)

**Sampling/Monitoring Results:**

Date:	Time:	Ammonia (ppm):	VOC (ppm):
01/03/2024	09:48AM	0.000	0.000
01/03/2024	10:00AM	0.000	0.000
01/03/2024	10:30AM	0.000	0.000
01/03/2024	13:57PM	0.000	0.000
01/03/2024	14:52PM	0.000	0.000

**SWIHD References:**

TF-AOP-015 Response Production Operations IHT Sweep (SWIHD Survey 24-00070)  
DRI Monitoring in 241-AW Farm for the morning of 01/03/2024 (SWIHD Survey 24-00086)

All Direct Read Instrumentation (DRI) readings for VOC and Ammonia were below the associated Action Levels.

**Additional Information:**

Weather conditions reported at 1100 hours on 01/03/2024, obtained from the Hanford Meteorological Station #6 indicated the following:

- Temperature: 40 degrees Fahrenheit
- Relative Humidity: 84%
- Wind Direction: Southwest
- Wind Speed: 2 miles per hour
- Pressure: 29.346 in/Hg

Review of the Data Fusion and Advisor System (DFAS) application, powered by SmartSite™, Weather Details and Chemical Details dashboards around the reported time of the event indicate the cause of the Personal Ammonia Monitor alarm is unlikely to be from Tank Farm Exhauster emissions based on:

01/03/2024 11:00 AM - Sensor at 600-WXSTA-021:

- Wind Speed: 3.0 mph
- Wind Direction: 198.9° SSW
- Mixing Height: 600 feet above grade
- Stability Class: D (neutral conditions)

01/03/2024 11:00 AM - Vapor Monitoring Data System (VMDS) ammonia readings:

- POR 518: 2.978 ppm ammonia
- POR 519: 0.767 ppm ammonia
- AN Stack: 21.572 ppm ammonia
- AW Stack: 0 ppm ammonia
- POR 126: 0 ppm ammonia
- POR 127: 31.631 ppm ammonia
- 702 AZ: 12.619 ppm ammonia
- AP Stack: I/O Timeout

**Recommendations/Conclusions:**

**Conclusions:**

On the day of the alarming event, workers exited the farm at approximately 10:40 AM and entered the change tent. Worker reported that when doffing equipment in the change tent, the worker's mask was placed over the Personal Ammonia Monitor. According to the datalog, at 10:50 AM after the worker entered the change tent, the readings slowly increased until alarming at 6 ppm. Then once discovered by the RCT surveying equipment, who then removed the mask from over the PAM, the readings immediately dissipated back to 0 ppm. Total alarm time was 29 seconds. While the PAM was covered by the mask, it is evident that the sensor became blocked and was unable to accurately monitor the air concentration. Once the obstruction (i.e., the mask) was removed and the sensor was able to resume monitoring air concentrations representative of personnel exposure.

At the time of the alarming event, there were several other Personal Ammonia Monitors on the survey table, none of which had an alarm event. In accordance with TF-AOP-015 "Response to Personal Ammonia Monitor Alarm" (current revision) procedure: "When personal ammonia monitor fault conditions (See Table 1) are evident, occur in a location not likely to be impacted by tank farm

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**INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)**

**Recommendations/Conclusions:**

vapors (i.e., general purpose areas), or alternate monitoring (for example, MultiRAE) in the same space indicates conditions are below alarm set points." In addition, TF-OPS-IHT-041 "Preparation and Field Use of the Ventis Pro5 Personal Ammonia Monitor" (current revision) specifies Response Actions in 5.3.2 "Exit of the affected area is determined by cleared alarm and/or additional PAM not alarming." In accordance with the procedures associated with the use of Ventis Pro5, having multiple Personal Ammonia Monitors in the area that are not alarming would indicate that conditions are below alarm set points.

In addition to the lack of resulting ammonia data on the nearby devices, there were no reports of odors associated with Ammonia- typically a pungent odor detected at low concentrations. Workers were not wearing Respiratory Protective Equipment at the time the device alarmed and would likely be aware of Ammonia concentrations approaching 6 parts per million.

American Conference of Governmental Industrial Hygienists (ACGIH) adopted value for Time Weighted Average (TWA) Threshold Limit Value (TLV) is 25 ppm. Therefore, the response level of 6 ppm for Ammonia is a conservative measure that was established to be an indication of changing conditions of chemical concentrations associated with tank chemical vapor and not as a measure of personnel ammonia exposure. Review of the stack emissions using the DFAS application, field readings, weather details, and chemical details dashboards for the reported time of the event indicate the cause of the PAM alarm is unlikely to be from Tank Farm exhauster emissions. Monitoring via direct reading instrumentation and observations made by the IHTs during the event response demonstrated conditions which caused the alarm were no longer present, allowing the exit of TF-AOP-015.

**Recommendations:**

The delay of communication of the alarming event to the Shift Office stemmed from a confusion on the response per procedure. The Field work supervisor communicated that the alarm did not meet the AOP-015 entering criteria as there was the presence of several other PAMs not alarming (i.e., alternate monitoring), and noted that the PAM was not being worn by the individual at the time of alarm. The Shift Manager commented that the current revision of the TF-AOP-015 procedure does not note alternate monitoring to include other PAMs specifically. My recommendation would be to initiate a Procedure Change to add the use of Personal Ammonia Monitors in the immediate area to the definition of alternate monitoring.

**Other:**

All involved workers were offered and declined precautionary medical surveillance. Six workers in the change tent at the time of the alarm filled out an Odor/Vapor Response Card and there were no reports of Odors nor Symptoms.  
See Event Investigation Report (EIR): 2024-001 and Action Request (AR): WRPS-AR-2024-0664 for additional information.

**Industrial Hygienist:**

\_\_\_\_\_  
*Print First and Last Name*

\_\_\_\_\_  
*Signature / Date*

**Industrial Hygiene Level 2 Manager:**

\_\_\_\_\_  
*Print First and Last Name*

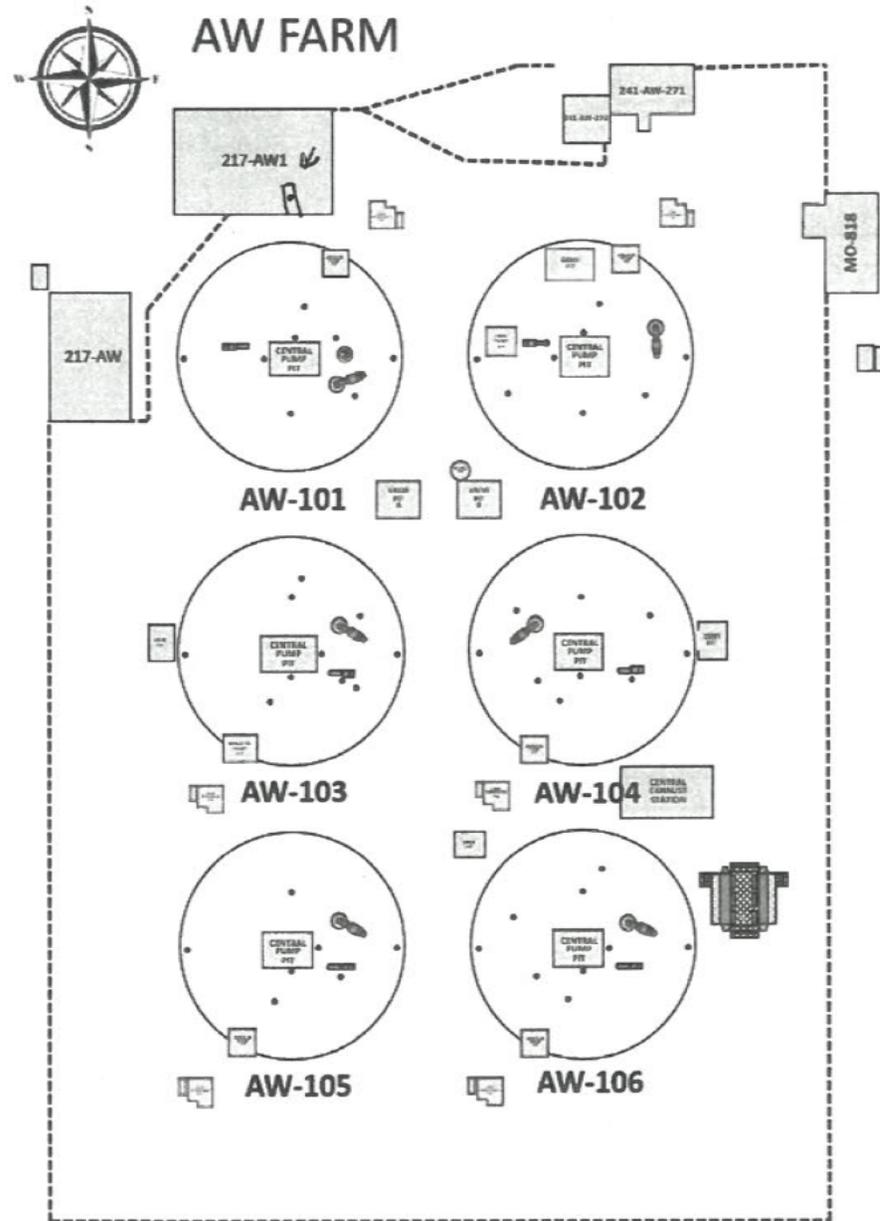
\_\_\_\_\_  
*Signature / Date*

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### 1. Complete below information and map (Page 1).

• Date and time of event: 1/3/27

• Check Applicable:

Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_

• Your name and the work you were performing:

; Material Clearance within 241AW1

• Other Work Underway? Describe:

None

• Location of event (mark area on map and wind direction):

241AW1

• Name(s) of others in or near the affected area:



• Was Industrial Hygiene present, who?

No

• Describe the odor: N/A

Sweet     Sour     Smoky     Septic/Sewer     Musty     Rotten  
 Metallic     Onion     Earthy     Ammonia     Citrus     Solvent  
 Other (describe): \_\_\_\_\_

• Is source known/likely? Describe:

Unsure

• Your symptoms?  None

Headache     Dizziness     Nausea     Cough     Fatigue  
 Weakness     Sore Throat     Difficulty Breathing     Eye Irritation     Rash  
 Itch     Tingling     Numbness     Taste  
 Other (describe): \_\_\_\_\_

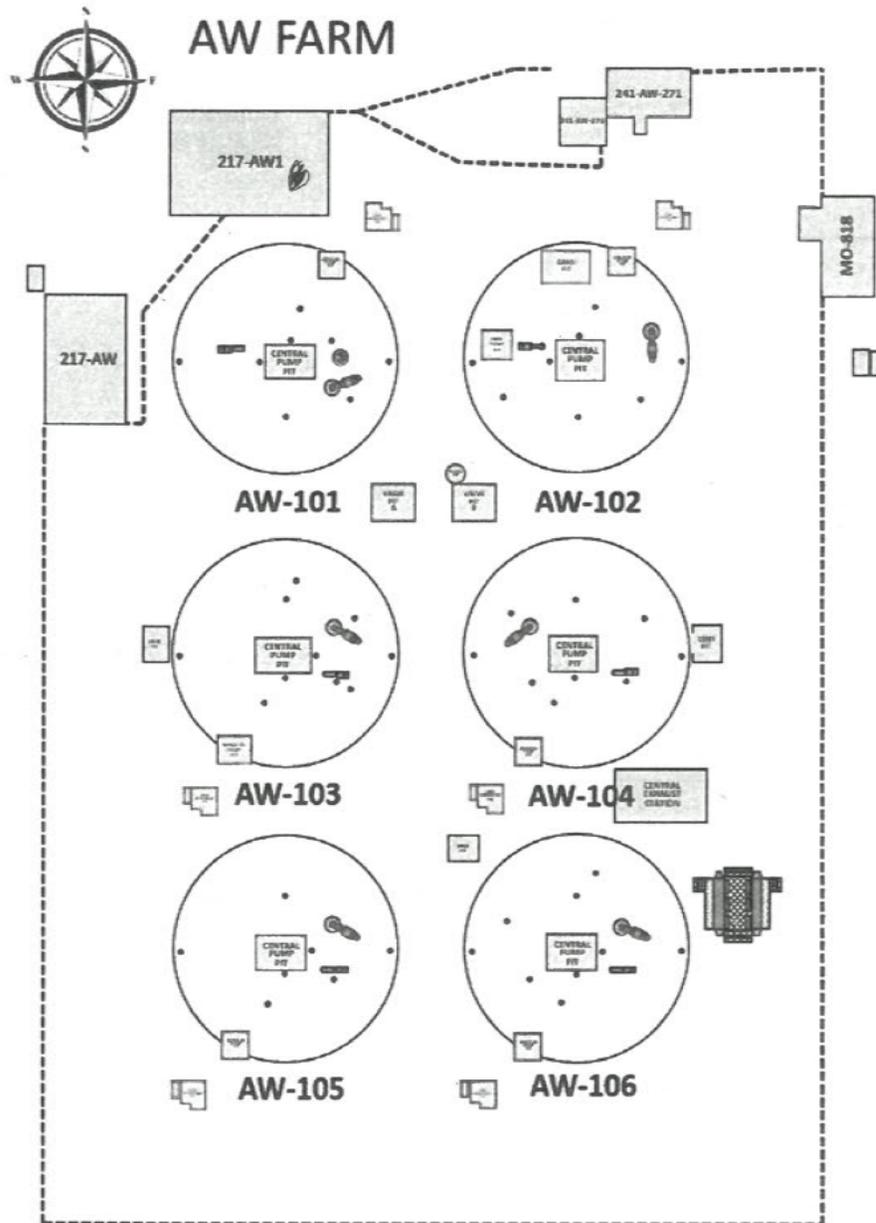
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM.  
If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### 1. Complete below information and map (Page 1).

• Date and time of event: 1/3/24 approx. 11:00 am

• Check Applicable:

Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_

• Your name and the work you were performing:

[REDACTED], Step off pad clearance surveys

• Other Work Underway? Describe:

people exiting AW farm

• Location of event (mark area on map and wind direction):

217 AW 1

• Name(s) of others in or near the affected area:

[REDACTED]

• Was Industrial Hygiene present, who?

N/A

• Describe the odor:

Sweet     Sour     Smoky     Septic/Sewer     Musty ?     Rotten  
 Metallic     Onion     Earthy     Ammonia     Citrus     Solvent  
 Other (describe): N/A

• Is source known/likely? Describe:

NO

• Your symptoms?  None

Headache     Dizziness     Nausea     Cough     Fatigue  
 Weakness     Sore Throat     Difficulty Breathing     Eye Irritation     Rash  
 Itch     Tingling     Numbness     Taste  
 Other (describe): \_\_\_\_\_

### 2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM.

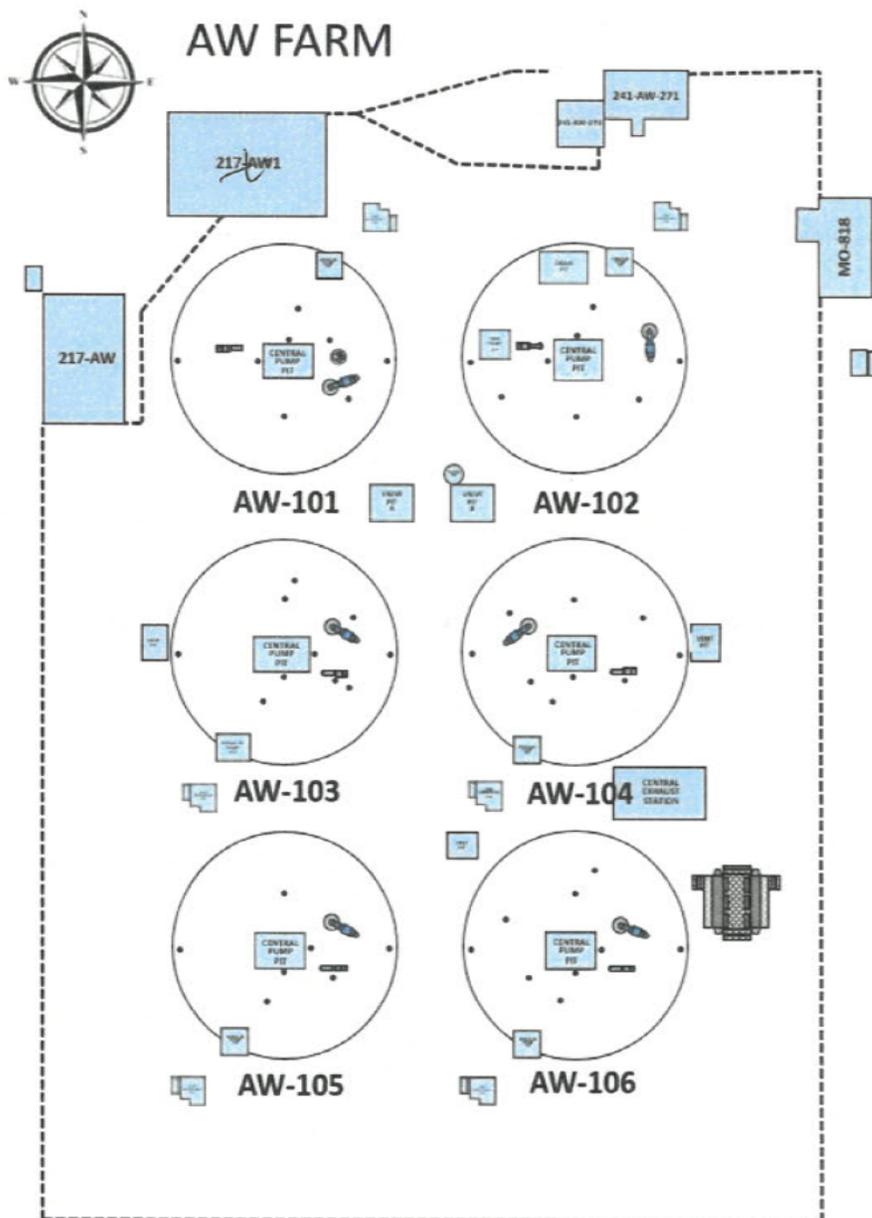
If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
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3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### 1. Complete below information and map (Page 1).

- Date and time of event: 1160
- Check Applicable:  
 Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_
- Your name and the work you were performing:  
[REDACTED] - PCT performing radiological surveys at SOP
- Other Work Underway? Describe:  
NA
- Location of event (mark area on map and wind direction):  
241 Aw 1 tent
- Name(s) of others in or near the affected area:  
[REDACTED]
- Was Industrial Hygiene present, who?  
NO
- Describe the odor:  

<input type="checkbox"/> Sweet	<input type="checkbox"/> Sour	<input type="checkbox"/> Smoky	<input type="checkbox"/> Septic/Sewer	<input type="checkbox"/> Musty	<input type="checkbox"/> Rotten
<input type="checkbox"/> Metallic	<input type="checkbox"/> Onion	<input type="checkbox"/> Earthy	<input type="checkbox"/> Ammonia	<input type="checkbox"/> Citrus	<input type="checkbox"/> Solvent
<input checked="" type="checkbox"/> Other (describe): <u>NO odor</u>					
- Is source known/likely? Describe:  
unknown
- Your symptoms?  None  

<input type="checkbox"/> Headache	<input type="checkbox"/> Dizziness	<input type="checkbox"/> Nausea	<input type="checkbox"/> Cough	<input type="checkbox"/> Fatigue
<input type="checkbox"/> Weakness	<input type="checkbox"/> Sore Throat	<input type="checkbox"/> Difficulty Breathing	<input type="checkbox"/> Eye Irritation	<input type="checkbox"/> Rash
<input type="checkbox"/> Itch	<input type="checkbox"/> Tingling	<input type="checkbox"/> Numbness	<input type="checkbox"/> Taste	
<input type="checkbox"/> Other (describe):				

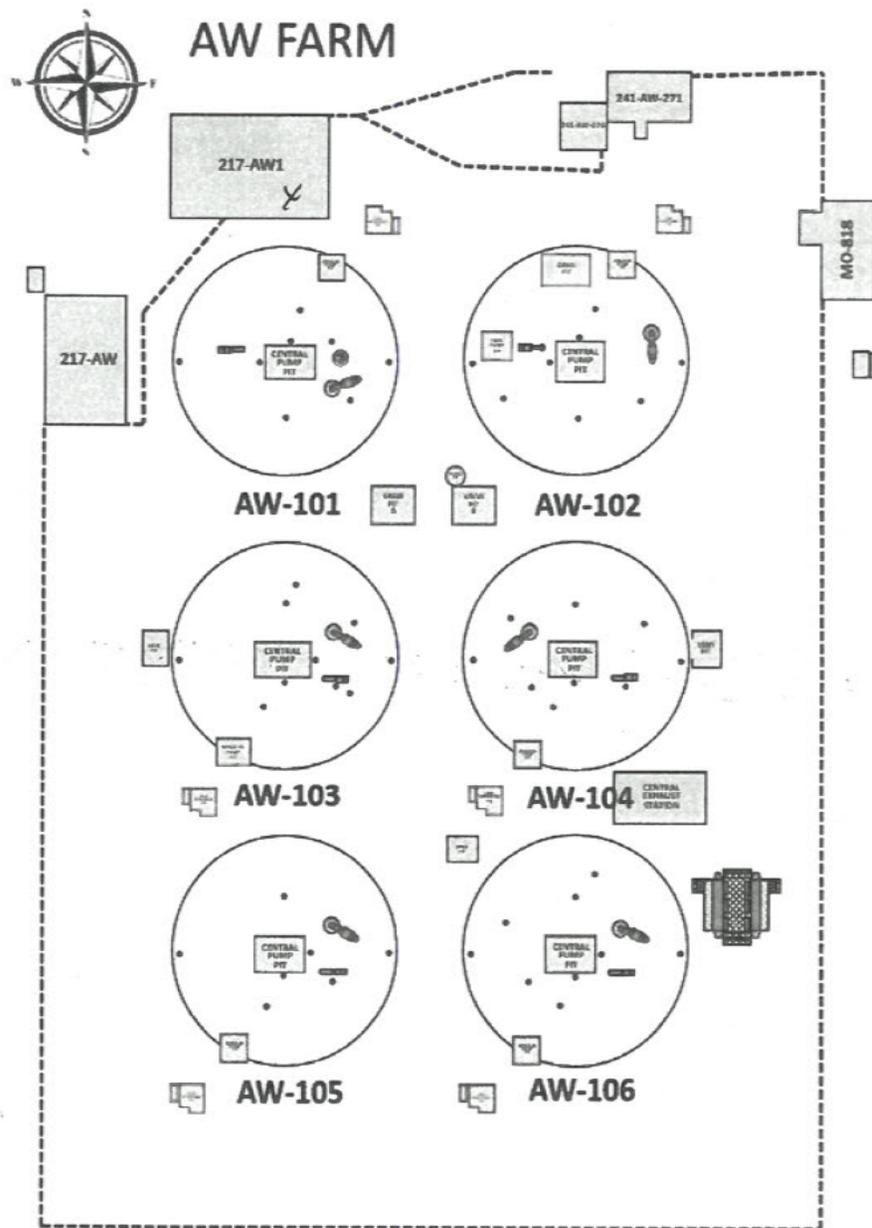
**2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.**

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### 1. Complete below information and map (Page 1).

• Date and time of event: 01-03-24

• Check Applicable:

Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_

• Your name and the work you were performing:

217 AW 1 change Trailer

• Other Work Underway? Describe:

NA

• Location of event (mark area on map and wind direction):

217 AW 1

• Name(s) of others in or near the affected area:

• Was Industrial Hygiene present, who?

NA

• Describe the odor:

NA

Sweet     Sour     Smoky     Septic/Sewer     Musty     Rotten  
 Metallic     Onion     Earthy     Ammonia     Citrus     Solvent  
 Other (describe): \_\_\_\_\_

• Is source known/likely? Describe:

NA

• Your symptoms?  None

Headache     Dizziness     Nausea     Cough     Fatigue  
 Weakness     Sore Throat     Difficulty Breathing     Eye Irritation     Rash  
 Itch     Tingling     Numbness     Taste  
 Other (describe): \_\_\_\_\_

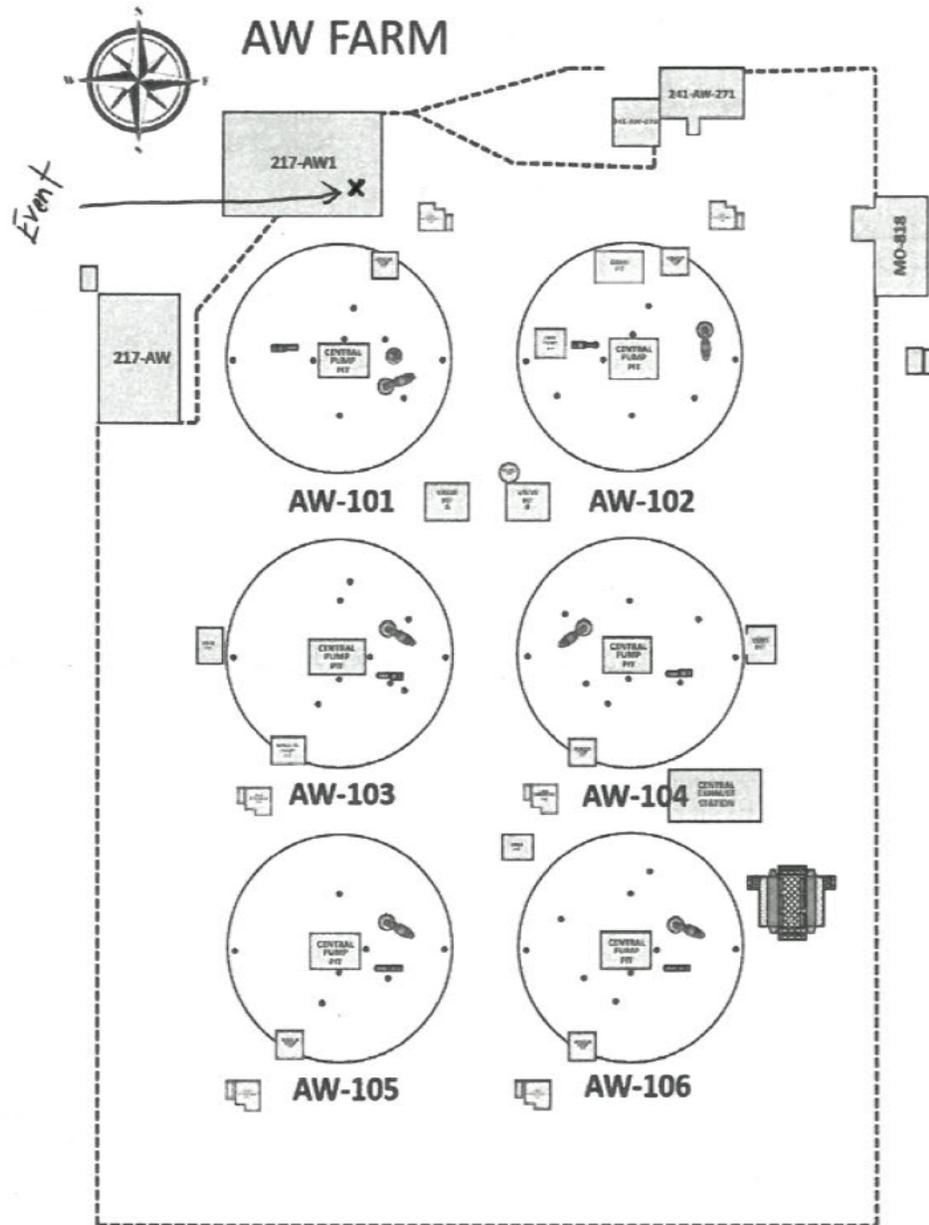
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### 1. Complete below information and map (Page 1).

• Date and time of event: 1-3-24 around 11am

• Check Applicable:

Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_

• Your name and the work you were performing:

Step off pool surveys

• Other Work Underway? Describe:

People gathering equipment

• Location of event (mark area on map and wind direction):

217 AW1 trailer

• Name(s) of others in or near the affected area:

• Was industrial hygiene present, who?

No

• Describe the odor:

Sweet     Sour     Smoky     Septic/Sewer     Musty     Rotten  
 Metallic     Onion     Earthy     Ammonia     Citrus     Solvent  
 Other (describe): \_\_\_\_\_

• Is source known/likely? Describe: No odor

• Your symptoms?  None

Headache     Dizziness     Nausea     Cough     Fatigue  
 Weakness     Sore Throat     Difficulty Breathing     Eye Irritation     Rash  
 Itch     Tingling     Numbness     Taste  
 Other (describe): \_\_\_\_\_

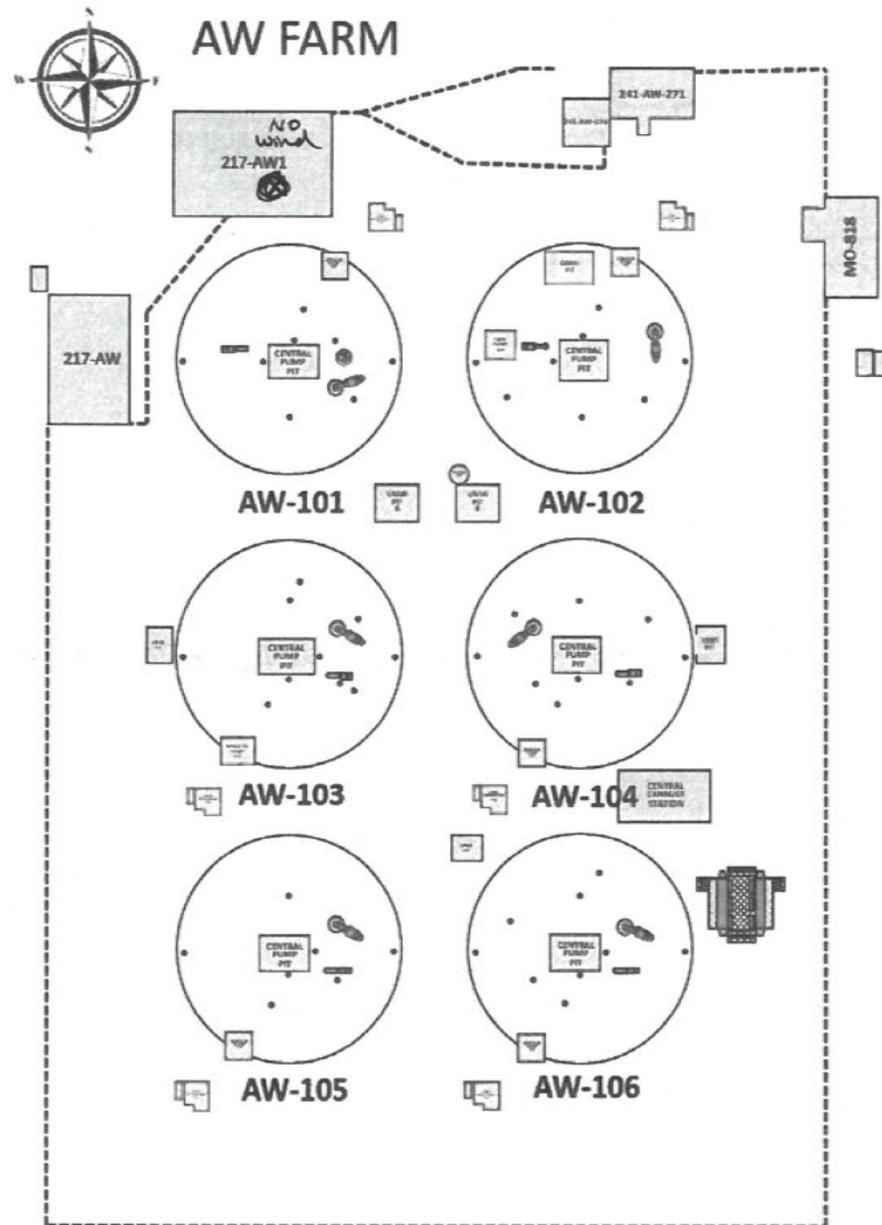
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

### Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
  - a. Approximate location, see map at right;
  - b. Wind direction, speed and description, such as stable or gusty wind;
  - c. Environmental conditions, such as hot, cold, windy, rainy;
  - d. Other work or contractors in the area;
  - e. Anything else you think is relevant.
4. Provide the completed card to your Supervisor\*, Industrial Hygiene\*, Union Safety Representative\* or the CSM.

\* If received by Supervisor, IH, or Union Safety Representative, the Supervisor/IH/ Union-SR will ensure card it is provided to the CSM.



## ODOR/VAPOR RESPONSE CARD - 241 AW FARM

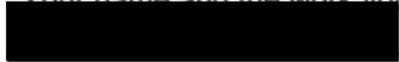
### 1. Complete below information and map (Page 1).

• Date and time of event: 1/3/24 1100

• Check Applicable:

Odor     Ammonia Alarm (6 ppm)     Ammonia Alarm (12 ppm)     Alarm (other - describe): \_\_\_\_\_

• Your name and the work you were performing:

 Clearance Surveys

• Other Work Underway? Describe:

N/A

• Location of event (mark area on map and wind direction):

217AW1

• Name(s) of others in or near the affected area:



• Was Industrial Hygiene present, who?

N/A

• Describe the odor:

Sweet     Sour     Smoky     Septic/Sewer     Musty     Rotten  
 Metallic     Onion     Earthy     Ammonia     Citrus     Solvent  
 Other (describe): \_\_\_\_\_

• Is source known/likely? Describe:

NO

• Your symptoms?  None

Headache     Dizziness     Nausea     Cough     Fatigue  
 Weakness     Sore Throat     Difficulty Breathing     Eye Irritation     Rash  
 Itch     Tingling     Numbness     Taste  
 Other (describe): \_\_\_\_\_

2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.