Hanford Tank Waste Operations & Closure (H2C)

EVENT REPORT FORM

1. Project: Retrieval and Closure Construction **2. Report Date:** 05/26/2026

3. Title: TF-AOP-015 in A-Farm

4. Investigation Report Number *(if applicable)*: EIR-2026-035 **5. Revision:** 0

6. Responsible Manager: [redacted]

7. Event Investigator: [redacted]

8. Area/Building/Location: 200 East/A Farm/Near A-103 Riser 12

9. Date and Approximate Time of Event: Date: 05/06/2026 **Time: *(military)*** 1415 hours

10. Associated Action Request (AR) Number: ITDC-AR-2026-1820

11. Occurrence Report Number *(if applicable)*: N/A

12. Event Learning Meeting Held: Yes [ ] or No [x] **Date:** N/A **Time: *(military)*** N/A

13. Brief Summary of Event: What Happened?

At approximately 1415 hours on 05/06/2026, an H2C worker was performing a walkdown in A-Farm when their Personal Ammonia Monitor (PAM) alarmed at 7 parts per million (ppm) near A-103 Riser 12.

There was no other works in the vicinity at the time of the PAM alarm. At the time of the event, the worker was wearing Full Face Air-Purifying Respirators with Gas/Vapor cartridges (MSA GME Chemical Vapor). No odors or symptoms were reported, and the involved worker declined precautionary medical evaluation.

14. What *Should Have* Happened?

The PAM should have not indicated an increased ammonia concentrations or activated the action-level alarm (≥12 ppm ammonia) unless changing tank vapors conditions were present (which includes the COPC sentinel indicator of ammonia).

15. Key Facts from Investigation:

- At the time the PAM began to alarm at 7 ppm the worker was near the A-103 Riser 12 performing a walkdown. At 1455 hours, Central Shift Manager (CSM) entered TF-AOP-015, *Response to Personal Ammonia Monitor Alarm,* A-Farm was evacuated and access to A-Farm was restricted. At 1546 hours, Industrial Hygiene Technicians (IHTs) performed field response actions per IHSP-PROG-MULTI-TF-AOP-15, *Response to Personal Ammonia Monitor Alarm.* At 1552 hours, access was restored and TF-AOP-015 was exited for A-farm. IHTs field response actions did not indicate further actions were necessary in regard to worker safety and health.

- To summarize the conclusions of Industrial Hygiene Event Investigation Report IHIR-00136, "*AOP-015 in A-farm*": The nearest active exhauster in the area is found within A Farm. The Vapor Detection Monitoring System (VMDS) reports that at 1415 hours on 05/06/2026 stack readings for ammonia in POR519 were <1 ppm. Furthermore, the review of VMDS data concludes that there was very low potential for ground level exposure from exhausters. Based on the event investigation and reviewing environmental conditions related to worker location and available monitoring data when the events occurred, it is unlikely that the PAM alarm was caused by Tank Farm vapors.

- To summarize the conclusions of Industrial Hygiene Event Equipment Report IHIR-00009, "AOP-015 A Farm": A detailed physical evaluation of the PAM was performed to identify any mechanical damage, component degradation, or configuration faults that could impact device functionality. No physical defects or configuration errors were found. During quality control testing, the alarm condition was successfully reproduced when the sample inlet was intentionally obstructed in a controlled clean-air environment, resulting in a measured concentration of 6 ppm. Additionally, the PAM displayed a measured concentration of 4 ppm in the same clean-air environment when subjected to minor mechanical impacts simulating a drop or collision with a solid surface. These responses deviate from expected performance characteristics and suggest that the sensor may be more susceptible than normal. As a precautionary measure, the instrument should be sent to Industrial Scientific for further evaluation. This action will be documented in ITDC-CR-2026-1820.

16. Impact to Facility: *(Caused by the event or a description of known consequences)*:
Due to access restrictions at A-farm an impact to operational capabilities occurred until response actions could be completed and access restored.

17. Problem Statement ***(Who, What, Where, When, and Consequence/Impact)***:
N/A

18. Event Causal Matrix Summary:
N/A

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR)

Event Title:	IHIR Number:
AOP-015 in A-farm	IHIR-00136
	IHEI Number: IHEI-0009

Date:	Time:	Location:
05/06/2026	1415	A-Farm

Event Summary and Timeline:

Ventis Pro alarm greater than 6ppm ammonia was activated on one worker in A-farm. At the time of the event the worker was performing a walkdown. The worker notified the CSM of PAM alarm near A-103 Riser 12. AOP-015 response actions were taken as follows:

1439: PO IH1, PO IH2, PO IH L3 Manager arrive CSO. Briefed by CSM: PAM alarm in A-farm near riser 12.
1442: PO IH3 arrives at CSO
1444: Weather Station #6 met data obtained.
- Temperature: 89F
- Humidity: 16%
- Wind direction: W
- Wind speed: 11mph
- Barometric pressure: 29.120 decreasing
- DFAS mixing height: 1500m

1449: VMDS readings:
- POR518 0ppm
- POR519 0.263ppm
- AN 0ppm
- AW 0ppm
- 702AZ 3.634ppm
- AP 9.9ppm

1453: Confirmed PAM peak reading, 7ppm
1455: CSM contacts DOE Fac Rep
1459: RWO IH 1&2 arrive at CSO
1500: CSM called affected worker. Confirmed no symptoms. Denied medical.
1501: PO IH requested IHIR
1502: PO IH L3 notified S&H manager L1 & L2
1504: IHIR assigned IHIR-00136.
1513: RWO IH briefs IHT to IHSP/RPF and deployed to field
1522: EIR assigned: 2026-035
1529: CSM contacts Adam Manely/ Jackie Winters assigned as event investigator
1534: PO IH L3 confirmed affected worker had NOT completed an OVRC and requested completion.
1546: IHT calls CSM to clarify access into areas within A-farm with excavation boundaries/postings. CSM confirmed with FWS from American Electric the area has been backfilled and due to the AOP postings not removed.
1552: PO IH3 calls to report IHT area monitoring is complete in A-farm with no detectable readings. IHT is in process of exiting the farm and will post instrumentation.
1619: IHT reports to IHT supervisor that instrumentation passed post testing. Notified CSM.

Sampling/Monitoring Results:

Field Response Area Readings:
- Ammonia: less than detectable (<1 ppm)

The responding IHT entered A Farm to perform DRI monitoring with a MultiRAE Pro. Monitoring was performed around A-103 where the PAM alarmed for potential sources of ammonia and/or tank vapors. DRI monitoring and observations made by the IHT demonstrated that no ongoing conditions which could result in PAM alarm existed at the time.

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Sampling/Monitoring Results:

PAM Datalog:
Review of the datalog reported that there were measurable readings for approximately one minute, with a maximum of 7 ppm. PAM data is recorded in 10 second increments, so it did not capture the actual peak reading of 7 ppm that occurred outside of the 10 second interval reading on the datalog.

SWIHD References:

26-02778 AOP-015 Response in A Farm

Additional Information:

At the time of the PAM alarm, the worker whose PAM alarmed was wearing respiratory protection equipment in accordance with the Management Directed Respiratory Protection Form, "MDRPP-PLN-173" Task 1: Full Face Air Purifying Respirator (FF-APR) with Gas/Vapor cartridges (MSA GME Chemical Vapor).

The nearest active exhauster in the area is found within A Farm. The Vapor Detection Monitoring System (VMDS) reports that at 1415 on 5/6/2026 stack readings for ammonia in POR519 were <1 ppm. The event occurred near the exhauster.

Review of DFAS at the approximate time of the PAM alarm event on 5/6/2026 @1415:

- Wind Speed: 7 mph
- Wind Direction: West
- Mixing Height: 1500 m above grade
- Stability Class: A (extremely unstable conditions)

Exhauster stacks have enhanced monitoring, VMDS, that can be used to detect elevated readings and provide further warnings of unexpected conditions. As a more conservative approach, Memo WRPS-1904672.1, TANK FARM EXHAUST STACK CONCENTRATION ALARM/ACTION LEVELS FOR AMMONIA establishes stack alarm/action set points for Tank Farm Exhausters. The alarm/action set points are based on a linear extrapolation of the Quantitative Risk Assessment model prediction resulting in various ammonia concentrations at an unspecified ground receptor.

241-A:

- High Alarm was conservatively established at 160 ppm Ammonia
  - Ammonia concentration of 2.5 ppm at an unspecified ground receptor
- High High Alarm was conservatively established at 320 ppm Ammonia
  - Ammonia concentration of 5 ppm at an unspecified ground receptor

Furthermore, the review of VMDS data concludes that there was very low potential for ground level exposure from exhausters.

Recommendations/Conclusions:

Conclusions:
Based on the event investigation and reviewing environmental conditions related to worker location and available monitoring data when the events occurred, it is unlikely that the PAM alarm was caused by Tank Farm vapors. Thus, the PAM that alarmed has been pulled from the field and is undergoing testing, as contained in IHEI-0009.

Others:

The worker did not report any symptoms and was offered and declined medical surveillance.

Associated Documents:

iCAS Number: N/A EIR Number: 2026-035

[redacted]

[redacted]

EVENT REPORT FORM

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI)

Event Title: AOP-015 A Farm	IHEI Number:00009
	IHIR Number:00136

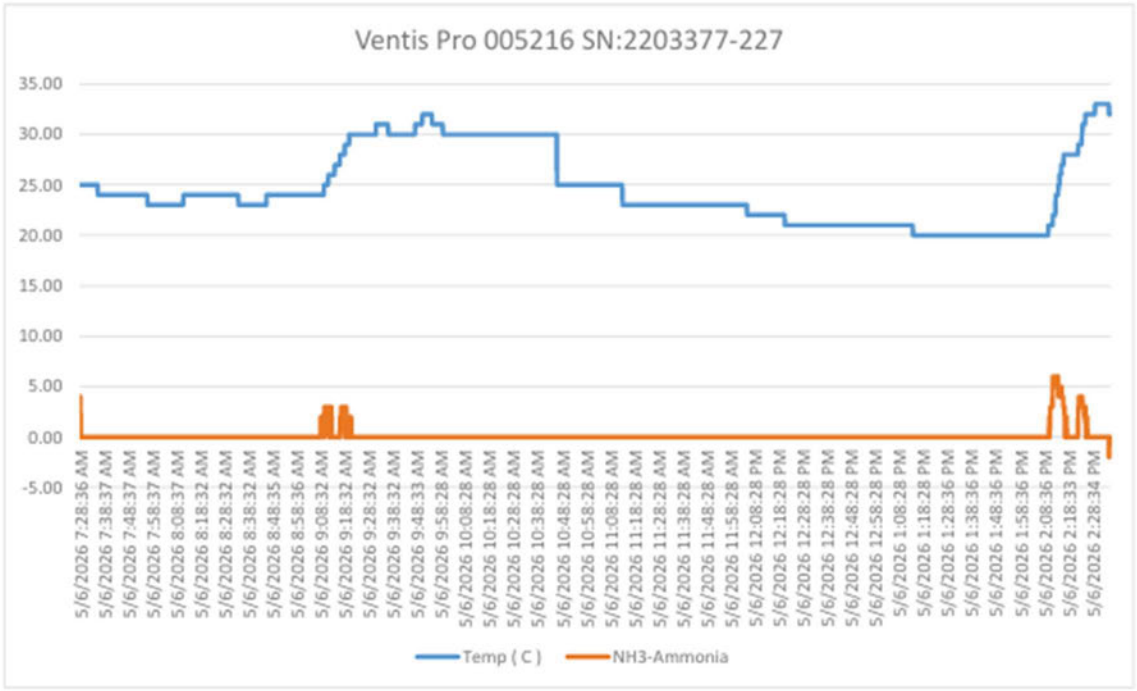
Date: 5/6/2026	Time: 2:13 PM	Location: A Farm A-103 Riser 12

Device Information:

IH ID: 005216 SN: 2203377-227

Last Calibration: 5/6/2026 Result: Passed	Last Bump: 5/5/2026 Result: Passed

Event Data Log:



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A-6008-942 (REV 2)

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI) (Continued)

Peak Readings:

Time	Duration	Peak Reading	Location
5/6/2026 2:12:03 PM	00:00:08	7	A-Farm
5/6/2026 2:12:17 PM	00:00:01	6	A-Farm
5/6/2026 2:12:19 PM	00:00:02	6	A-Farm
5/6/2026 2:12:28 PM	00:00:04	6	A-Farm
5/6/2026 2:12:53 PM	00:00:01	6	A-Farm
5/6/2026 2:12:55 PM	00:00:01	6	A-Farm
5/6/2026 2:13:03 PM	00:00:10	6	A-Farm
5/6/2026 2:13:14 PM	00:00:02	6	A-Farm
5/6/2026 2:13:18 PM	00:00:02	6	A-Farm
5/6/2026 2:13:21 PM	00:00:01	6	A-Farm
5/6/2026 2:13:25 PM	00:00:03	6	A-Farm
5/6/2026 2:13:34 PM	00:00:01	6	A-Farm
5/6/2026 2:13:37 PM	00:00:21	7	A-Farm
5/6/2026 2:14:03 PM	00:00:03	7	A-Farm
5/6/2026 2:14:07 PM	00:00:08	7	A-Farm
5/6/2026 2:15:03 PM	00:00:01	6	A-Farm

Recommendations/Conclusions:

A comprehensive assessment was undertaken to evaluate the operational performance of the Ventis Pro 5 instrument. This assessment included an in-depth review of the instrument's full span reserve, analysis of its alarm and data logs, examination of its calibration and bump test records and physical inspection.

The instrument successfully passed its most recent calibration on May 6th,2026 prior to field use. Additionally, the instrument passed its weekly bump test on May 5th, 2026.

An examination of the instrument's alarm log identified several alarm events with the highest peak recorded as 7ppm at 2:13 pm for a duration of twenty-one seconds. The instrument returned to 0ppm after each event.

The worker reported that they wore the instrument on the outside of their anticontamination clothing and did not cover the inlet. They stated that no other equipment was being operated during the walkdown.

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI) (Continued)

Recommendations/Conclusions:

A detailed physical evaluation of the Ventis Pro 5 was conducted to identify any mechanical damage, component degradation, or configuration faults affecting device functionality. No physical defects or configuration errors were observed. During quality control testing, the alarm condition was reproduced when the sample inlet was intentionally obstructed in a controlled clean-air environment. The instrument indicated a measured concentration of 6 ppm. Additionally, the ventis gave a measured concentration of 4 ppm in the same clean-air environment when the device was subjected to minor mechanical impacts designed to simulate a drop event or collision with a solid surface. These behaviors deviate from the expected performance characteristics suggesting the sensor may be more susceptible than normal.

It is recommended that the instrument be sent to Industrial Scientific for service, inspection and sensor replacement.

Other: NA

Associated Reports:
iCAS Number: NA PAM AIC Number: 005216 2026-05-06

[redacted]

26. Signatures

Prepared By: *(Event Investigator)*

[redacted]

Name (First, Middle Initial, Last)

Responsible Manager Approval:

[redacted]

Name (First, Middle Initial, Last)

[redacted]

Signature / Date

CAS Manager Approval:

[redacted]

Name (First, Middle Initial, Last)

[redacted]

Signature / Date

ODOR/VAPOR RESPONSE CARD - 242 A

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

- Date and time of event: 05/06/26 14:15
- Check Applicable:
  ☐ Odor ☑ Ammonia Alarm *(6 ppm)* ☐ Ammonia Alarm *(12 ppm)* ☐ Alarm *(other - describe)*:
- Your name and the work you were performing: [redacted] walkdown A-Farm
- Other Work Underway? Describe: not at this time.
- Location of event *(mark area on map and wind direction)*: A-103 Riser 12
- Name(s) of others in or near the affected area: NA
- Was Industrial Hygiene present, who? [redacted]
- Describe the odor:
  ☐ Sweet ☐ Sour ☐ Smoky ☐ Septic/Sewer ☐ Musty ☐ Rotten
  ☐ Metallic ☐ Onion ☐ Earthy ☐ Ammonia ☐ Citrus ☐ Solvent
  ☐ Other *(describe)*: NA
- Is source known/likely? Describe: Unknown
- Your symptoms? ☑ None
  ☐ Headache ☐ Dizziness ☐ Nausea ☐ Cough ☐ Fatigue
  ☐ Weakness ☐ Sore Throat ☐ Difficulty Breathing ☐ Eye Irritation ☐ Rash
  ☐ Itch ☐ Tingling ☐ Numbness ☐ Taste
  ☐ Other *(describe)*:

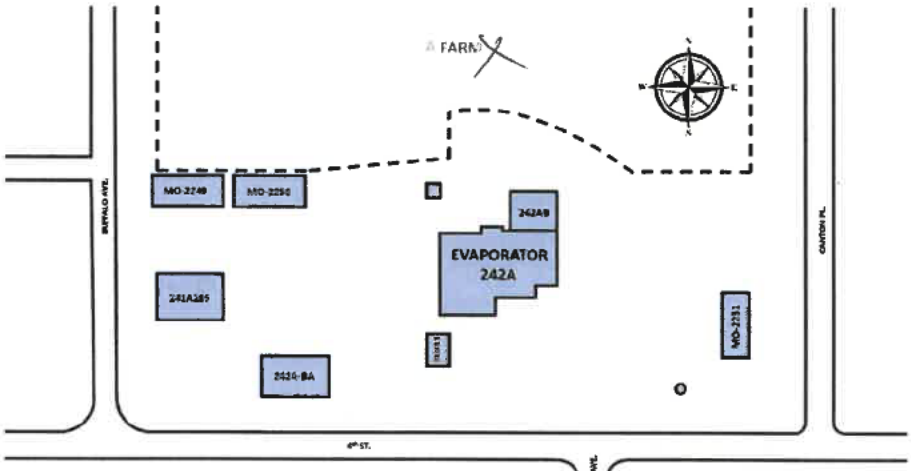
2. Provide this completed card *(Page 1 & 2)* to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM.
If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 242 A

Instructions:

1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at (509) 373-2689.
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.



Walk down near Riser 012 when Vents reached 6PPm. Proceeded to exit Farm. Potential faulty equipment deemed by IHT.