Hanford Tank Waste Operations & Closure (H2C)

EVENT REPORT FORM

1. Project: Tank Farm Projects **2. Report Date:** 06/11/2026

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

4. Investigation Report Number *(if applicable)*: EIR-2026-044 **5. Revision:** 0

6. Responsible Manager: [redacted]

7. Event Investigator: [redacted]

8. Area/Building/Location: 200E/A-Farm/Near A-103

9. Date and Approximate Time of Event: Date: 05/28/2026 **Time: *(military)*** 1250

10. Associated Action Request (AR) Number: ITDC-AR-2026-1917

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 1250 hours on 05/28/2026, four American Electric Incorporated (AEI) electricians were in A-Farm at A-103 when one of their Personal Ammonia Monitors (PAM) alarmed at 6 parts per million (ppm).

At the time of the alarm the electricians were all wearing full-face air-purifying respirators with gas/vapor cartridges (MSA GME Chemical Vapor). No odors or symptoms were reported and all involved workers declined precautionary medical evaluation.

14. What *Should Have* Happened?

The PAM should not have indicated increased ammonia concentrations or activated the action-level (≥12 ppm ammonia) unless changing tank vapor conditions were present (which includes the COPC Sentinel indicator for ammonia).

15. Key Facts from Investigation:

The responding Industrial Hygiene Technician (IHT) entered A-Farm to perform Direct Reading Instrument (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.

To summarize the conclusions of Industrial Hygiene Investigation Report (IHIR) IHIR-00138, "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 1250 hours on 5/28/2026 stack readings for ammonia in POR519 were <1 ppm. The event occurred just southeast of the exhauster. Furthermore, the review of VMDS data concludes that there was very low potential for ground level exposure from exhausters. Based on 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.

From the Industrial Hygiene Equipment Investigation (IHEI) IHEI-00010, "AOP-15 Response at 241-A Farm": 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. This behavior deviates from the expected performance characteristics suggesting the sensor may be more susceptible than normal. The PAM unit has been taken out of service.

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

19. See IHIR-00138, "AOP-015 in A-farm" on next page(s):

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR)

Event Title:	IHIR Number:
AOP-015 in A-farm	IHIR-00138
	IHEI Number: IHEI-00010

Date:	Time:	Location:
05/28/2026	1250	A-Farm

Event Summary and Timeline:

Ventis Pro alarm at 6ppm ammonia was activated on one worker in A-farm. At the time of the event the worker was performing electrical work. The CSM was notified of PAM alarm at A-103. AOP-015 response actions were taken as follows:

1323: DFLAW IH and PO IH Manager arrive at CSO
1323: DFAS:
- Stability Class: A (extremely unstable conditions)
- Wind direction: 243
- Wind speed: 7mph
- DFAS mixing height: 1200m

1326: VMDS readings:
- POR519 0ppm
- AN 0ppm
- AW 0ppm
- 702AZ 3.125ppm
- AP 10.659ppm

1327: PO IH Manager requests IHT support and prep instruments
1328: CSM determines IHT has taken alarming PAM to PAM station for download
1331: PO IH Manager uses DSX to view alarming PAM datalog:
- Peak - 6ppm

1333: CSM notifies DOE Fac Rep of event details
1338: EIR number assigned, McKeever is Event Investigator assigned
1342: No symptoms reported, worker declined IHA evaluation
1343: RC IH arrives at CSO
1352: DFLAW IH briefs response actions
- RPE not required - <12ppm peak
- Sweep affected area
  - Fugitive emission sources
  - Upset conditions

1355: CSM requests OVRCs
1357: CSM contacts R/C radcon for RWP: TF-102
1400: PO shift IHT departs CSO to perform response actions
1414: Affected worker reports to CSO to complete OVRC
1427: IHT notifies CSM that readings are at or below background levels
1432: IHT confirms instrument passed post-function check
1433: Exit AOP-015

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.

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 within of the 10 second interval reading on the

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Sampling/Monitoring Results:
datalog.

SWIHD References:
26-03292 TF-AOP-015 Response at 241-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, "MDRPF-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 1250 on 5/28/2026 stack readings for ammonia in POR519 were <1 ppm. The event occurred just southeast of the exhauster.

Review of DFAS at the approximate time of the PAM alarm event on 5/28/2026 @1250:

- Wind Speed: 7 mph
- Wind Direction: 243
- Mixing Height: 1200 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-0010.

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

Associated Documents:
iCAS Number: N/A
EIR Number: 2026-044

Industrial Hygienist:
[redacted] *Print First and Last Name*
[redacted] *Signature / Date*

Industrial Hygiene Level 3 Manager
[redacted] *Print First and Last Name*
[redacted] *Signature / Date*

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Industrial Hygiene Level 2 Manager: [redacted]	[redacted]
Print First and Last Name	*Signature / Date*

20. See IHEI-00010, "AOP-15 Response at 241-A Farm" on next page(s):

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI)

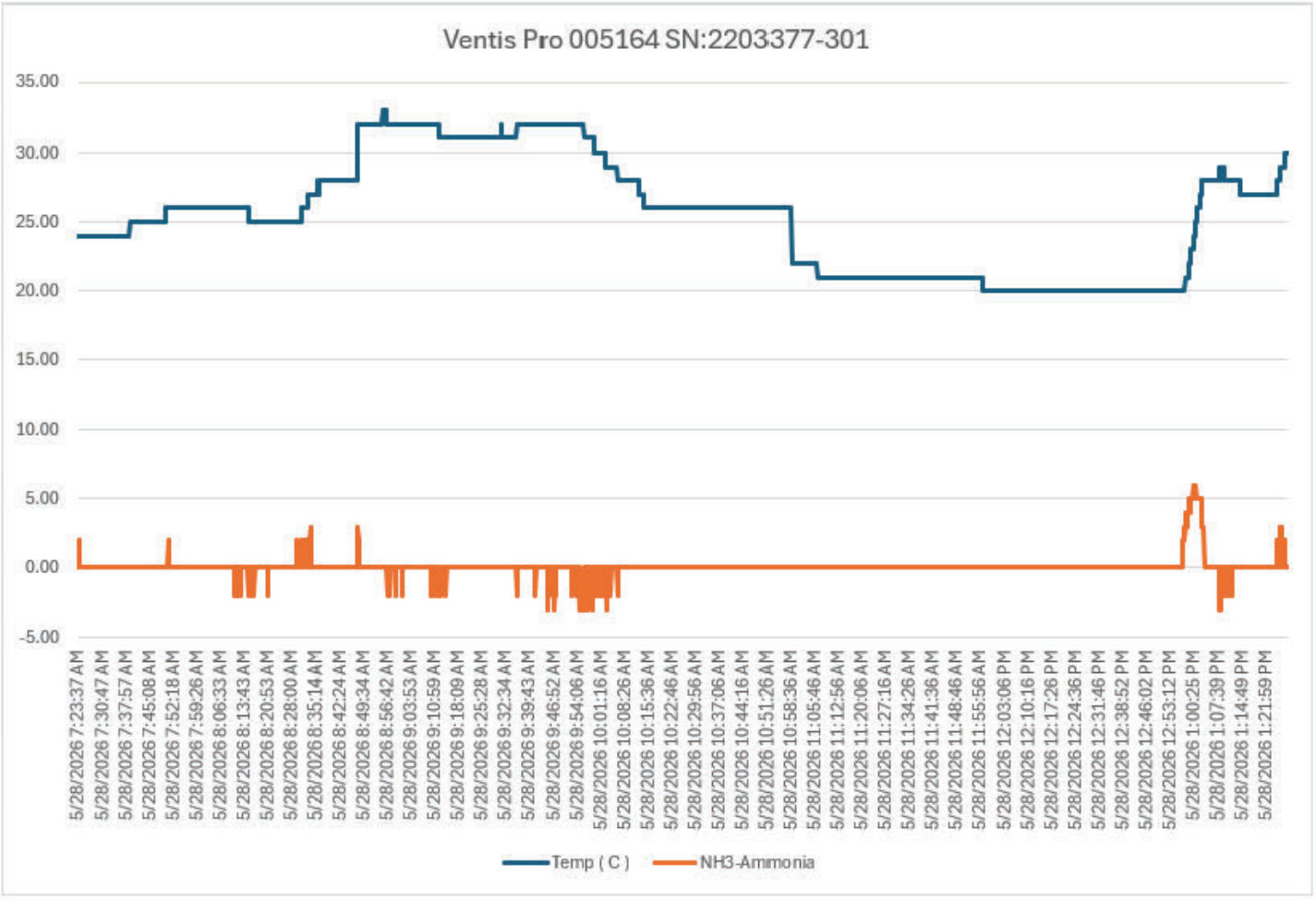
Event Title:	IHEI Number:
AOP-15 Response at 241-A Farm	00010
	IHIR Number: 00138

Date:	Time:	Location:
05/28/2026	13:10	North-East of A-103

Device Information:
IH ID: 005164
SN: 2203377-301

Last Calibration:	Last Bump:
5/14/2026 - Passed	5/26/2026 - Passed

Event Data Log:



Event Data Log:

Peak Readings:

Time	Duration	Peak Reading	Location
5/28/2026 12:59:27 PM	00:00:04	6	A-Farm
5/28/2026 1:00:14 PM	00:00:03	6	
5/28/2026 1:00:18 PM	00:00:01	6	
5/28/2026 1:00:21 PM	00:00:08	6	A-Farm
5/28/2026 1:00:31 PM	00:00:01	6	A-Farm
5/28/2026 1:00:34 PM	00:00:01	6	A-Farm
5/28/2026 1:00:42 PM	00:00:12	7	A-Farm
5/28/2026 1:01:11 PM	00:00:06	7	A-Farm
5/28/2026 1:01:39 PM	00:00:07	6	A-Farm
5/28/2026 1:01:59 PM	00:00:01	6	A-Farm
5/28/2026 1:02:04 PM	00:00:04	6	A-Farm
5/28/2026 1:02:18 PM	00:00:01	6	A-Farm
5/28/2026 1:02:20 PM	00:00:05	6	A-Farm
5/28/2026 1:02:52 PM	00:00:06	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 14th,2026 prior to field use. Additionally, the instrument passed its weekly bump test on May 26th, 2026.

An examination of the instrument's alarm log identified several alarm events with the highest peak recorded as 7ppm at 1:00 pm for a duration of twelve seconds and again at 1:01 pm for a duration of six seconds.

The worker reported that they wore the instrument on the outside of their anticontamination clothing with the inlet facing outward unobstructed. They stated that they were putting gloves on when the instrument began to alarm. A coworker in close proximity reported 2ppm on their Ventis unit. The worker backed away from the initial

Recommendations/Conclusions:

location and reported the Ventis was continuing to alarm. Once back at the change trailer, instrument readings were between 0 and 2 ppm and 0 ppm after a few minutes.

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. This behavior deviates 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:
N/A

Associated Reports:
iCAS Number: N/A PAM AIC Number: 005164 2026-05-28

Industrial Hygienist Equipment SME/Program Owner:
[redacted] [redacted]
Print First and Last Name *Signature / Date*

Industrial Hygiene Level 3 Manager
[redacted] [redacted]
Print First and Last Name *Signature / Date*

21. Signatures

Prepared By: *(Event Investigator)*

[redacted] [redacted]
Name (First, Middle Initial, Last) *Signature / Date*

Responsible Manager Approval:

[redacted] [redacted]
Name (First, Middle Initial, Last) *Signature / Date*

CAS Manager Approval:

[redacted] [redacted]
Name (First, Middle Initial, Last) *Signature / Date*