Hanford Tank Waste Operations & Closure (H2C)

EVENT REPORT FORM

1. Project: Sampling Operations **2. Report Date:** 11/03/2026

3. Title: AOP-015 Response in AN Farm

4. Investigation Report Number *(if applicable)*: EIR-2026-060 **5. Revision:** 0

6. Responsible Manager: [redacted]

7. Event Investigator: [redacted]

8. Area/Building/Location: 200E/ AN Farm/ Radioactive Material Area (RMA) RMA-297

9. Date and Approximate Time of Event: Date: 9/22/2026 **Time: *(military)*** 1005 hours

10. Associated Action Request (AR) Number: ITDC-AR-2026-2783

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 1005 hours on 09/22/2026, two H2C Nuclear Chemical Operators (NCOs) were conducting a Reusable Contaminated Equipment (RCE) inspection inside an RCE storage box at AN Farm. The box lid had remained open for roughly 10 minutes when one worker's Personal Ammonia Monitor (PAM) alarmed at 6 Parts Per Million (ppm). There were six workers in the area at the time of the PAM alarm. However, there were no other alarming PAMs. At the time of the alarm the workers were wearing full-face air-purifying respirators with gas/vapor cartridges (MSA GME Chemical Vapor).

At 1028 hours the Central Shift Manager entered TF-AOP-015 *Response to Personal Ammonia Monitor Alarm*. No odors or symptoms were reported and all involved workers declined precautionary medical evaluation.

14. What *Should Have* Happened?

N/A

15. Key Facts from Investigation:

To summarize the conclusions of Industrial Hygiene Event Investigation Report IHIR-00147 *TF-AOP-015 Response 241-AN Farm near TK-107* The Personal Ammonia Monitor alarm that occurred during inventory of a long-sealed waste box in Radioactive Material Area (RMA) RMA-297 is unlikely to have originated from Tank Farm exhauster emissions and as confirmed through Data Fusion and Advisor System analysis. The Direct Reading Instructions (DRI) monitoring performed during the response actions did not indicate further action was necessary to protect workers' safety and health. Although the waste box was not reopened during the response, available evidence indicates the most probable source of the ammonia reading was the pit equipment contained within the box. The waste box will proceed directly to disposal preparation and will not be reopened.

To summarize the conclusions of Industrial Hygiene Event Equipment Report IHIR-00013, *TF-AOP-15 Response at 241-AN Farm* the Ventis Pro 5 was reviewed through alarm logs, calibration and bump test records, and a physical inspection. The alarm log showed a single 12-ppm event near a waste box in AN Farm at 1005 hours occurred, with no corroborating readings from other instruments. Attempts to recreate the alarm condition during quality control testing were unsuccessful, and no defects were

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identified. As a conservative measure, the instrument will be sent to Industrial Scientific for further evaluation.

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

Due to access restrictions at AN-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

Hanford Tank Waste Operations & Closure (H2C)
EVENT REPORT FORM (Continued)

26. 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*

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI)

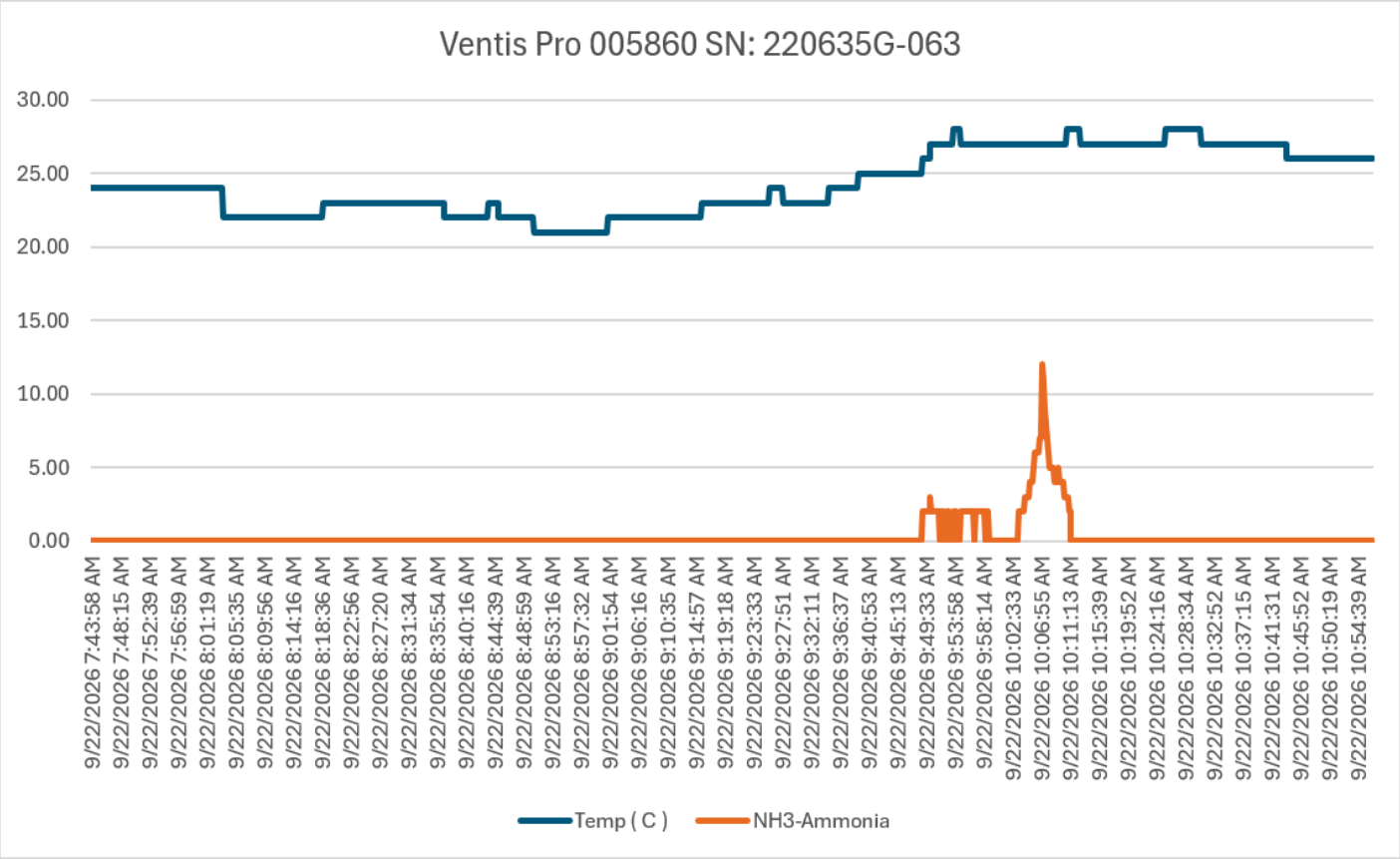
Event Title:	IHEI Number:
TF-AOP-15 Response at 241-AN Farm	00013
	IHIR Number: 00147

Date:	Time:	Location:
09/22/2026	10:18	241-AN North Fence

Device Information:
IH ID: 005860
SN: 220635G-063

Last Calibration:	Last Bump:
09/07/2026 - Passed	09/22/2026 - Passed

Event Data Log:



Peak Readings:

Time	Duration	Peak Reading	Location
9/22/2026 10:05:53 AM	00:02:09	12	

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 September 7th,2026 prior to field use. Additionally, the instrument passed its weekly bump test on September 22nd, 2026.

Washington River Protection Solutions

INDUSTRIAL HYGIENE EQUIPMENT INVESTIGATION (IHEI) (Continued)

Recommendations/Conclusions:

An examination of the instrument's alarm log identified one alarm event with the highest peak recorded as 12ppm at 10:05 am for a duration of two minutes and nine seconds.

The worker reported that they wore the Ventis facing outward with no obstructions. The worker was at a waste box in AN Farm that was approximately 6ft tall with other workers in close proximity. The worker's Ventis began alarming while no other Ventis reported any readings. The worker then backed away toward the FWS. The FWS was approximately six feet away outside the fence when worker notified FWS of Ventis alarm.

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 could not be reproduced by obstructing the inlet, simulating small impacts or altering ambient temperature.

As a conservative approach, it is recommended that the instrument be sent to Industrial Scientific for further evaluation.

Other:

N/A

Associated Reports:

iCAS Number: N/A PAM AIC Number: 005860 26-09-22

Industrial Hygienist Equipment SME/Program Owner:

[redacted] [redacted]

First and Last Name *Signature / Date*

Industrial Hygiene Level 3 Manager

[redacted] [redacted]

Print First and Last Name *Signature / Date*

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR)

Event Title:	IHIR Number:
TF-AOP-015 Response 241-AN Farm near TK-107	00147
	IHEI Number: 00013

Date:	Time:	Location:
09/22/2026	1005	200E, 241-AN Farm, near TK-107

Event Summary and Timeline:

At approximately 1005 a crew of 6 workers were performing equipment inventory inside 241-AN farm when a worker's personal ammonia monitor (PAM) alarmed at 6 ppm. Workers exited the farm and called the Central Shift Office (CSO). The timeline was as follows:

1028 IH personnel arrive at CSO and are briefed regarding Ventis PRO alarm in AN farm while crew was performing inventory.
1030 SmartSite software was accessed and mixing height at the time of the alarm was above 100 feet. All functioning Vapor Monitoring Detection Systems (VMDS) were reporting below the high and the high-high limits.
1032 IHIR number requested via email.
1033 PO IH manager, 4 IHT supervisors, and IHT report to CSO.
1042 Event Investigation Report(EIR) point of contact (POC) was identified.
1046 Central Shift Manager (CSM0 contacted the Field Work Supervisor (FWS) of the work crew and was told that all six personnel had declined medical.
1053 PO IH manager updated ESHQ management (Deputy #1 and Deputy #2).
1055 Two Odor/Vapor Response Cards were received. No odor reported and no symptoms reported.
1055 Ventis PRO data being downloaded.
1105 Ventis PRO data showed peak reading was 12 ppm ammonia at 1005.
1108 Response brief given to IHTs based on 12 ppm peak reading.
1109 IHTs deployed to the field.
1135 DOE IH oversight briefed at the CSO.
1152 IHT reported results in farm were at or below background and instrumentation passed post-use function testing.
1156 CSM exits TF-AOP-015.

Sampling/Monitoring Results:

Field Response Area Readings:
Ammonia: Less than Detectable (< 1 ppm)

The responding IHT entered AN Farm at 1127 and performed monitoring in the area of the alarmed PAM 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 a peak of 12 ppm at 1005 occurred in AN Farm.

SWIHD References:

26-06512 TF-AOP-015 Field Response at 241-AN Farm

Additional Information:

At the time of the PAM alarm, workers in the affected area were wearing respiratory protection equipment in accordance the management directed respiratory protection form MDRPF-MD-207 Task 1.

Meteorological Information from the Hanford Weather Station:
09/22/2026 @ 1000 (approximately 5 minutes before the initiating event)

- Barometric Pressure: 29.14 inHg
- Wind Speed and Direction: 9 mph N
- Temperature: 73°F
- Relative Humidity: 34%
- Mixing Height: 1500 m

Review of the Data Fusion and Advisor System (DFAS) application, powered by SmartSite™, Weather Details dashboard at the approximate time of the initiating event:
09/22/2026 @ 1005 (AY/AZ Farm):

- Wind Speed: 3.2 mph

Additional Information:

- Wind Direction: 141°
- Mixing Height: 140 feet above grade
- Stability Class: F/G

241-AN-VTP is not currently equipped with a Vapor Monitoring Detection System (VMDS). Readings are acquired in accordance with TF-OPS-IHT-037 when Stack Monitoring for Ammonia via the Vapor Monitoring Detection System (VMDS) is unavailable. Stack readings are required once per calendar day.

241-AN-VTP Vapor Monitoring Detection System (VMDS) Alternate Monitoring:
Date: 9/22/2026
Time: 1337
SWIHD Survey ID: 26-06504
DRI Result: 24 ppm NH3

Date: 9/21/2026
Time: 0843
SWIHD Survey ID: 26-06470
DRI Result: 27 ppm

Recommendations/Conclusions:

During the initiating event, workers were taking inventory of a waste box that hadn't been opened in at least 5 years to prepare it for disposal near the boundary of AN Farm in RMA-297. After the box had been open for approximately 15 minutes per the FWS, one PAM alarmed at 12 ppm. FWS reported that he was standing approximately 10 feet away outside the farm and did not smell any odors. Odors were not reported on the Odor/Vapor Response Cards by the workers in the farm, however, workers were in respiratory protection equipment at the time. The waste box was found to contain pit equipment.

Review of the Data Fusion and Advisor System (DFAS) application, powered by SmartSite™, Weather Details, and Chemical Details dashboards for the reported time of the Event indicate the cause of the Personal Ammonia Monitor alarm is unlikely to be from Tank Farm Exhauster emissions. Direct Reading Instrumentation monitoring performed in AN Farm during response actions did not readily identify a source that would have induced the Personal Ammonia Monitor alarm, and indicated further action was not necessary to protect worker safety and health in the work site's current configuration. As a result, the area was released from restricted access, and work was allowed to continue. However, the waste box was not reopened during the field response, so the conditions that initiated the event were not recreated.

It is highly likely that the source of the reading on the Ventis was associated with the pit equipment located in the waste box. Per conversation with the FWS, the waste box does not need to be reopened and will be prepared for disposal.

Others:

Figure 1: Waste box being opened at initiating event



INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Associated Documents:

iCAS Number: N/A

EIR Number: 2026-060

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 Level 2 Manager:

[redacted]

Print First and Last Name

[redacted]

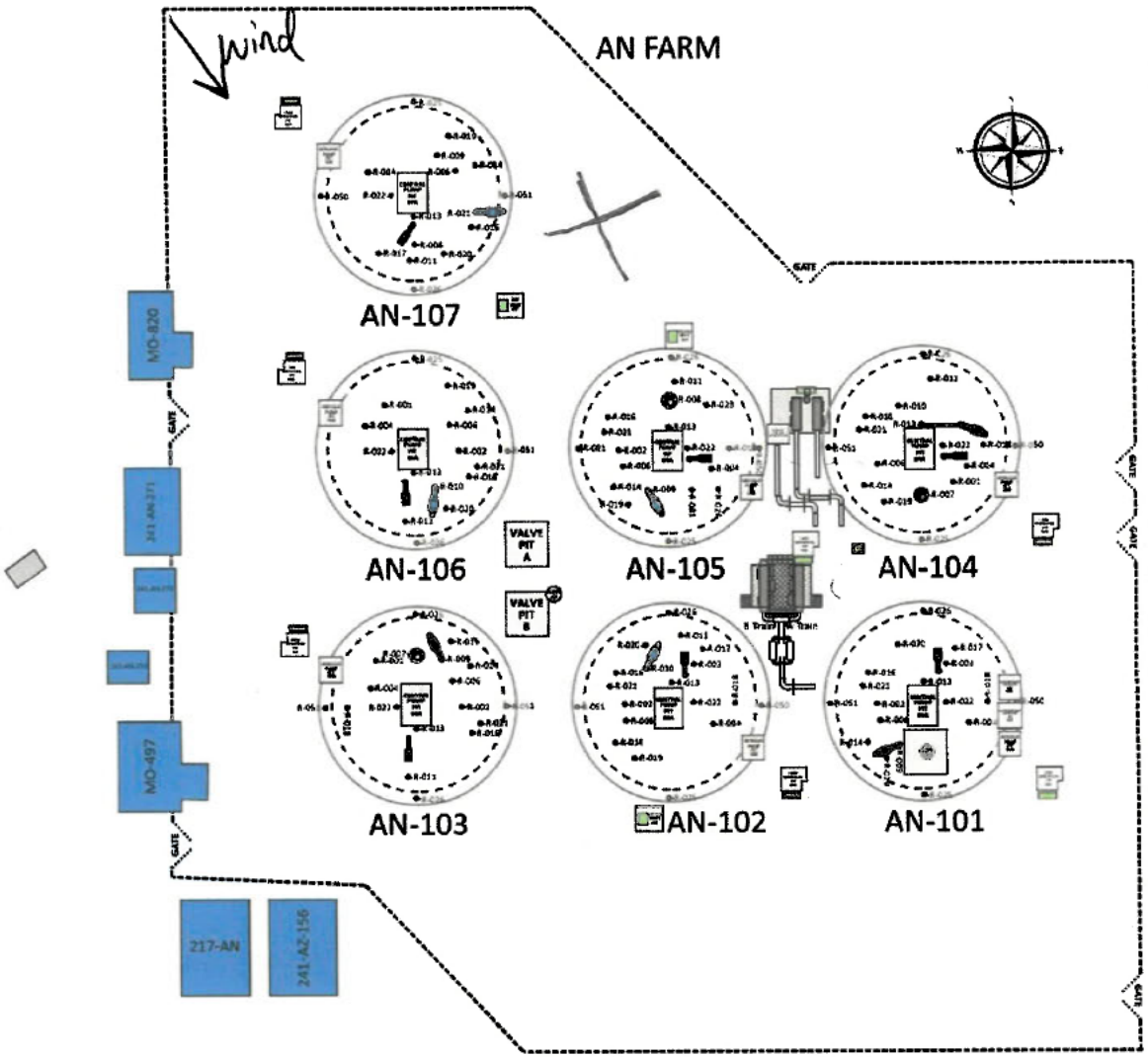
Signature / Date

ODOR/VAPOR RESPONSE CARD - 241 AN FARM

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.



[redacted]

ODOR/VAPOR RESPONSE CARD - 241 AN FARM

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

- Date and time of event: 9/22/26 1018
- Check Applicable:
  - ☐ Odor ☑ Ammonia Alarm *(6 ppm)* ☐ Ammonia Alarm *(12 ppm)* ☐ Alarm *(other - describe)*:
- Your name and the work you were performing: [redacted] RCE inspection
- Other Work Underway? Describe:
- Location of event *(mark area on map and wind direction)*: Marked with an X
- 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:
- 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.

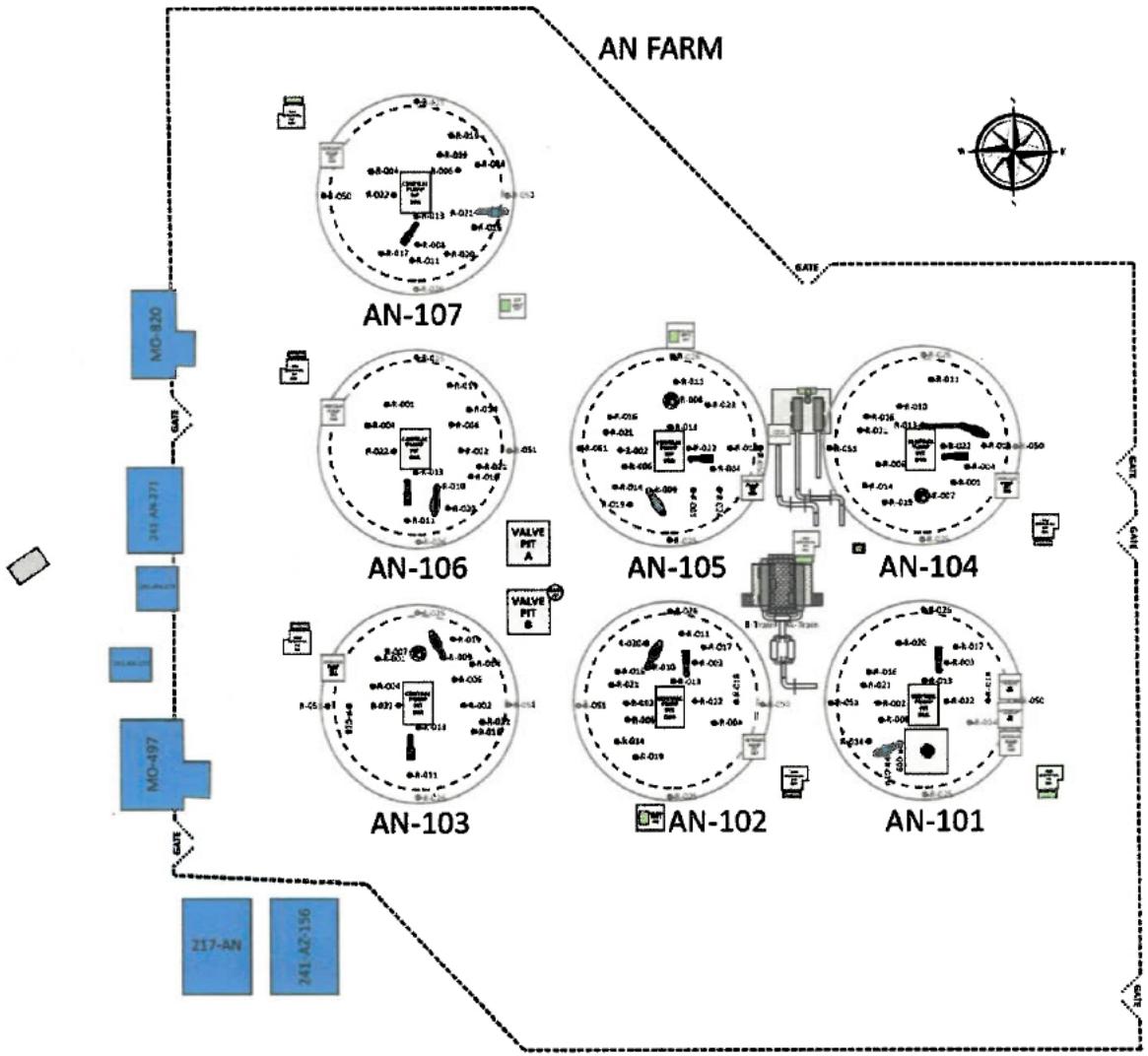
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[redacted]

ODOR/VAPOR RESPONSE CARD - 241 AN FARM

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

- Date and time of event: _____
- Check Applicable:
  ☐ Odor ☐ Ammonia Alarm *(6 ppm)* ☐ Ammonia Alarm *(12 ppm)* ☐ Alarm *(other - describe)*: _____
- Your name and the work you were performing: _____
- Other Work Underway? Describe: _____
- Location of event *(mark area on map and wind direction)*: _____
- Name(s) of others in or near the affected area: [redacted]
- Was Industrial Hygiene present, who? [redacted]
- Describe the odor:
  ☐ Sweet ☐ Sour ☐ Smoky ☐ Septic/Sewer ☐ Musty ☐ Rotten
  ☐ Metallic ☐ Onion ☐ Earthy ☐ Ammonia ☐ Citrus ☐ Solvent
  ☐ Other *(describe)*:
- Is source known/likely? Describe: _____
- Your symptoms? ☐ None
  ☐ Headache ☐ Dizziness ☐ Nausea ☐ Cough ☐ Fatigue
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[redacted]