

Hanford Tank Waste Operations & Closure
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:** East Area/AY Electrical Construction 2. **Report Date:** 9/18/2025
3. **Investigation Title:** C-67 Response at 2237E
4. **Investigation Report Number:** EIR 2025-071
5. **Responsible Manager:** [REDACTED]
6. **Event Investigator:** [REDACTED]
7. **Area / Building / Location:** 200 East/2237E and MO-2254 (two events)
0935 and
8. **Date and Approximate Time of Event:** **Date:** 09/15/2025 **Time (military):** 1230 hours
9. **Associated Action Request (AR) Number:** N/A
10. **Associated Occurrence Report Number (if applicable):** N/A
11. **Event Investigation Meeting Held:** Yes [] or No [X] **Date:** _____ **Time (military):** _____

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

Event 1: Three workers were transitioning from the 2237E electrical shop to AY farm when they noticed the odor.

Event 2: Two workers were walking from the 2237E electrical shop to AY farm when they noticed the odor. After the event was reported the FWS and IHT also reported the odor when following up on the event.

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

Event 1:

- AMEC Electricians - 3

Event 2:

- AMEC Electricians - 2
- AMEC Field Work Supervisor (FWS) - 1
- H2C Industrial Hygiene Technician (IHT) - 1
- H2C ESH&Q Deputy Director (IHT) - 1

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

On 09/15/2025, at approximately 0935 hours, three electricians reported smelling an "onion" odor near their electrical shop (2237E) as they were getting ready to go to AY farm.

At 0937 hours, the Central Shift Manager (CSM) initiated response per TF-OPS-OPER-C-67, *Response to Stronger than Normal Odors*, for odors at from the 2237E electrical shop. Although the electricians did not report any symptoms, one electrician elected precautionary medical surveillance via Inomedic Health Applications (IHA). The worker was released without restriction from the Site medical provider.

IHTs performed a field response at approximately 1020 hours and completed their DRI monitoring of the exterior and interior of 2237E per Industrial Hygiene Sample Plan (IHSP), IHSP-POE-MULTI-TFCOPSOPERC67, *Industrial Hygiene Odor Evaluation*. At 1039 hours IHT reported the NH3, VOC, and H₂S concentrations were below detectable levels. After the post function check was completed the CSM sent a SOEN that TFC-OPSOPER-C-67, *Response to Stronger than Normal Odors* were completed. Access was restored to the area.

At 1230 hours a second notification of the same odor was made to the FWS. The FWS arrived at approximately 1254 hours and notified the CSM that two employees reported an "onion like" odor outside of MO2254 which was also noticed by the FWS. The CSM

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initiated response per TF-OPS-OPER-C-67, Response to Stronger than Normal Odors, for odors in the area surrounding MO2254. The electricians did not report any symptoms and declined precautionary medical surveillance via Inomedic Health Applications (IHA).

IHTs performed a field response at approximately 1355 hours and completed their DRI monitoring of the exterior and interior of MO2254 per Industrial Hygiene Sample Plan (IHSP), IHSP-POE-MULTI-TFCOPSOPERC67, Industrial Hygiene Odor Evaluation. At 1405 hours IHT reported the NH₃, VOC, and H₂S concentrations were below detectable levels. After the post function check was completed the CSM sent a SOEN that TFC-OPSOPER-C-67, Response to Stronger than Normal Odors were completed at 1520 hours. Access was restored to the area.

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

- The odor event occurred in an area North of 244AR from 2237E to MO2254 West of 217AY1 in the 200 East Area of the Hanford site.
- At the time odors were reported the workers were wearing standard street clothes and in a work location that was posted as a radiological buffer area. The personnel were not in an area requiring the use of respiratory protection or personal ammonia monitor (e.g., Ventispro or ToxiRAE).
- The Hanford Site Meteorological Station #6 in the 200 East Area and Data Fusion and Advisory System (DFAS) application, powered by SmartSite, were utilized for outdoor weather details at the time odors were reported. The Hanford Site Meteorological Station # and DFAS dashboard indicated the following weather conditions on 08/25/2025:

| | at 0930 hours | at 1230 hours |
|------------------------|--------------------|--------------------|
| o Temperature: | 64°F | 74°F |
| o Relative Humidity: | 48% | 33% |
| o Wind Speed: | 3 mph | 5 mph |
| o Wind Direction: | from ESE | from SE |
| o Barometric Pressure: | 29.40-inch mercury | 29.40-inch mercury |

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

There was no impact to the facility.

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

- The CSM restricted access to the area.
- The CSM initiated TFC-OPS-OPER-C-67, Response to Stronger than Normal Odors, response actions.
- Industrial Hygiene Technicians (IHTs) took readings inside and outside of area of interest per IHSP-POE-MULTI-TFCOPSOPERC67.
- The workers were offered precautionary medical evaluation.
- The DOE Facility Representative was notified of the events.
- The CSM made required TFC-OPS-OPER-C-67 notifications.
- The CSM initiated Event Investigation EIR-2025-071, The CSM restricted access to the MO-217G change trailer.
- The CSM initiated TFC-OPS-OPER-C-67, Response to Stronger than Normal Odors, response actions.
- Industrial Hygiene Technicians (IHTs) took readings inside and outside of MO-217G change tent per IHSP-POE-MULTI-TFCOPSOPERC67.
- The workers were offered precautionary medical evaluation.
- The DOE Facility Representative was notified of the event.
- The CSM made required TFC-OPS-OPER-C-67 notifications.
- The CSM initiated Event Investigation EIR-2025-068, C-67 Stronger than normal odor at MO-217G.

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18. Compensatory Actions Taken:

None.

19. Remedial Actions Taken:

None.

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

Per TFC-PLN-120, Industrial Hygiene Investigative Response Plan, Industrial Hygiene (IH) documented the event investigation within Industrial Hygiene Event Investigation Report (IHIR) number IHIR-00122, TFC-OPS-OPER-C-67 Response at 2237E, MO-2254, and adjacent areas. DRI monitoring performed during odor investigation and TFC-OPSOPER-C-67 response actions did not indicate further actions were necessary in regard to worker safety and health occupational exposure limits. The following considerations were provided in IHIR-00121 to support the conclusion.

Direct Reading Instrument Monitoring Results

IHTs performed DRI monitoring inside and outside of the 2237E and MO-2254 per IHSP-POE-MULTI-TFCOPSOPERC67. IHTs used a DRI equipped with a Volatile Organic Compounds (VOCs) 10.6 electron-volts(eV) photoionization detector (PID) and VOCs 11.7eV PID. All readings were less than detectable. The instrumentation used for monitoring passed the post-use function check.

Sampling/Monitoring Results:

DRI Monitoring results:

- Exterior of 2237E
 - Ammonia (NH₃)- Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- Interior of 2237E
 - Ammonia (NH₃)-Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- DRI Post-Use-Function Test passed at 1048 09/15/2025

- Exterior of MO-2254
 - Ammonia (NH₃)- Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- Interior of MO-2254
 - Ammonia (NH₃)-Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- DRI Post-Use-Function Test passed at 1413 09/15/2025

Field Response Notes:

- Odors were detected during both events, readings from instrumentation were below detectable limits

A Review for Tank Waste Chemical Vapors

- The odor description is inconsistent with Tank Waste Chemical Vapors. A review of DFAS, Vapor Monitoring Detection System (VMDS), and Odor/Vapor Response Cards (O/VRC)s provided adequate indication that Tank Waste Chemical Vapors was unlikely to be the cause of reported odors, therefore monitoring for Tank Waste Chemical Vapors was not performed.
- VMDS Active ventilation systems exhaust a mixture of all connected tanks with output through a "stack". The emission of exhaust

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ventilation systems is monitored either continuously by the VMDS or periodically by alternate monitoring.

- o VMDS exhauster Ammonia readings on 09/15/2025

| Vapor Monitoring and Detection System (VMDS) Data | | |
|--|--------------------------------------|--------|
| Exhauster / Farm | Concentration (ppm NH ₃) | |
| | @0935 | @1230 |
| 518 | 1.488 | 1.521 |
| 519 | 0 | 0 |
| AN | 0 | 0 |
| AW | 0 | 0 |
| 126 | N/A | N/A |
| 127 | N/A | N/A |
| 702 | 6.588 | 6.916 |
| AP | N/A | N/A |
| SY | 4.3115 | 3.4502 |

- Odor descriptors provided by Affected Workers are inconsistent with Tank Vapors.
 - o The area where the odor was reported has a history of odors that have been found to be associated with sourced other than Tank Farm vapor source emissions, such as septic tank gaseous emissions. Bacteria in biofilms can create sulfur compounds with very low odor thresholds which can smell like onions.
 - The blue room portable restrooms located south of 2254 were not identified as a source. The IHT described a body odor smell and not onion.
 - A diesel generator on the north side of the building emitted a characteristic diesel odor.
 - No other source of odors was found in the area.
 -

Conclusion

Odor descriptors provided by Affected Workers are inconsistent with Tank Vapors. Based on a review of the Weather Details dashboard and VMDS exhauster ammonia readings for the approximate time of the Event, the cause of the odor is unlikely to be from Tank Farm Exhauster emissions.

21. Positive Aspects Identified:

Personnel responded promptly to both events, implementing the applicable TFC-OPSOPER-C-67 procedure and response actions.

22. Key Take Aways / Learning Opportunities:

Investigation IHIR-00122 contains the thorough description of the IH investigation. IHT investigators could not measure concentrations of the odor at detectable levels with current instrumentation.

Areas where biological material can collect and be saturated with water in an anerobic environment for extended periods can allow bacteriological growth of

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producing sulfur compounds like dimethyl disulfide and dimethyl trisulfide. Abandoned facilities or septic pipes harbouring bacteria may be a source of the intermittent onion odor reported in this and previous TFC-OPS-OPER-C-67 notifications.

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.

Responsible Manager Approval:

Name (First, Middle Initial, Last)

Signature / Date

CAS Manager Approval:

Name (First, Middle Initial, Last)

Signature / Date

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR)

| | | |
|---|----------------------|--|
| Event Title: TFC-OPS-OPER-C-67 response at 2237E, MO-2254, and adjacent areas | | IHIR Number: IHIR-00122 |
| | | IHEI Number: N/A |
| Date: 09/15/2025 | Time: 1045 | Location: 2237E, MO-2254, and adjacent areas |

Event Summary and Timeline:

Event Summary:

Morning: At approximately 0935, three workers experienced an onion odor 2237E, MO-2254, and adjacent areas. All employees reported no symptoms and one elected for precautionary medical surveillance via Inomedic Health Applications (IHA). No odor sources were identified.

Afternoon: At approximately 1230, onion odor was reported at 2237E, MO-2254, and adjacent areas. All employees reported no symptoms and one elected for precautionary medical surveillance via IHA. No odor sources were identified.

Field Response Timeline:

- **0935** Call to CSM: Onion odor, no symptoms, no medical. Three people (North of 244AR, 2237E), Odor/Vapor Response Card (OVRC) requested filled out @ Central Shift Office (CSO)
- **0940** Production Operations (PO) Industrial Hygienist (IH) arrived
- **0945** Second PO IH & PO Industrial Hygiene Manager (IHM) arrived
- **0945** Central Shift Manager (CSM) briefs IHS
- **0947** CSM calls Facility Representative (Fac. Rep.)
- **0950** PO IHM called by Retrieval & West Operations (RWO) IHM to offer support
- **0951** Industrial Hygiene Event Investigation Report (IHIR) number requested
- **0951** Industrial Hygiene Supervisor (IHS) arrives
- **0951** IHS requests Industrial Hygiene Technician (IHT) resources
- **0959** Affected workers arrived at CSO
- **0959** CSM checks again with workers: No symptoms, one went to IHA.
 - 1 Field Work Supervisor (FWS): Did not detect odors
 - 2 Electricians: Detected odors
 - Noted that over the years similar odors have occurred in area
- **1002** IHS confirms IHT support
- **1002** IHT arrive
- **1005** IHS requests H₂S sensor preparation
- **1007** OVRC Completed & reviewed
- **1007** FWS called IHT from pre-job and requested to monitor the area. Two IHTs arrived. Two other workers were in area but no odors
- **1013** Attachment A 1/2 signed
- **1013** IHS contacts IHTs identified by FWS (were in pre-job, arrived after odor)
- **1016** Two RWO IHs arrive: update on IHTs: Monitoring for NH₃, VOC, LEL, O₂, and CO. IHTs still at affected area, no detectable results
- **1018** PO IH performs briefing:
 - Odor type/location
 - Monitoring: NH₃, VOC, H₂S interior and exterior
 - RPE: Voluntary
 - Approach from upwind
- **1020** IHTs enroute with RWO IHS
- **1025** IHS requests SWIHD numbers from IHTs at affected area (not responding IHTs)
- **1028** CSM calls to request for Event Investigator
- **1039** IHT calls PO IH: Below detectable NH₃, VOC, H₂S exterior and interior. Enroute to post function check
- **1041** CSM calls Fac. Rep. with update: EIR# and title
- **1044** RWO IHs return
- **1054** IHT calls IHS: All sensors passed by 1048
- **1056** Attachment A 2/2 signed
- **1058** CSM sends SOEN C67 complete

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Event Summary and Timeline:

- **1057** One PO IH exits
 - **1058** All IHs exit
-
- **1230** Call to CSM: Same location, same odor, same EIR number, new response
 - **1256** PO IH arrives
 - **1257** FWS arrives, indicates they smelled odor, CSM requests OVRC.
 - **1257** IHT at area. Planning to deploy AreaRAE. IHT detected odor in area too, needs to fill out OVRC
 - **1259** 2 electrician affected workers arrive
 - **1302** CSM calls Fac. Rep.
 - **1302** PO IH arrives
 - **1306** FWS requests OVRC from IHT
 - **1309** IHT arrived
 - **1309** First 3 OVRC completed & reviewed
 - **1309** PO IH calls IHT request H₂S sensor prepped
 - **1312** PO IHM at CSO
 - **1315** IHS arrives
 - **1318** Responding RWO IH enroute to CSO
 - **1320** IHT arrives at CSO, starts filling out OVRC
 - **1321** Last OVRC received, no symptoms, declines IHA check
 - **1329** PO IHM -> L1 ESHQ & L2 IHM updates
 - **1330** Attachment A 1/2 signed
 - **1342** RWO IHs arrive
 - **1342** IH performs briefing:
 - Odor type/location
 - Monitoring: NH₃, VOC, H₂S interior and exterior
 - RPE: Voluntary
 - Approach from upwind
 - **1343** IHT enroute to pick up instrument
 - **1349** PO IHs turn over to RWO IH and exit
 - **1355** RWO IH and IHT arrive at affected area and begin monitoring
 - **1357** Responding IH and IHT noted a body odor smell near blue rooms south of affected building. Odor source was not blue rooms, not nearby trash cans, not upwind dumpster. Responding IH and IHT noted diesel smell coming from diesel generator on north side of affected building.
 - **1405** Readings reported as less than detectable inside and outside MO-2254
 - **1413** IHT confirms instrument passed post-use function check

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Sampling/Monitoring Results:

DRI Monitoring results:

- Exterior of 2237E
 - Ammonia (NH₃)- Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- Interior of 2237E
 - Ammonia (NH₃)-Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- DRI Post-Use-Function Test passed at 1048 09/15/2025

- Exterior of MO-2254
 - Ammonia (NH₃)- Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- Interior of MO-2254
 - Ammonia (NH₃)-Less than detectable (< 1.0 ppm)
 - Volatile Organic Compounds (VOCs, 10.6 eV PID)- Less than detectable (< 0.01 ppm)
 - Hydrogen Sulfide (H₂S)- Less than detectable (< 0.1 ppm)
- DRI Post-Use-Function Test passed at 1413 09/15/2025

Field Response Notes:

- Odors were detected during both events, readings from instrumentation were below detectable limits

SWIHD References:

SWIHD DRI Survey:

- #25-06504 " TFC-OPS-OPER-C-67 response at 2237E "
- #25-06512 "TFC-OPS-OPER-C-67 response at 2254"

Additional Information:

IHT monitoring results alongside atmospheric conditions indicate the cause of the odor is unlikely to be from Tank Farm emissions. Below are Meteorology Station, Data Fusion Advisory System (DFAS), and Vapor Monitoring and Detection System (VMDS) data:

| Meteorology Station Data (Station 6) | | |
|--------------------------------------|------------|------------|
| | @0930 | @1230 |
| Wind Direction | ESE | SE |
| Wind Speed | 3 mph | 5 mph |
| Temperature | 64 °F | 74 °F |
| Barometric Pressure | 29.40 inHg | 29.40 inHg |
| Relative Humidity | 48% | 33% |
| Mixing Height | 700m | 1100m |

| Data Fusion Advisory System (DFAS) Data | | |
|---|-------------|-------------|
| | @0930 | @1230 |
| Stability Class | D | D |
| Wind Speed | 2.5 mph | 4.3 mph |
| Wind Direction | 160 ° (SSE) | 113 ° (ESE) |
| Mixing Height | 1500 ft. | 1200 ft. |

*Note: Stability Class D = Neutral Conditions

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Additional Information:

| Vapor Monitoring and Detection System (VMDS) Data | | |
|--|--------------------------------------|--------|
| Exhauster / Farm | Concentration (ppm NH ₃) | |
| | @0935 | @1230 |
| 518 | 1.488 | 1.521 |
| 519 | 0 | 0 |
| AN | 0 | 0 |
| AW | 0 | 0 |
| 126 | N/A | N/A |
| 127 | N/A | N/A |
| 702 | 6.588 | 6.916 |
| AP | N/A | N/A |
| SY | 4.3115 | 3.4502 |

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

241-A Complex (exc. A):

- High Alarm was conservatively established at 460 ppm Ammonia
 - Ammonia concentration of 2.5 ppm at an unspecified ground receptor
- High High Alarm was conservatively established at 920 ppm Ammonia
 - Ammonia concentration of 5 ppm at an unspecified ground receptor

Nearby Potential Odor Sources:

- The affected area has a history of odors that have been found to be associated with sources other than Tank Farm vapor source emissions, such as septic tank gaseous emissions indicative of nearby septic related equipment. The area where individuals experienced the odors is adjacent to major roads which are often traveled by septic service vehicles.
- 242A Evaporator was in operations mode with active slurry to AP-103 during time of reported odor. Wind direction at the time of reported odors was ESE at 0930 (per met station 6) and SE at 1230(per met station 6). The affected area would be considered downwind of evaporator. No VMDS or equivalent data from evaporator stack was able to be found at this time.
- The affected area is also adjacent to WIDS:
 - Inactive buried transfer lines and pipelines: WIDS: 200-E-143-PL-A, 200-E-225-PL, 200-E-152-PL-C, 200-E-148-PL-C, 200-E-153-PL-A, 200-E-275-PL, WIDS: 200-E-309-PL-B, 200-E-225-PL
 - Inactive 200E Effluent Pond: WIDS: 200-E-286
 - Inactive 244AR building related equipment and unplanned releases: WIDS: 216-A-41, 200-E-276-PL, 296-A-13, 200-E-125

Recommendations/Conclusions:

Recommendations:

- VMDS or equivalent monitoring of 242A evaporator emissions

INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT (IHIR) (Continued)

Recommendations/Conclusions:

Conclusions:

Based on the odor response and reviewing environmental conditions related to worker location, wind direction, and available monitoring data when the odors were reported, it is unlikely that the odors reported by the workers were caused by Tank Farm vapors related to in farm exhausters. DRI monitoring by IHT demonstrated conditions which caused the experienced odors were no longer present in concentrations measurable by our current instrumentation. However, odors were smelled intermittently while utilizing monitoring equipment. As a result, the area where odors were reported was released from restricted access and work was allowed to continue. However, the investigation was not able to determine the source of the reported odors.

Others:

N/A

Associated Documents:

iCAS Number: N/A

EIR Number: EIR-2025-071

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]

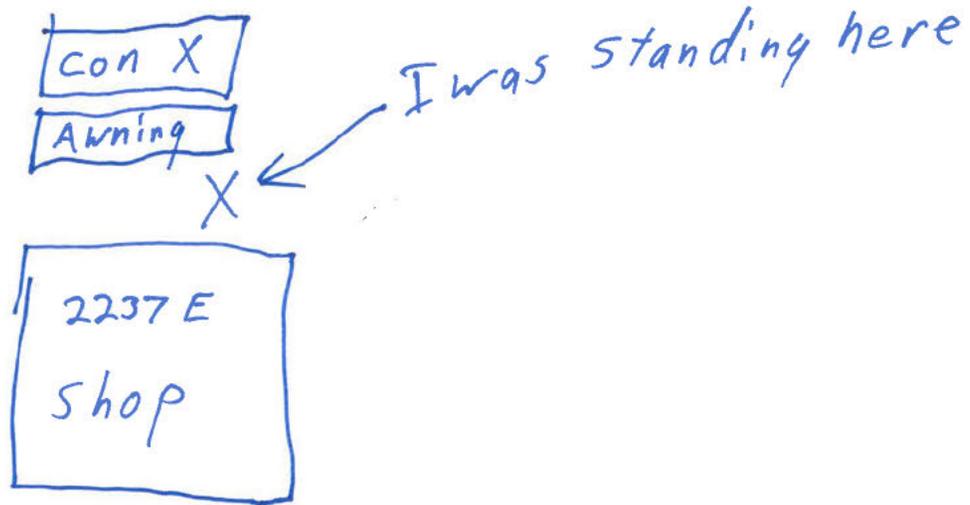
Signature / Date

ODOR/VAPOR RESPONSE CARD

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.



ODOR/VAPOR RESPONSE CARD

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

- Date and time of event: 9/15/25 about 9:30 AM
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm)
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): _____
- Your name and the work you were performing:
[Redacted] Electrician
- Other Work Underway? Describe:
N/A
- Location of event (mark area on map and wind direction):
Electric Shop 2237 E
- Name(s) of others in or near the affected area:
[Redacted]
- 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
 - Weakness
 - Itch
 - Other (describe): _____
 - Dizziness
 - Sore Throat
 - Tingling
 - Nausea
 - Difficulty Breathing
 - Numbness
 - Cough
 - Eye Irritation
 - Taste
 - Fatigue
 - Rash

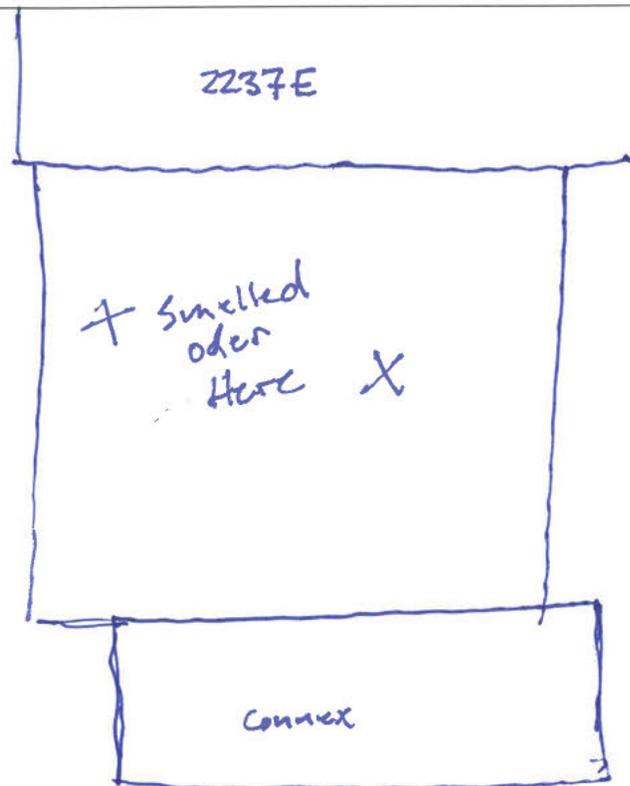
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD

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.



ODOR/VAPOR RESPONSE CARD

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

- Date and time of event: 9/15/25 Roughly 9:45 am
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] Electrical work at Shop
- Other Work Underway? Describe:
NA
- Location of event (mark area on map and wind direction):
Electrical Shop 2237E
- 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 checked="" type="checkbox"/> Onion | <input type="checkbox"/> Earthy | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Citrus | <input type="checkbox"/> Solvent |
| <input type="checkbox"/> Other (describe): _____ | | | | | |
- Is source known/likely? Describe:
NA
- 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): _____ | | | | |

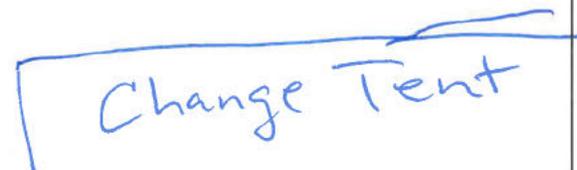
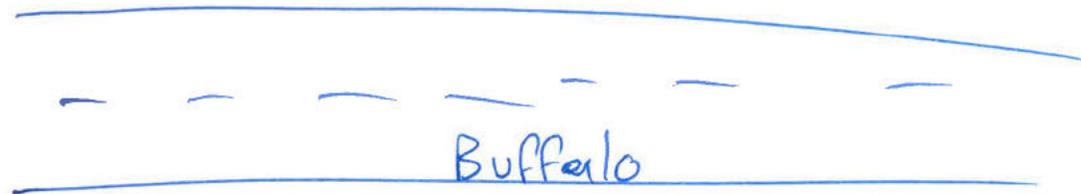
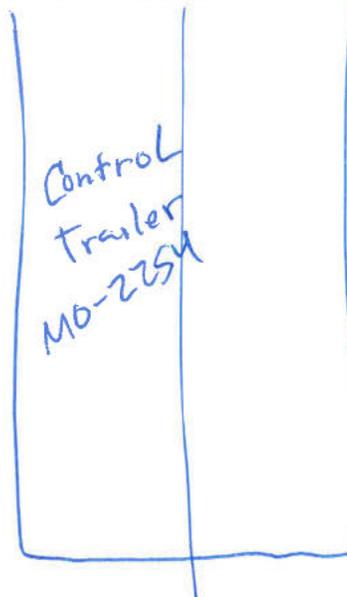
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD

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. *Onion Smell*
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

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

• Date and time of event: 9-15-25 @ 12:30 pm

• Check Applicable:

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

• Your name and the work you were performing:

[Redacted] I was traversing to the change tent

• Other Work Underway? Describe:

Not Sure

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

Near buffalo st (X)

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

[Redacted]

• Was Industrial Hygiene present, who?

Not Sure

• Describe the odor:

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

• Is source known/likely? Describe:

Not Sure

• Your symptoms? None

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

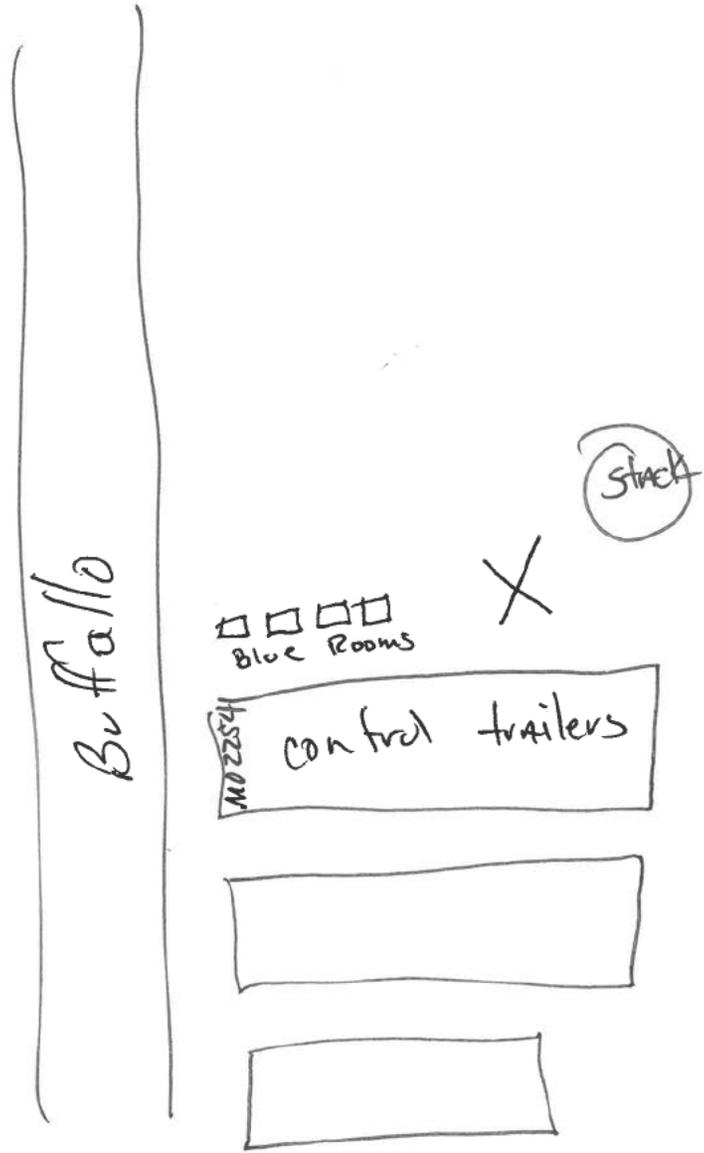
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM.
If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD

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.



ODOR/VAPOR RESPONSE CARD

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

- Date and time of event: 9/15/08 1730
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] following up on where odor occurred w/ electricians
- Other Work Underway? Describe:
Terminations on N side of control trailer
- Location of event (mark area on map and wind direction):
South control trailer on Buffalo
- Name(s) of other(s) in area of the affected area:
[REDACTED]
- Were Industrial Hygienists present, who?
[REDACTED] was called & there in 10 min
- 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 checked="" type="checkbox"/> Onion | <input type="checkbox"/> Earthy | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Citrus | <input type="checkbox"/> Solvent |
| <input type="checkbox"/> Other (describe): _____ | | | | | |
- Is source known/likely? Describe: _____
- 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): _____ | | | | |

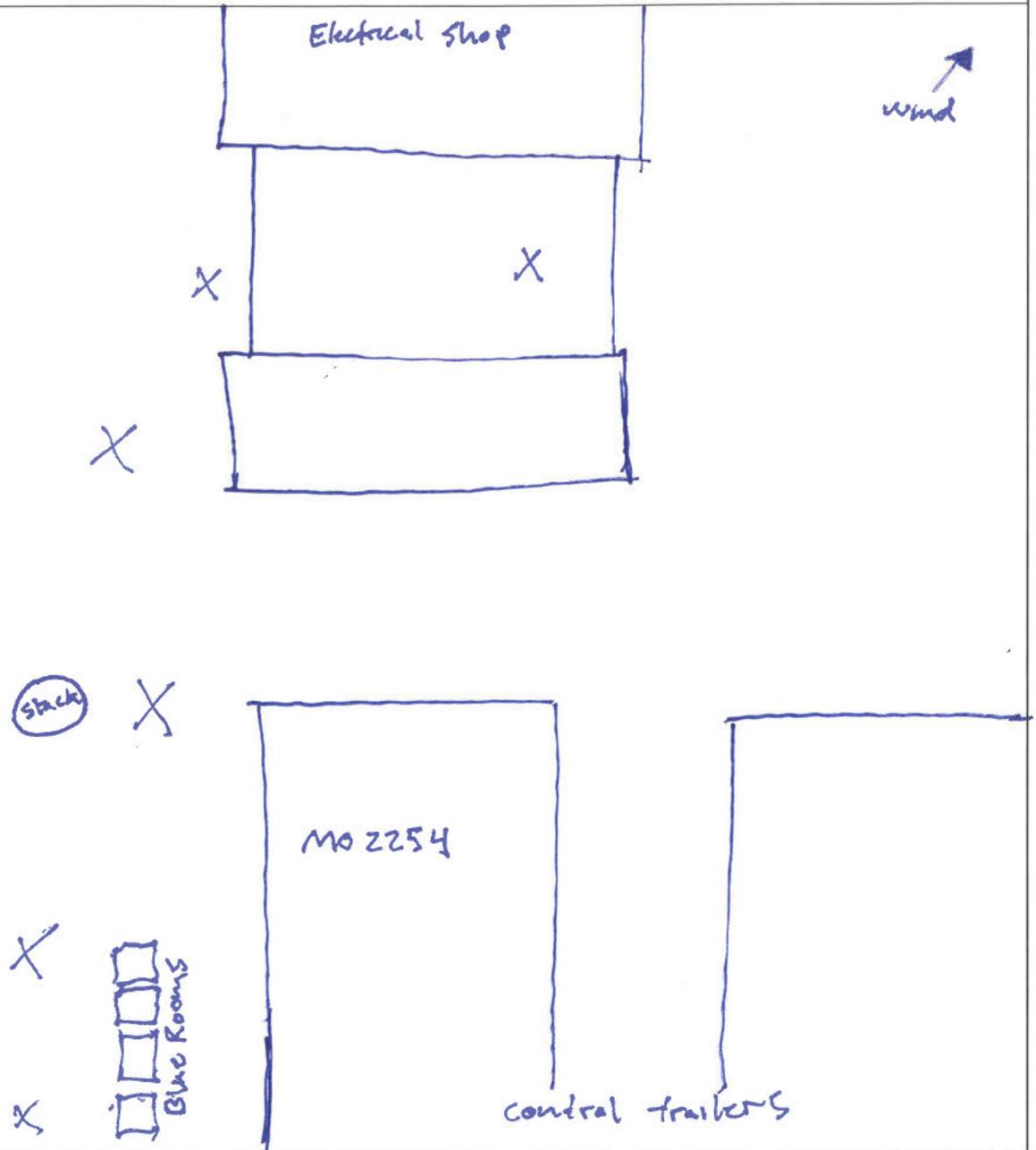
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ODOR/VAPOR RESPONSE CARD

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.



ODOR/VAPOR RESPONSE CARD

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

- Date and time of event: 9-15-25 Roughly 12:30 PM
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] - was walking from electrical shop to AY2
- Other Work Underway? Describe:
NA
- Location of event (mark area on map and wind direction):
Between AY2 & Electrical Shop
- Name(s) of others in or near the affected area:
[REDACTED]
- Was Industrial Hygiene present, who?
Not initially but when they showed up Don smelled it too
- 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 checked="" type="checkbox"/> Onion | <input type="checkbox"/> Earthy | <input type="checkbox"/> Ammonia | <input type="checkbox"/> Citrus | <input type="checkbox"/> Solvent |
| <input type="checkbox"/> Other (describe): _____ | | | | | |
- Is source known/likely? Describe:
Not Sure
- 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): _____ | | | | |

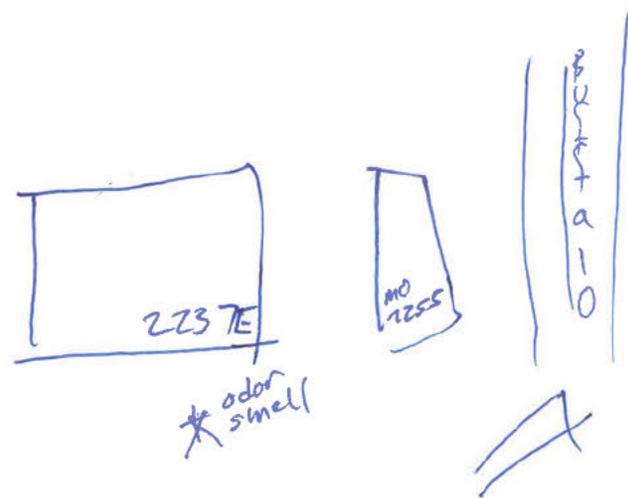
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ODOR/VAPOR RESPONSE CARD

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.



ODOR/VAPOR RESPONSE CARD

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

- Date and time of event: 09/15/2025 1300
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm)
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] - IHT monitoring for this stronger than normal odor
- Other Work Underway? Describe:
Not at the time of monitoring
- Location of event (mark area on map and wind direction):
2237E
- Name(s) of others in or near the affected area:
[REDACTED]
- Was Industrial Hygiene present, who?
Yes, myself and IHT - [REDACTED]
- 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.