

AOP-015 Event Investigation Reports (Redacted) EIR-2023-056 (07/27/2023)

(Settlement Agreement Deliverable)

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
Office of River Protection under Contract DE-AC27-08RV14800



**P.O. Box 850
Richland, Washington 99352**

AOP-015 Event Investigation Reports (Redacted) EIR-2023-056 (07/27/2023)

(Settlement Agreement Deliverable)

A. Beerman

Washington River Protection Solutions

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WRPS

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APPROVED
By Lynn M Ayers at 2:43 pm, Aug 24, 2023

Release Approval

Date

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Washington River Protection Solutions
EVENT SUMMARY

Check PART 1 box to hide that section of the form. Check PART 2 box it will show that section.

PART 1 (hide)* **PART 2 (show)***

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:

Project: Tank Farm Projects/Construction Date: Jul 27, 2023

Area/Building/Location: 200W/U Farm/MO-2194 U Farm Change Trailer Approximate Time of Event: 1156 hours

AR Number: WRPS-AR-2023-2077 Responsible Manager: [REDACTED]

EIR Number: EIR-2023-056 Event Investigator: [REDACTED]

EVENT SUMMARY PART 1

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

Personnel supporting Work Order (WO) #945335, "241-U, Install Bollards, Caisson's, and Grade in Preparation for Barrier" were within MO-2194 taking a break/rest period, cooling off, and re-hydrating.

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

Personnel located within MO-2194 at time of VentisPro personal ammonia monitor (PAM) Response Level alarm:
- 23 Fowler laborers
- 3 WRPS Health Physics Technicians (HPTs)
- 3 WRPS Industrial Hygiene Technicians (IHTs)

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

On 07/27/2023, at approximately 1156 hours, personnel supporting the WO# 945335 work evolution were within the MO-2194 U Farm Change Trailer taking a break/rest period, cooling off, and re-hydrating after several workers within the work crew had sweat through their anti-contamination clothing while performing work activities in U Farm. 12 workers (10 laborers and 2 IHTs) were within the contamination area (CA) side of the change trailer and 17 workers (13 laborers, 1 IHT, and 3 HPTs) were within the Radiological Buffer Area (RBA) side of the change trailer when, after resting for approximately 20 minutes, a worker's Ventis Pro personal ammonia monitor "Response Level" alarm initiated. The Ventis Pro personal ammonia monitor displayed an ammonia concentration of 6 ppm at the time of the instrument alarm, although, the displayed ammonia concentration quickly dissipated to 0 ppm [Note: 9 ppm was the concentration reported, however, review of the Ventis Pro datalog indicated a peak reading of 6 ppm]. The IHTs that were present in MO-2194 reviewed the Ventis Pro personal ammonia monitors of the remaining 11 workers located on the CA side of the change trailer, where 8 were identified as having elevated ammonia readings between 3 ppm and 4 ppm. However, it is important to note sensor drift up to 3 ppm is anticipated/considered normal for the Ventis Pro personal ammonia monitors.

Initially, workers reported they did not smell an odor at the time of the Ventis Pro personal ammonia monitor alarm. In addition, they reported experiencing no symptoms and declined precautionary medical surveillance.

At 1446, CSM review of the completed Odor/Vapor Response Cards identified 5 workers had made selections on the "Your Symptoms" section of the Response card. Three workers indicated headache, one worker indicated sore throat, and one worker selected "Other" however did not provide further description. In addition, one individual provided an odor description of "earthy and musty" but did not indicate symptoms. The workers indicating symptoms on their Odor/Vapor Response Cards were directed to report to the onsite medical provider for precautionary medical evaluation. All five personnel were evaluated and released to return to work without restriction.

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

At the time the odors were reported, the individuals were not in an area requiring the use of respiratory protection. Workers had doffed their respiratory protection equipment upon exit from U Farm when MO-2194 was entered.

As directed by TVIS-U-001, Personal Ammonia Monitors (e.g., VentisPro) were being worn by all workers performing or supporting activities within U Farm.

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EVENT SUMMARY (Continued)

Project: Tank Farm Projects/Construction Date: Jul 27, 2023

Area/Building/Location: 200W/U Farm/MO-2194 U Farm Change Trailer Approximate Time of Event: 1156 hours

AR Number: WRPS-AR-2023-2077 Responsible Manager: [REDACTED]

EIR Number: EIR-2023-056 Event Investigator: [REDACTED]

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

Workers within the posted radiological Contamination Area (CA) were wearing anti-contamination clothing as required by Radiological Work Permit (RWP) WTP-0608.

The Hanford Site Meteorological Station #19 was utilized for outdoor weather details at the of the Ventis Pro personal ammonia monitor alarm. The Hanford Site Meteorological Station #19 indicated the following weather conditions at 1200 hours on 07/27/2023:

- . Wind Speed: 2 miles per hour (mph)
- . Wind Direction: 90° (out of East)
- . Stability Class: B (moderately unstable conditions)
- . Temperature: 85°F
- . Barometric Pressure: 29.15 inches Hg (rising slowly)

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

The WO# 945335 work evolution was delayed ~2 hours and access restricted to MO-2194 for ~3.5 hours. No additional impacts to scheduled 07/27/2023 work evolutions occurred.

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

- IH verified no workers were experiencing symptoms and offered precautionary medical surveillance. Workers declined medical surveillance.
- CSM initiated TF-AOP-015 response actions and restricted access to MO-2194.
- CSM requested Odor/Vapor Response Cards from affected workers.
- CSM made required TF-AOP-015 notifications.
- Production Operations shift Industrial Hygiene Technicians (IHTs) initiated TF-AOP-015 response actions and monitoring per IHP-09001. Direct-reading instrument (DRI) area readings at MO-2194 indicated a less than detectable (< 1 ppm) ammonia concentration.
- Initiated Event Investigation EIR-2023-056 "TF-AOP-015 at U Farm Change Trailer"
- CSM review of the Odor/Vapor Response Cards identified five workers had made selections within the "Your Symptoms" section of the Response Card. Once identified, the five workers were instructed to report to the onsite medical provider for precautionary medical evaluation.

Notifications Already Made (Time and personnel notified):

[1216 hours]- The CSM initiated TF-AOP-015, restricted access to MO-2194, provided radio announcement, and issued Shift Office Event Notification (SOEN), "Entered TF-AOP-015 Response to Personal Ammonia Monitor Alarm for PAM alarm at U Farm change trailer. Access to the U Farm Change Trailer is restricted". CSM contacted the on-call DOE Facility Representative and informed them of TF-AOP-015 event initiation.

[1256 hours]- CSM provided TF-AOP-015, Attachment 1- Initial Communication Template to email to distribution list "DL- WRPS Odor/Vapor Event Notification."

[1446 hours]-

[1926 hours]- CSM provided TF-AOP-015, Attachment 2- Follow-up Event Summary to email to distribution list "DL- WRPS Odor/Vapor Event Notification."

[1929 hours]- CSM issued SOEN, "Response actions for U-Farm TF-AOP-015 event have been completed and the results are at or below background levels. Exiting TF-AOP-015."

[1941 hours]- CSM contacted the on-call DOE Facility Representative and informed them TF-AOP-015 had been exited.

This event does not merit an Event Investigation meeting

This event merits an Event Investigation meeting

Basis for Determination:

Information gathered from interviews and documentation reviews have provided sufficient information regarding this event.

Washington River Protection Solutions
EVENT SUMMARY (Continued)

Project: Tank Farm Projects/Construction Date: Jul 27, 2023

Area/Building/Location: 200W/U Farm/MO-2194 U Farm Change Trailer Approximate Time of Event: 1156 hours

AR Number: WRPS-AR-2023-2077 Responsible Manager: [REDACTED]

EIR Number: EIR-2023-056 Event Investigator: [REDACTED]

Responsible Manager:

[REDACTED] Digitally signed by [REDACTED]
Print First and Last Name Signature / Date

CAS Manager:

[REDACTED] [REDACTED] [REDACTED]
Print First and Last Name Signature / Date

EVENT SUMMARY PART 2

Key Elements of the Investigation (Key investigation points):

Corrections to Event Summary Part 1 information provided within the "WHAT HAPPENED" section.

Event Summary Part 1 stated: The IHTs that were present in MO-2194 reviewed the Ventis Pro personal ammonia monitors of the remaining 11 workers located on the CA side of the change trailer, where 8 were identified as having elevated ammonia readings between 3 ppm and 4 ppm.

Correction: After further evaluation, it was determined the IHTs that reviewed the Ventis Pro personal ammonia monitors of the remaining 11 workers located on the CA side of the change trailer identified 8 Ventis Pro personal ammonia monitors showing Peak Readings between 3 ppm and 4 ppm on the instrument display screen. Real-time elevated ammonia readings between 3 ppm and 4 ppm were not indicated.

This is further supported by review of the data logs from all Ventis Pro Personal Ammonia monitors being worn by personnel on the CA side of MO-2194 indicating no readings above 0 ppm at the time of the initiating Personal Ammonia monitor alarm occurrence.

Event Summary Part 1 stated: However, it is important to note sensor drift up to 3 ppm is anticipated/considered normal for the Ventis Pro personal ammonia monitors.

Correction: Sensor drift up to 3 ppm is anticipated/considered normal for the ToxiRAE personal ammonia monitors. While the lowest sensor detection limit for the Ventis Pro personal ammonia monitors ranges between 1-4 ppm, false positive readings above 0 ppm are not expected. However, "Peak Readings" between 3 ppm and 4 ppm being displayed on the Ventis Pro personal ammonia monitors had been previously reported by field IHTs.

KEY ELEMENTS TO THE INVESTIGATION:

In summary of the Industrial Hygiene Event Investigation report, IHIR-00078 "TF-AOP-015 Personal Ammonia Monitor Response Alarm at U-Farm Change Trailer", the Ventis Pro personal ammonia monitor alarm was not indicative of an employee chemical exposure event or changing Tank Farm conditions related to Tank Farm vapors and was determined to likely be resultant of a possible instrument malfunction or sensor impingement. Direct Reading Instrumentation 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 standpoint. As a result, the area was released from restricted access.

The following considerations support the IHIR-00078 conclusion:

(1) Due to the proximity to the Tank Farms, monitoring for Tank Waste Chemical Vapors was conducted during the TFC-OPS-OPER-C-67 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

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EVENT SUMMARY (Continued)

Project: Tank Farm Projects/Construction

Date: Jul 27, 2023

Area/Building/Location: 200W/U Farm/MO-2194 U Farm Change Trailer Approximate Time of Event: 1156 hours

AR Number: WRPS-AR-2023-2077

Responsible Manager: [REDACTED]

EIR Number: EIR-2023-056

Event Investigator: [REDACTED]

Key Elements of the Investigation (Key investigation points):

utilized as a sentinel indicator for Tank Waste Chemical Vapor COPCs, thus direct reading instruments (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 indicated less than detectable concentrations for ammonia (<1 ppm), therefore, providing indication the Ventis Pro "Response Level" alarm was unlikely to be resultant of Tank Farms emissions.

(2) Datalog review of the event initiating Ventis Pro personal ammonia monitor (ID Number: 004946) indicated three different instances on 07/27/2023 where sporadic ammonia concentration readings were observed during an ~5-minute interval. All three instances occurred while the instrument was in a location where an ammonia source would not be present.

Review of the Ventis Pro personal ammonia monitor (ID Number: 004946) alarm history shows one prior instance of instrument alarm. The Ventis Pro personal ammonia monitor (ID Number: 004946) passed calibration following this event occurrence and was returned to service. However, if Ventis Pro (ID Number: 004946) provides indication of a third alarm event when an ammonia source is not present, the instrument will be removed from service.

(3) Additional workers were within the immediate area of the individual when the Ventis Pro personal ammonia monitor alarmed. The other workers' Ventis Pro personal ammonia monitors did not alarm or indicate elevated ammonia concentrations. Review of the datalogs associated with 8 Ventis Pro personal ammonia monitors noted as showing Peak Readings between 3 ppm and 4 ppm on the instrument display screen determined no ammonia readings above 0 ppm were recorded around the time of the initiating instrument alarm. The Peak Readings between 3 ppm and 4 ppm were determined to be resultant of the instrument calibration process (refer to Bullet #5 for additional discussion). The resulting data logs from all the devices nearby the event-initiating device indicating concentrations of 0 ppm ammonia suggests the Ventis Pro "Response Level" alarm is likely resultant of a possible instrument malfunction or sensor impingement.

(4) In addition to the lack of resulting ammonia data on the nearby devices, there were no reports of odors associated with Ammonia, which has an offensive, pungent, irritating odor that is readily detectable at very low concentrations. The lower range of the odor threshold for ammonia is 43 parts per billion (ppb) or 0.043 parts per million (ppm) (AIHA, 2013). Workers were not wearing Respiratory Protective Equipment at the time the instrument alarm; therefore, it would be expected Ammonia concentrations approaching 6 ppm would have been readily perceived by personnel.

(5) After review of the calibration and sensor bump schedule of the Ventis Pros' that were distributed to the work crew, it was discovered that the sensors received a bump (i.e., sensor response test that exposes the sensor to predetermined Ammonia gas concentrations to ensure the sensor is responding accordingly) the day prior to the event. Due to the propensity of Ammonia gas to linger, it is likely that after bump tests are performed, a peak reading registers when the instrument turns on after the Ventis Pros are checked out. A controlled test was conducted on August 1st and 2nd, confirming this conclusion. The steps of the test were as follows:

- On evening of August 1st, ten Ventis Pro5 devices were docked in the 2704HV lab.
- All 10 devices shutoff automatically upon removing the instrument from the docking station.
- The ten Ventis Pro5 devices were retained in the 2704HV lab overnight.
- The 10 devices were turned on/started the following morning (replicating conditions of July 27 event). All ten devices indicated a peak reading of 3-5 ppm on the instrument display, even though they were exposed to 0 ppm ammonia the entire time they were turned on August 2nd.

This confirmed that for Ventis Pros first use after performance of a bump test or calibration, devices will indicate a peak reading of 3-5 ppm ammonia, even though never being exposed to ammonia outside the docking station. The reason for this behavior is as follows:

- When a device is bump tested or calibrated, the instrument is turned on within the docking

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EVENT SUMMARY (Continued)

Project: Tank Farm Projects/Construction Date: Jul 27, 2023

Area/Building/Location: 200W/U Farm/MO-2194 U Farm Change Trailer Approximate Time of Event: 1156 hours

AR Number: WRPS-AR-2023-2077 Responsible Manager: [REDACTED]

EIR Number: EIR-2023-056 Event Investigator: [REDACTED]

station and exposed to known concentrations of the ammonia calibration gas.
• Upon removing the device from the docking station, residual ammonia lingers on the sensor, therefore, during the few seconds between the device being removed from the docking station and the instrument automatically shutting off, the internal memory of the device records a peak reading between 3-5 ppm. This peak reading is retained until a higher ammonia concentration is experienced by the sensor or the device is re-docked, in which case the peak reading is zero'd.

(6) Weekly DRI monitoring of potential Fugitive Emission sources in 241-U Farm is conducted. Fugitive emission monitoring data from 06/02/2022 to 07/27/2023 includes 1063 data points. All 1063 readings indicated less than detectable ammonia concentrations, 1040 readings indicated less than detectable VOC concentrations, and the 23 detectable VOC readings (ranging from 10 ppb to 280 ppb) were still below anticipated background levels.

(7) Daily DRI monitoring conducted within the 241-U Farm Exclusion Zones Monday July 24th, 2023, through Thursday July 27th, 2023, indicated less than detectable ammonia (<1 ppm) concentrations and less than detectable Volatile Organic Compounds (VOCs) concentrations (<0.01 ppm).

Additional Compensatory/Remedial Measures (any additional measures taken if different from immediate actions):

None.

Lessons Learned or Information That the Work Force Needs Immediately:

None. Per TFC-OPS-OPER-C-28, "Operating Experience/Lessons Learned," this event did not meet the criteria requiring generation of a Operating Experience/Lessons Learned (OPEX/LL).

- 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

Basis for Determination:

This event does not require continuation of the event investigation process under TFC-OPS-OPER-C-14, "Event Investigation Process." The facts, findings, and comprehensive account captured under this Event Summary and the Industrial Hygiene Event Investigation Report, IHIR-00078, "TF-AOP-015 Personal Ammonia Monitor Response Alarm at U-Farm Change Trailer," form the basis that further investigation will provide no additional information or operational benefit.

Responsible Manager:

[REDACTED] Digitally signed by [REDACTED]
Print First and Last Name Signature / Date

CAS Manager:

[REDACTED] Digitally signed by [REDACTED]
Date: 2023.08.21 16:50:00 -07'00'
Print First and Last Name Signature / Date

Washington River Protection Solutions
INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT

Event Title: TF-AOP-015 Personal Ammonia Monitor Response Alarm at U-Farm Change Trailer	PER Number: IHIR Number: IHIR-00078
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Date: 07/27/2023	Time: 1156	Location: 241-U Farm Change Trailer, MO 2194
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Event Summary and Timeline:

Event Summary:
 On Thursday July 27th, 2023, TF-AOP-015 was initiated in 241-U Farm Change Trailer after a Personal Ammonia Monitor response alarm occurred. The work crew was supporting the 241-U Farm Install Bollards, Caissons, and Grading in Preparation for Barrier (WO# 945335) performing backfilling, compacting, and installing Corrugated Metal Pipes (CMPs) around fixtures in the farm. The work crew had exited the farm for a rest break to cool down and rehydrate in the change trailer at approximately 11:30 AM. At the time of the alarm, 17 workers (13 Fowler laborers, 3 WRPS Health Physics Technicians, and one WRPS Industrial Hygiene Technician) were staged in the Radiological Buffer Area (RBA) of the change trailer and 12 workers (10 Fowler laborers and 2 WRPS Industrial Hygiene Technicians) were cooling down in the Contamination Area (CA) of the change trailer.

Field Response Timeline:
 11:54 Worker's Personal Ammonia Monitor (PAM) alarmed while sitting in the CA of the U-Farm change trailer (MO 2194) and quickly stopped alarming when the worker stood up to show the Industrial Hygiene Technician (IHT).

11:56 IHT called Field Work Supervisor (FWS) and Project Industrial Hygienist (IH) to notify of alarming Personal Ammonia Monitor at 9 ppm.

12:00 Project IH arrived at the U-Farm change trailer to assist with response. Workers in the CA informed IH that peaks of 3 ppm and 4 ppm were reached on PAMs in the affected area (6 reported peaks of 3 ppm and 2 reported peaks of 4 ppm).

12:07 IHT called Central Shift Office (CSO) and made notification to the Central Shift Manager (CSM).

12:16 CSM Entered TF-AOP-015, restricted access to MO 2194, and issued a Shift Office Event Notification (SOEN). Workers in the CA began doffing, and the remaining workers in the RBA removed their anti-c's and everyone exited the change trailer. All workers that were in the change trailer at the time of the alarm were directed to turn in their Ventis Pro, fill out an Odor Response Card, and fill out Personal Ammonia Monitor Issues and Concerns forms. At this time all workers were asked about symptoms and offered HPMC evaluation and all declined. No odors were reported at this time.

12:57 Production Operations Shift IHTs arrived at U-Farm change trailer MO 2194.

13:04 FWS arrived at the change trailer to unlock the building and allow access to Shift IHTs to conduct their sweep.

13:29 Shift IHTs completed the sweep of MO 2194 change trailer.

13:35 IH arrived at MO 2810 (Fowler job trailer) and collected Odor Response Cards, Personal Ammonia Monitor Issues and Concerns forms, and Ventis Pros from affected area.

13:58 Shift IHT completed Post Use Function Test on MultiRAE pro. There was no detectable readings of ammonia, no unusual odors, and no sources identified during the sweep.

14:10 IH arrived at the CSO and provided updates to the names and number of individuals in the change trailer at the time of event, odor response cards, and the issues and concerns forms.

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INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

Event Summary and Timeline:

14:45 Central Shift Manager review of the Odor response cards reveals 5 workers that had made selections in the "Your Symptoms" section of the response card. Three workers selected "headache", one worker selected "none" as well as "sore throat", and one worker selected "other" however did not provide a description.

14:50 FWS called Fowler Safety Representative to reach out to the workers reporting symptoms and instruct them report to the on-site medical provider for precautionary medical evaluation.

19:29 CSM issued SOEN "Reponse Actions for U-Farm TF-AOP-015 event have been completed and the results are at or below background levels. Exiting TF-AOP-015."

Sampling/Monitoring Results:

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

Instrument ID Number: 004946 (alarming device)

Peak Reading: 6 ppm

Data Log Readings:

- Readings from 04:24:21 AM (when checked out to worker) until 11:43:15 AM are all 0 ppm NH3

- Readings from 11:43:25 AM until 11:47:55 AM rise to a peak of 5 ppm (at 11:46:25 AM) and dissipate back to 0 ppm by 11:48:05 AM:

11:43:15 0 ppm

11:43:25 2 ppm

11:43:35 3 ppm

11:43:45 3 ppm

11:43:55 3 ppm

11:44:05 3 ppm

11:44:15 3 ppm

11:44:25 3 ppm

11:44:35 3 ppm

11:44:45 4 ppm

11:44:55 3 ppm

11:45:05 4 ppm

11:45:15 4 ppm

11:45:25 4 ppm

11:45:35 4 ppm

11:45:45 4 ppm

11:45:55 4 ppm

11:46:05 4 ppm

11:46:15 4 ppm

11:46:25 4 ppm

11:46:35 4 ppm

11:46:45 5 ppm

11:46:55 4 ppm

11:47:05 4 ppm

11:47:15 3 ppm

11:47:25 3 ppm

11:47:35 3 ppm

11:47:45 2 ppm

11:47:55 2 ppm

11:48:05 0 ppm

- Readings remained at 0 ppm until 11:51:25 AM when readings begin to rise again, peaking at 6 ppm, reported at 11:54:15 AM and 11:54:25 AM, then dissipating again to 0 ppm by 11:56:45 AM:

11:51:15 0 ppm

11:51:25 2 ppm

11:51:35 3 ppm

11:51:45 3 ppm

11:51:55 4 ppm

11:52:05 4 ppm

11:52:15 4 ppm

11:52:25 4 ppm

Washington River Protection Solutions
INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

Sampling/Monitoring Results:

11:52:35 5 ppm
11:52:45 5 ppm
11:52:55 5 ppm
11:53:05 5 ppm
11:53:15 5 ppm
11:53:25 5 ppm
11:53:35 5 ppm
11:53:45 5 ppm
11:53:55 5 ppm
11:54:05 5 ppm
11:54:15 6 ppm (alarm)
11:54:25 6 ppm (alarm)
11:54:35 5 ppm
11:54:45 5 ppm
11:54:55 4 ppm
11:55:05 4 ppm
11:55:15 3 ppm
11:55:25 3 ppm
11:55:35 3 ppm
11:55:45 2 ppm
11:55:55 2 ppm
11:56:05 2 ppm
11:56:15 2 ppm
11:56:25 2 ppm
11:56:35 2 ppm
11:56:45 0 ppm
-Readings remained at 0 ppm until 12:17:35 PM when readings started to oscillate between 0 ppm and 2 ppm until 12:29:05 PM:
12:17:25 0 ppm
12:17:35 2 ppm
12:17:45 0 ppm
12:17:55 0 ppm
12:18:05 0 ppm
12:18:15 0 ppm
12:18:25 2 ppm
12:18:35 0 ppm
12:18:45 2 ppm
12:18:55 2 ppm
12:19:05 0 ppm
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12:21:05 0 ppm
12:21:15 0 ppm
12:21:25 0 ppm
12:21:35 0 ppm
12:21:45 2 ppm
12:21:55 2 ppm
12:22:05 0 ppm
12:22:15 0 ppm
12:22:25 0 ppm
12:22:35 0 ppm
12:22:45 0 ppm

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INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

12:22:55 2 ppm
12:23:05 2 ppm
12:23:15 0 ppm
12:23:25 0 ppm
12:23:35 2 ppm
12:23:45 0 ppm
12:23:55 0 ppm
12:24:05 0 ppm
12:24:15 0 ppm
12:24:25 2 ppm
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12:27:25 0 ppm
12:27:35 0 ppm
12:27:45 2 ppm
12:27:55 0 ppm
12:28:05 0 ppm
12:28:15 0 ppm
12:28:25 0 ppm
12:28:35 0 ppm
12:28:45 0 ppm
12:28:55 2 ppm
12:29:05 0 ppm

-All remaining readings recorded were 0 ppm for the duration of the data log of the device.

Ventis Pro 5 Personal Ammonia Monitor devices worn by other individuals in the CA data logs

Instrument ID Numbers: 004521, 004839, 004850, 004870, 004881, 004895, 004918, 004933, and 004944

Peak Readings: N/A

Data Log Readings: All readings 0 ppm for the duration of the data logs for all instruments.

TF-AOP-015 Response Production Operations IHT Sweep (SWIHD Survey 23-04954)

Comments:

"IHT responded to U farm change trailer (MO-2194) for TF-AOP-015 (Ventis alarm). IHT performed continuous monitoring for NH3 throughout the evolution inside the change trailer. Initial reading was taken at the door of the change trailer followed with a (DRI) sweep of the clean side area of the change trailer. There was no detectable readings or unusual odors. IHT donned proper attire for CA entry inside the change trailer to perform a (DRI) sweep. There was no detectable readings, unusual odors, or sources on the CA side of the change trailer."

Readings:

13:05 Ammonia 0.000 ppm Initial entrance and area sweep of the clean side of change trailer.

13:16 Ammonia 0.000 ppm Area sweep of the CA side of change trailer.

13:30 Ammonia 0.000 ppm Area sweep of the clean side of change trailer upon exiting change trailer.

Washington River Protection Solutions
INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

DRI Monitoring conducted in 241-U Farm for the week of 07/24/2023 through 07/27/2023

Fugitive Emissions Monitoring in U-Farm

Monday July 24th, 2023 (SWIHD Survey 23-04630):

Readings:

U109	07:20	Ammonia	0.000	ppm
U109	07:20	VOC	0.000	ppb
U108	07:22	Ammonia	0.000	ppm
U108	07:22	VOC	0.000	ppb
U107	07:24	Ammonia	0.000	ppm
U107	07:24	VOC	0.000	ppb
U110	07:26	Ammonia	0.000	ppm
U110	07:26	VOC	0.000	ppb
U111	07:28	Ammonia	0.000	ppm
U111	07:28	VOC	0.000	ppb
U111	07:29	Ammonia	0.000	ppm
U111	07:29	VOC	0.000	ppb
U111	07:31	Ammonia	0.000	ppm
U111	07:31	VOC	0.000	ppb
U111	07:32	Ammonia	0.000	ppm
U111	07:32	VOC	0.000	ppb
U111	07:33	Ammonia	0.000	ppm
U111	07:33	VOC	0.000	ppb
U203	07:35	Ammonia	0.000	ppm
U203	07:35	VOC	0.000	ppb

Ammonia and Volatile Organic Compound (VOC) Monitoring of Exclusion Zones (EZ) in U-Farm

Monday July 24th, 2023 (SWIHD Survey 23-04797):

Readings:

U101	05:40	Ammonia	0.000	ppm
U101	05:40	VOC	0.000	ppb
U102	05:42	Ammonia	0.000	ppm
U102	05:42	VOC	0.000	ppb
U103	05:44	Ammonia	0.000	ppm
U103	05:44	VOC	0.000	ppb
U104	05:46	Ammonia	0.000	ppm
U104	05:46	VOC	0.000	ppb
U105	05:48	Ammonia	0.000	ppm
U105	05:48	VOC	0.000	ppb
U106	05:50	Ammonia	0.000	ppm
U106	05:50	VOC	0.000	ppb
U107	05:52	Ammonia	0.000	ppm
U107	05:52	VOC	0.000	ppb
U108	05:54	Ammonia	0.000	ppm
U108	05:54	VOC	0.000	ppb
U109	05:56	Ammonia	0.000	ppm
U109	05:56	VOC	0.000	ppb
U110	05:58	Ammonia	0.000	ppm
U110	05:58	VOC	0.000	ppb
U111	06:00	Ammonia	0.000	ppm
U111	06:00	VOC	0.000	ppb
U112	06:02	Ammonia	0.000	ppm
U112	06:02	VOC	0.000	ppb
U201	06:04	Ammonia	0.000	ppm
U201	06:04	VOC	0.000	ppb
U202	06:06	Ammonia	0.000	ppm
U202	06:06	VOC	0.000	ppb
U203	06:08	Ammonia	0.000	ppm
U203	06:08	VOC	0.000	ppb
U204	06:10	Ammonia	0.000	ppm

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INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

U204	06:10	VOC	0.000	ppb
301B	06:12	Ammonia	0.000	ppm
301B	06:12	VOC	0.000	ppb
U103	06:26	Ammonia	0.000	ppm
U103	06:26	VOC	0.000	ppb
U101	12:21	Ammonia	0.000	ppm
U101	12:21	VOC	0.000	ppb
U105	12:44	Ammonia	0.000	ppm
U105	12:44	VOC	0.000	ppb

Tuesday July 25th, 2023 (SWIHD Survey 23-04858):

Readings:

U101	05:50	Ammonia	0.000	ppm
U101	05:50	VOC	0.000	ppb
U102	05:52	Ammonia	0.000	ppm
U102	05:52	VOC	0.000	ppb
U103	05:54	Ammonia	0.000	ppm
U103	05:54	VOC	0.000	ppb
U104	05:56	Ammonia	0.000	ppm
U104	05:56	VOC	0.000	ppb
U105	05:58	Ammonia	0.000	ppm
U105	05:58	VOC	0.000	ppb
U106	06:00	Ammonia	0.000	ppm
U106	06:00	VOC	0.000	ppb
U107	06:02	Ammonia	0.000	ppm
U107	06:02	VOC	0.000	ppb
U108	06:04	Ammonia	0.000	ppm
U108	06:04	VOC	0.000	ppb
U109	06:06	Ammonia	0.000	ppm
U109	06:06	VOC	0.000	ppb
U110	06:08	Ammonia	0.000	ppm
U110	06:08	VOC	0.000	ppb
U111	06:10	Ammonia	0.000	ppm
U111	06:10	VOC	0.000	ppb
U112	06:12	Ammonia	0.000	ppm
U112	06:12	VOC	0.000	ppb
U201	06:14	Ammonia	0.000	ppm
U201	06:14	VOC	0.000	ppb
U202	06:16	Ammonia	0.000	ppm
U202	06:16	VOC	0.000	ppb
U203	06:18	Ammonia	0.000	ppm
U203	06:18	VOC	0.000	ppb
U204	06:20	Ammonia	0.000	ppm
U204	06:20	VOC	0.000	ppb
301B	06:22	Ammonia	0.000	ppm
301B	06:22	VOC	0.000	ppb
U104	06:25	Ammonia	0.000	ppm
U104	06:25	VOC	0.000	ppb
U102	06:32	Ammonia	0.000	ppm
U102	06:32	VOC	0.000	ppb
U104	07:47	Ammonia	0.000	ppm
U104	07:47	VOC	0.000	ppb
U101	11:05	Ammonia	0.000	ppm
U101	11:05	VOC	0.000	ppb
U101	11:25	Ammonia	0.000	ppm
U101	11:25	VOC	0.000	ppb

Wednesday July 26th, 2023 (SWIHD Survey 23-04888):

Readings:

U101	05:52	Ammonia	0.000	ppm
U101	05:52	VOC	0.000	ppb
U102	05:54	Ammonia	0.000	ppm
U102	05:54	VOC	0.000	ppb

Washington River Protection Solutions
INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

U103	05:56	Ammonia	0.000	ppm
U103	05:56	VOC	0.000	ppb
U104	05:58	Ammonia	0.000	ppm
U104	05:58	VOC	0.000	ppb
U105	06:00	Ammonia	0.000	ppm
U105	06:00	VOC	0.000	ppb
U106	06:02	Ammonia	0.000	ppm
U106	06:02	VOC	0.000	ppb
U107	06:04	Ammonia	0.000	ppm
U107	06:04	VOC	0.000	ppb
U108	06:06	Ammonia	0.000	ppm
U108	06:06	VOC	0.000	ppb
U109	06:08	Ammonia	0.000	ppm
U109	06:08	VOC	0.000	ppb
U110	06:10	Ammonia	0.000	ppm
U110	06:10	VOC	0.000	ppb
U111	06:12	Ammonia	0.000	ppm
U111	06:12	VOC	0.000	ppb
U112	06:14	Ammonia	0.000	ppm
U112	06:14	VOC	0.000	ppb
U201	06:16	Ammonia	0.000	ppm
U201	06:16	VOC	0.000	ppb
U202	06:18	Ammonia	0.000	ppm
U202	06:18	VOC	0.000	ppb
U203	06:20	Ammonia	0.000	ppm
U203	06:20	VOC	0.000	ppb
301B	06:20	Ammonia	0.000	ppm
301B	06:20	VOC	0.000	ppb
301B	06:24	Ammonia	0.000	ppm
301B	06:24	VOC	0.000	ppb

Thursday July 27th, 2023 (SWIHD Survey 23-04933):

Readings:

U101	05:45	Ammonia	0.000	ppm
U101	05:45	VOC	0.000	ppb
U102	05:47	Ammonia	0.000	ppm
U102	05:47	VOC	0.000	ppb
U103	05:49	Ammonia	0.000	ppm
U103	05:49	VOC	0.000	ppb
U104	05:51	Ammonia	0.000	ppm
U104	05:51	VOC	0.000	ppb
U105	05:53	Ammonia	0.000	ppm
U105	05:53	VOC	0.000	ppb
U106	05:55	Ammonia	0.000	ppm
U106	05:55	VOC	0.000	ppb
U107	05:57	Ammonia	0.000	ppm
U107	05:57	VOC	0.000	ppb
U108	05:59	Ammonia	0.000	ppm
U108	05:59	VOC	0.000	ppb
U109	06:01	Ammonia	0.000	ppm
U109	06:01	VOC	0.000	ppb
U110	06:03	Ammonia	0.000	ppm
U110	06:03	VOC	0.000	ppb
U111	06:05	Ammonia	0.000	ppm
U111	06:05	VOC	0.000	ppb
U112	06:07	Ammonia	0.000	ppm
U112	06:07	VOC	0.000	ppb
U201	06:09	Ammonia	0.000	ppm
U201	06:09	VOC	0.000	ppb
U202	06:11	Ammonia	0.000	ppm
U202	06:11	VOC	0.000	ppb
U203	06:12	Ammonia	0.000	ppm
U203	06:12	VOC	0.000	ppb

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INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

U204 06:13 Ammonia 0.000 ppm
U204 06:13 VOC 0.000 ppb
U101 06:15 Ammonia 0.000 ppm
U101 06:15 VOC 0.000 ppb

SWIHD References:

TF-AOP-015 Event Response:
SWIHD IH DRI Monitoring Survey 23-04954 (07/27)

Fugitive Emissions Monitoring:
SWIHD IH DRI Monitoring Survey 23-04630 (07/24)

Exclusion Zone Monitoring (Week of 07/24-07/27):
SWIHD IH DRI Monitoring Survey 23-04797 (07/24)
SWIHD IH DRI Monitoring Survey 23-04858 (07/25)
SWIHD IH DRI Monitoring Survey 23-04888 (07/26)
SWIHD IH DRI Monitoring Survey 23-04933 (07/27)

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

Additional Information:

Weather conditions reported at 1300 hours on 07/27/2023, obtained from the Hanford Meteorological Station #21 indicated the following:

- Temperature: 88 degrees Fahrenheit
- Relative Humidity: 19%
- Wind Direction: out of the Southeast
- Wind Speed: 6 miles per hour
- Pressure: 29.15 in/Hg

Recommendations/Conclusions:

According to the data log from the alarming Ventis Pro Personal Ammonia Monitor, the device alarmed at 6 ppm and not at 9 ppm as initially reported. After reviewing the data log from the event initiating device, there were three instances where ammonia concentration readings increased sporadically. All of these instances occurred inside the change trailer, where no ammonia source is present. After reviewing the alarm history from the device, there was one previous instance of an alarm where no ammonia source was identified. If another similar alarm event occurs with this device, it would be recommended that this device be removed and sent to the manufacturer for service.

Also, after reviewing the data logs from all the Ventis Pro Personal Ammonia monitors in the Contamination Area near the worker with the alarming device, no peak readings were recorded above 0 ppm and none of the reported peak readings of 3 ppm and 4 ppm were recorded.

Industrial Hygiene contacted the manufacturer (Industrial Scientific) representative to confirm that if a reading above 0 ppm had been reached, the data log would reflect this reading despite the instrument creating a 10-second average. The resulting data logs from all the devices nearby the event-initiating device reading 0 ppm Ammonia suggests that the alarming device is likely the result of a possible instrument malfunction or sensor impingement.

After review of the calibration and sensor bump schedule from the Ventis Pros that were distributed to the work crew, it was discovered that the sensors received a bump (a sensor response test that exposes the sensor to Ammonia gas to ensure the sensor is responding accordingly) the day prior to the event. Due to the propensity of Ammonia gas to linger, it is likely that after the bump test when the instrument was turned on it registered a peak reading. This would explain why the peak is not recorded in the data log, as the Ventis Pros were not yet checked out.

To test this hypothesis, [REDACTED] performed a quick test on August 1st and 2nd. The steps of the test were as follows:

- On evening of August 1st, docked several Ventis Pro5 devices in 2704HV lab until 5 devices with automatic bump test and 5 devices with automatic calibration were obtained.

Washington River Protection Solutions
INDUSTRIAL HYGIENE EVENT INVESTIGATION REPORT(Continued)

Recommendations/Conclusions:

- Allowed all 10 devices to shutoff automatically upon removing from dock.
- Retained Ventis devices in office overnight.
- Started up all 10 devices the next day (replicating conditions of July 27 event) and checked the peak reading value.
- In all ten cases, the instruments had a peak reading of 3-5 ppm, even though they all read 0 ppm the entire time they were turned on August 2nd.

This confirmed the hypothesis that for the first use after bump test or calibration, devices will have a peak reading of 3-5 ppm NH3 even though they have never been exposed to ammonia outside the docking station. The reason for this behavior is as follows:

- When a device is bump tested or calibrated, it is turned on in the docking station and exposed to ammonia. The alarm is turned off so that an audible alarm is not heard while in the docking station.
- Upon removing the device from the docking station, residual ammonia is on the sensor and the device will show 3-5 ppm. During the few seconds between when a device is removed from the dock and it automatically shuts off, the internal memory of the device records a peak reading.
- This peak reading is retained until a higher ammonia concentration is experienced by the sensor or the device is re-docked, in which case the peak reading is zero'd.

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. Considering workers were staged in the U-Farm change trailer at the time of the alarm, it is unlikely the alarm value is a response to changing conditions of tank farm chemical vapor.

Other:

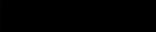
All involved workers were offered and declined precautionary medical surveillance. Five workers reported symptoms and reported to onside medical provider, however all workers were later released to work with no restrictions. Two of these workers reported that the questions on the odor response card were unclear, and that they did not intend to check symptoms. Many other workers identified that it is unclear how to fill out the response card for odors when the initiation of AOP-015 is for alarming devices and not reported odors.

See Event Investigation Report #2023-056 for additional information.

Industrial Hygienist:

 _____ <i>Print First and Last Name</i>	 _____ <i>Signature / Date</i>
	<small>Digitally signed by  Date: 2023.08.16 11:09:12 -07'00'</small>

Industrial Hygiene Level 2 Manager:

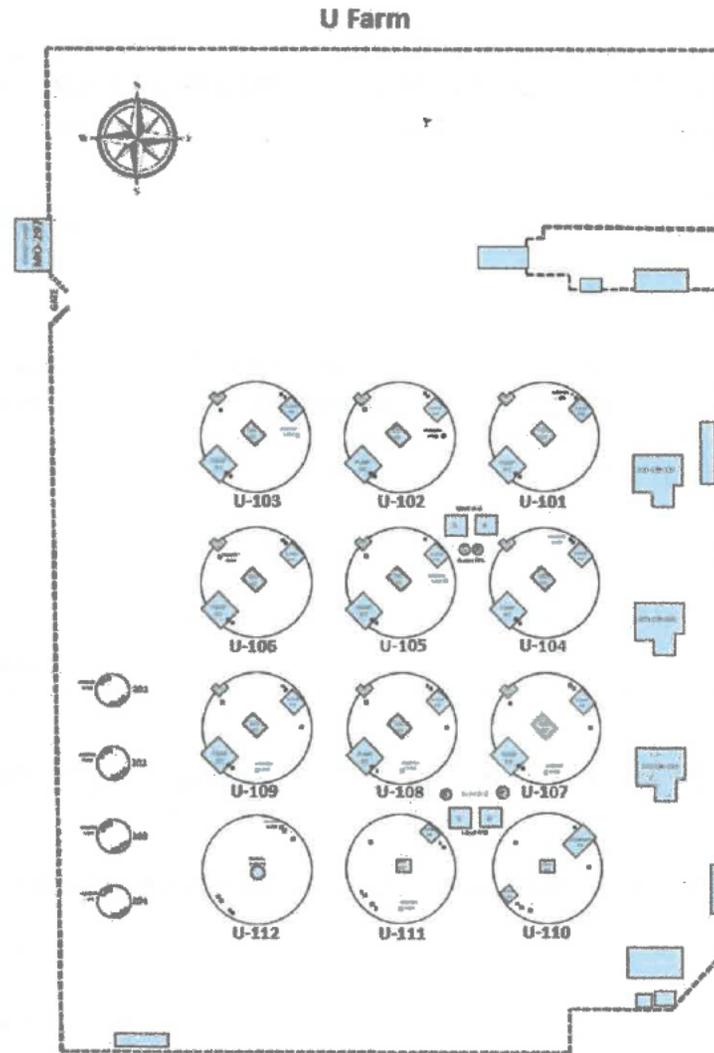
 _____ <i>Print First and Last Name</i>	 _____ <i>Signature / Date</i>
	<small>Digitally signed by  Date: 2023.08.17 08:17:27 -07'00'</small>

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7-27-23
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing: [REDACTED] on Break from CAS Truck
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction): _____
- Name(s) of others in or near the affected area: _____
- Was Industrial Hygiene present, who? _____
- 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 type="checkbox"/> Other (describe): _____					
- Is source known/likely? Describe: No odor
- 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): _____				

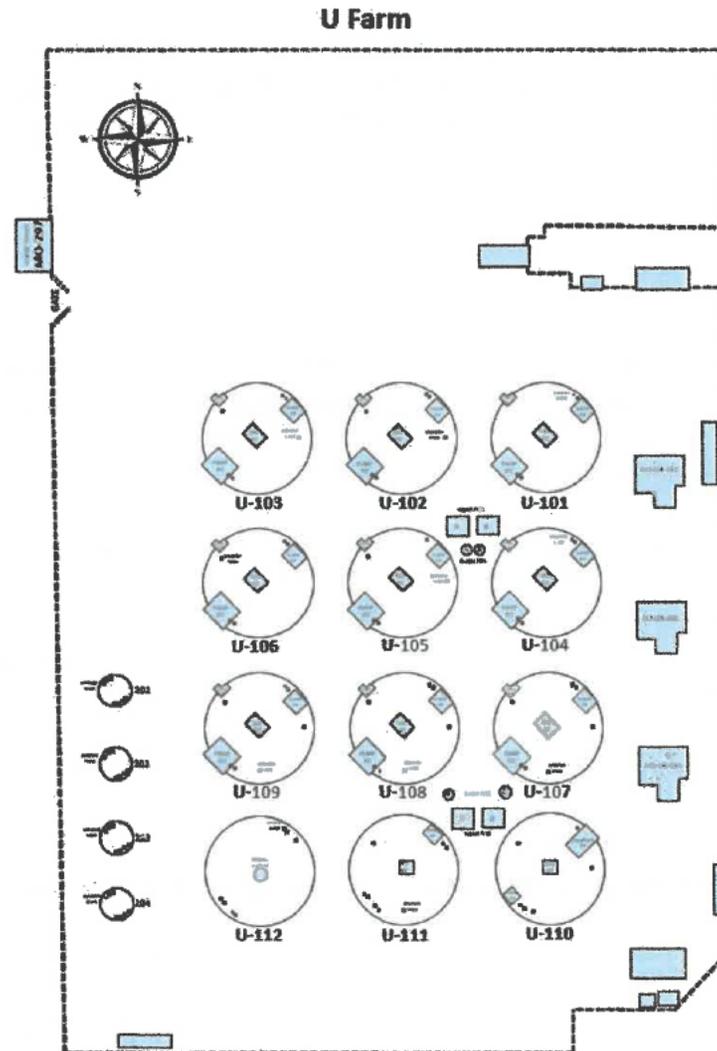
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7-27-23 11:55 AM
- 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 in the change trailer on Break
- Other work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
Change trailer
- Name(s) of others in or near the affected area:
Whole crew
- Was Industrial Hygiene present, who?
Yes
- 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): _____

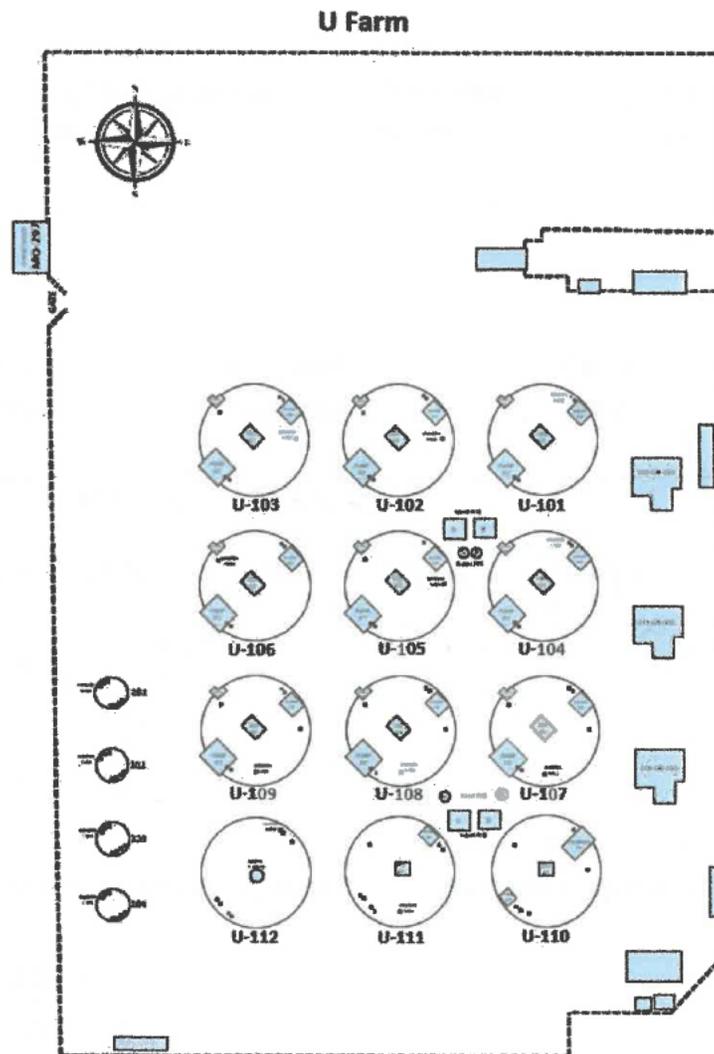
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ODOR/VAPOR RESPONSE CARD - 241 U FARM

Instructions:

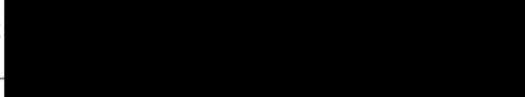
1. Notify Immediate Supervisor.
2. Contact Central Shift Manager (CSM), at [REDACTED]
3. Complete both pages of this form and include as many details as possible, including:
 - a. Approximate location, see map at right;
 - b. Wind direction, speed and description, such as stable or gusty wind;
 - c. 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 U FARM

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

- Date and time of event: 7-27-23 - 11:55 AM
- 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: break time
- Location of event (mark area on map and wind direction): Change Trailer CA side
- Name(s) of others in or near the affected area: Fowler crew HPTs IH
- Was Industrial Hygiene present, who? Yea they were
- Describe the odor:
 Sweet Sour Smoky Septic/Sewer Musty Rotten
 Metallic Onion Earthy Ammonia Citrus Solvent
 Other (describe): Nothing
- 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):

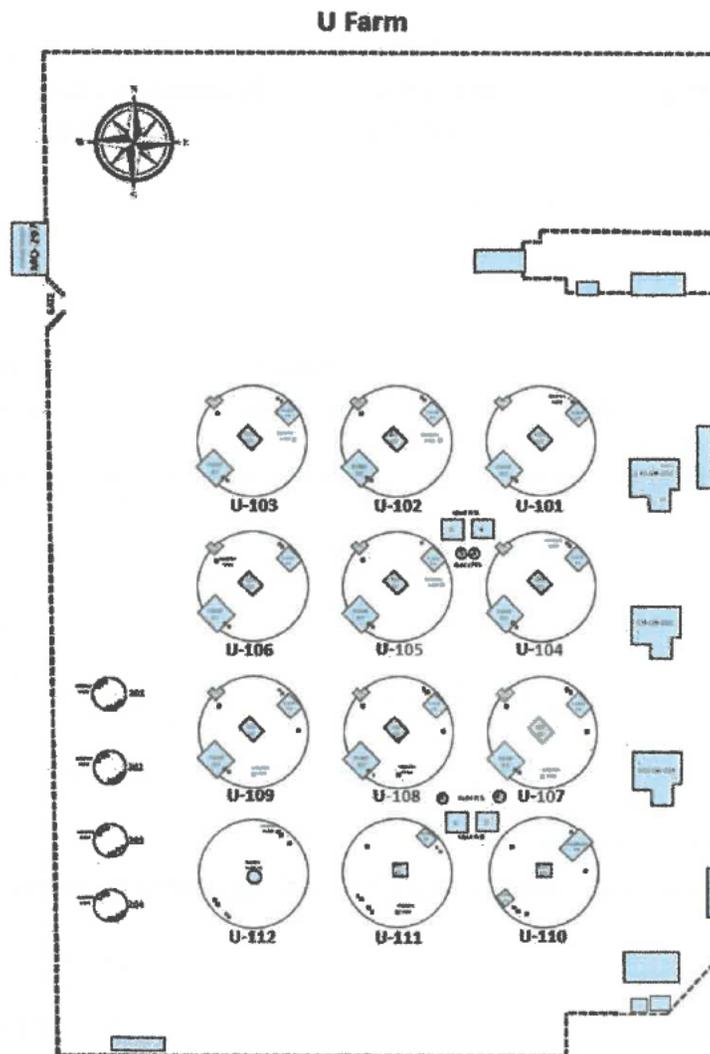
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ODOR/VAPOR RESPONSE CARD - 241 U FARM

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 U FARM

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

• Date and time of event: 7.27.23 / 11:55

• Check Applicable:

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

• Your name and the work you were performing:

[Redacted] was in CA Doffing

• Other Work Underway? Describe:

People still in farm working and people coming out for break

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

Inside of Change trailer

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

Co-workers

• Was Industrial Hygiene present, who?

Yes, but don't know name

• Describe the odor:

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

• Is source known/likely? Describe:

N/A

• Your symptoms? None

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

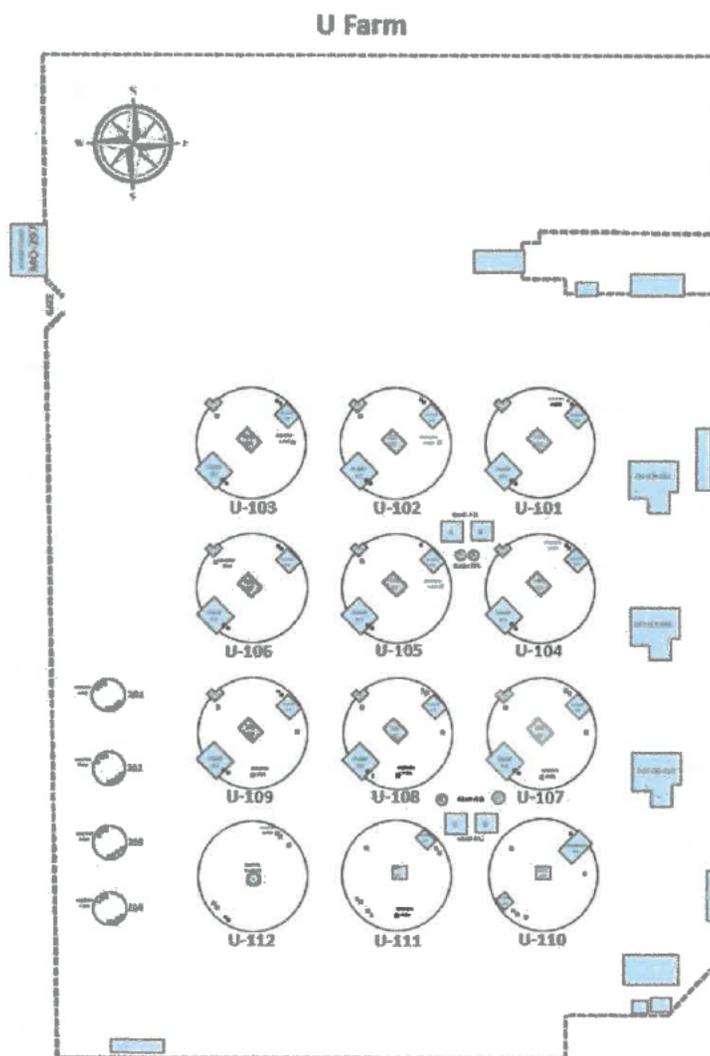
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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.
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ODOR/VAPOR RESPONSE CARD - 241 U FARM

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

• Date and time of event: 7-27-23 11:55

• Check Applicable:

- Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): 3

• Your name and the work you were performing: [REDACTED]

• Other Work Underway? Describe:

• Location of event (mark area on map and wind direction): Change trailer CA side

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

• Was Industrial Hygiene present, who? yes

• 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):

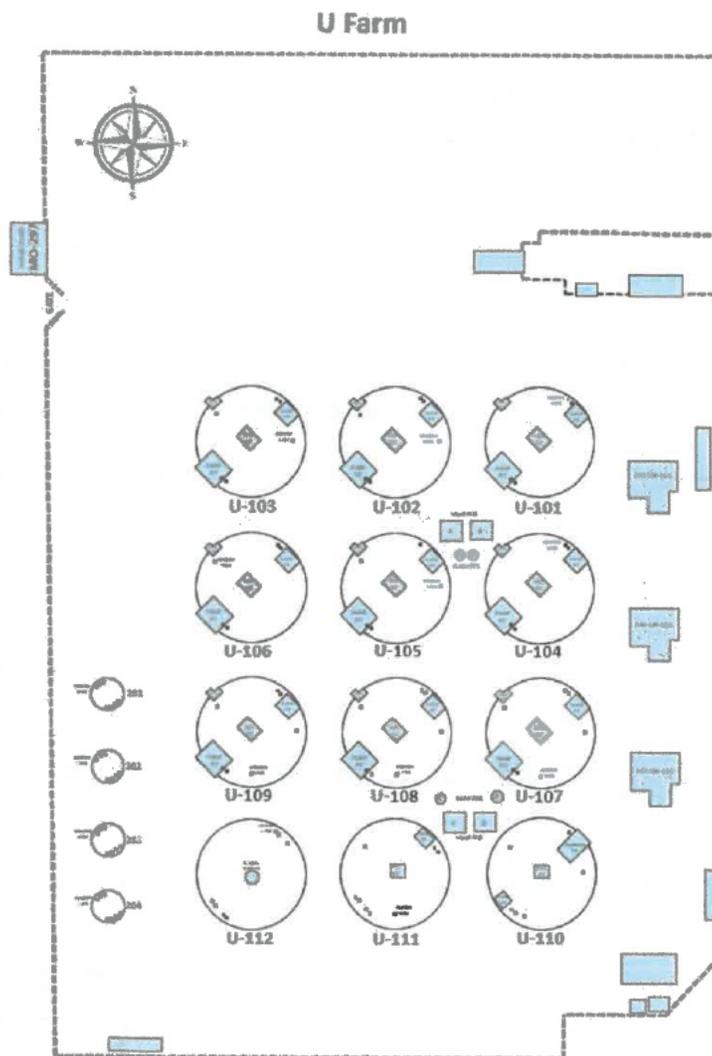
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7/27/23 12:35pm
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] - taking break in change trailer.
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
Change trailer
- Name(s) of others in or near the affected area: _____
- Was Industrial Hygiene present, who?
Yes
- 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 type="checkbox"/> Other (describe): _____					
- Is source known/likely? Describe: N/A
- 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): _____				

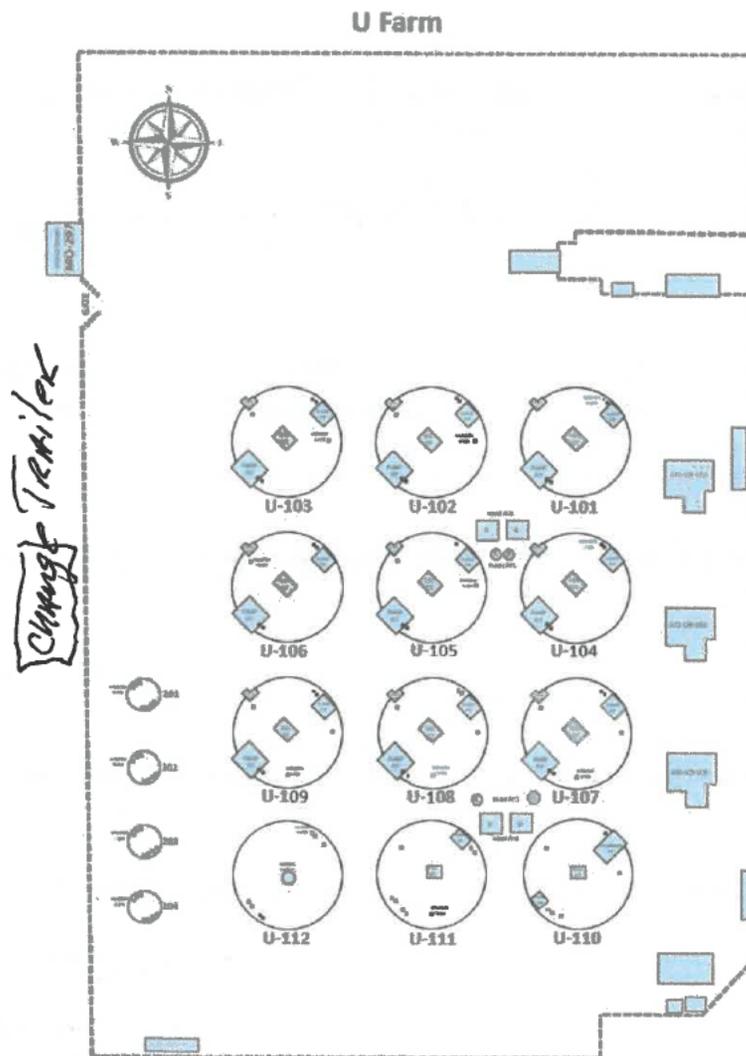
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

• Date and time of event: 7/27/2023 11:55 AM

• Check Applicable:

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

• Your name and the work you were performing:

[REDACTED] on Break in change TRAILER

• Other Work Underway? Describe:

NONE

• 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?

yes

• Describe the odor:

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

• Is source known/likely? Describe:

Didn't smell anything

• Your symptoms? None

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

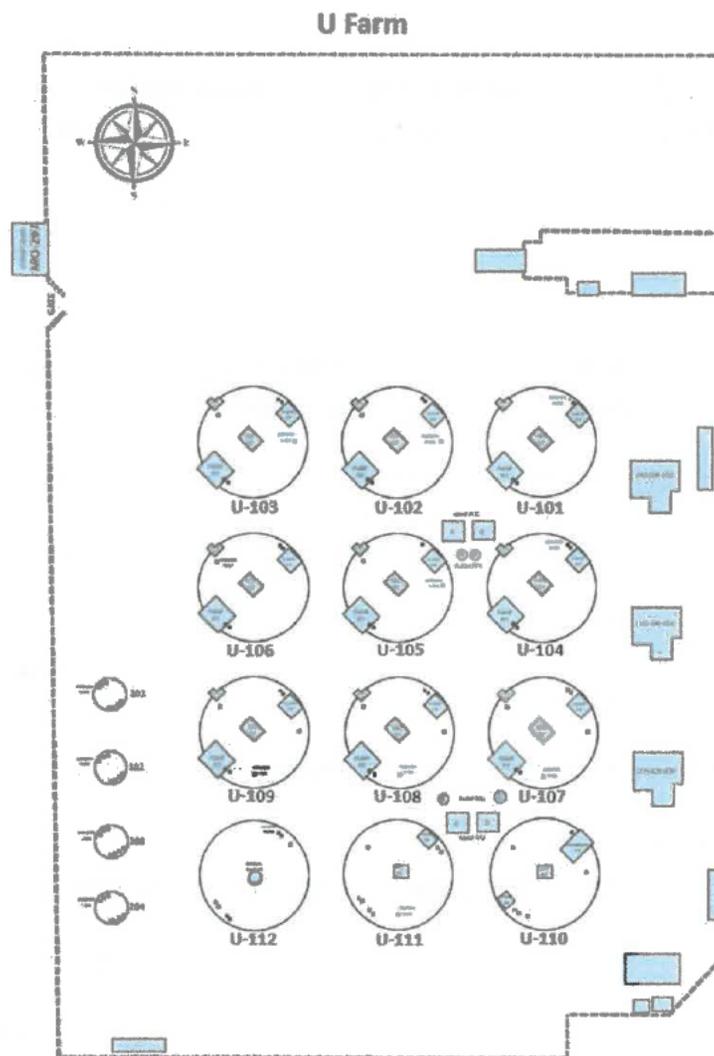
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7-27-23 11:53 AM
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[redacted] in the change trailer
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
change trailer
- Name(s) of others in or near the affected area: _____
- Was Industrial Hygiene present, who? _____
- 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): _____

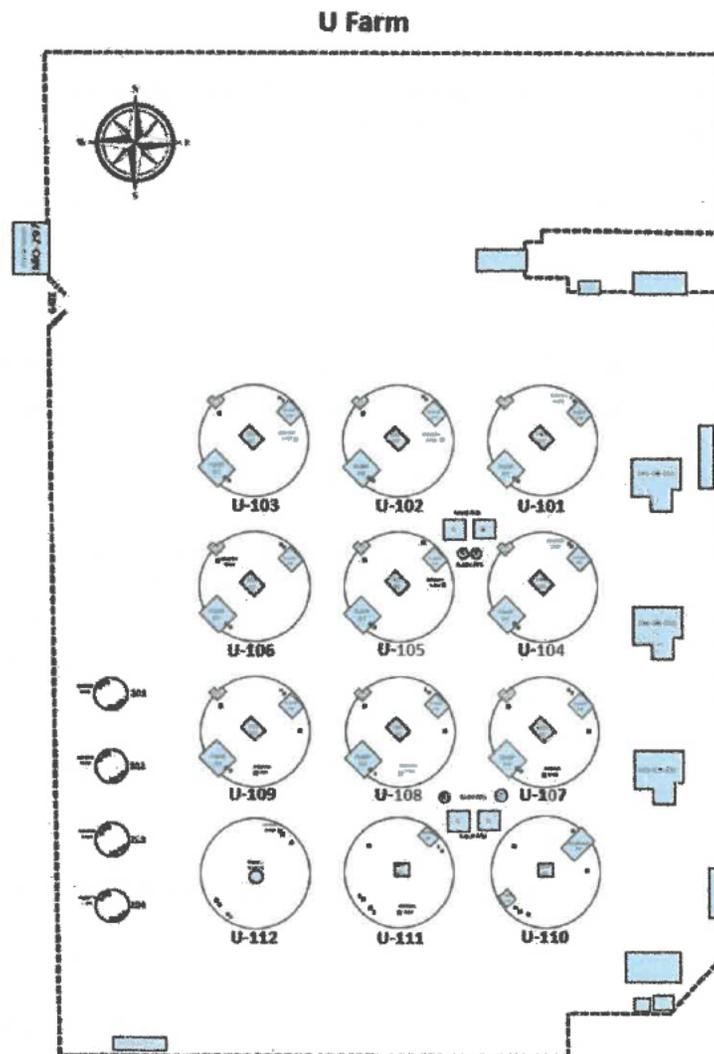
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7/27/23 11:55
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm)
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): 9
- Your name and the work you were performing: [redacted] in change trailer
- Other Work Underway? Describe: shoveling, Raking etc...
- Location of event (mark area on map and wind direction): change trailer
- Name(s) of others in or near the affected area [redacted]
- Was Industrial Hygiene present, who? YLS
- 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):

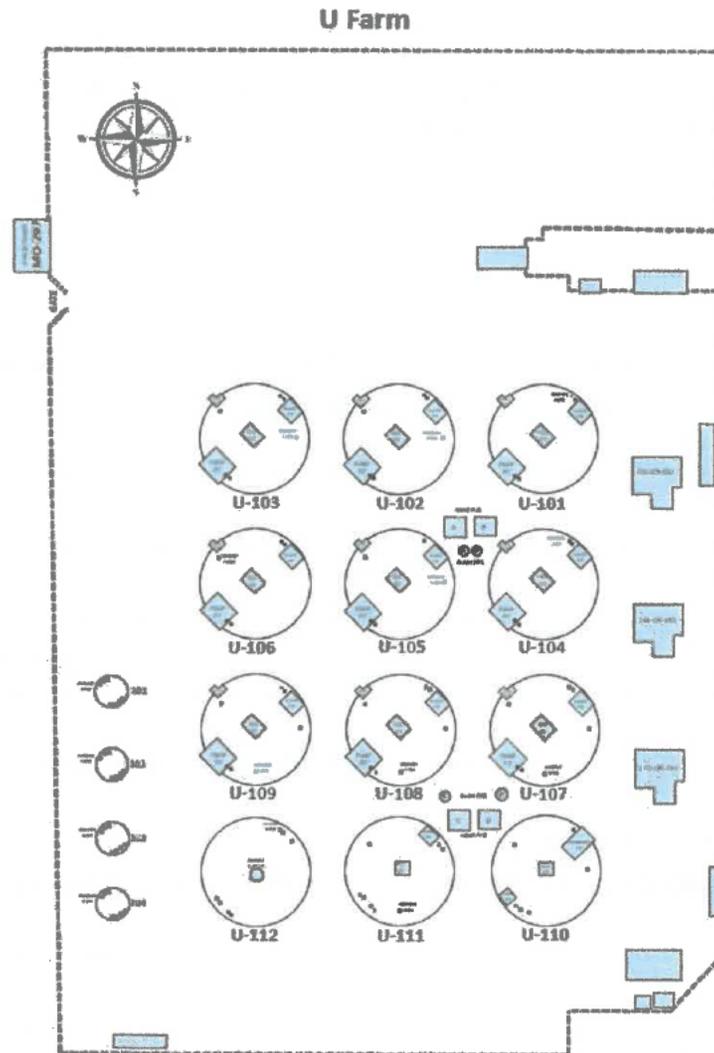
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

• Date and time of event: 7/27/23 11:55 am

• Check Applicable:

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

• Your name and the work you were performing:

[Redacted] on break in change trailer

• Other Work Underway? Describe:

None/N/A

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

Change trailer

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

[Redacted]

• Was Industrial Hygiene present, who?

Yes

• 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): _____

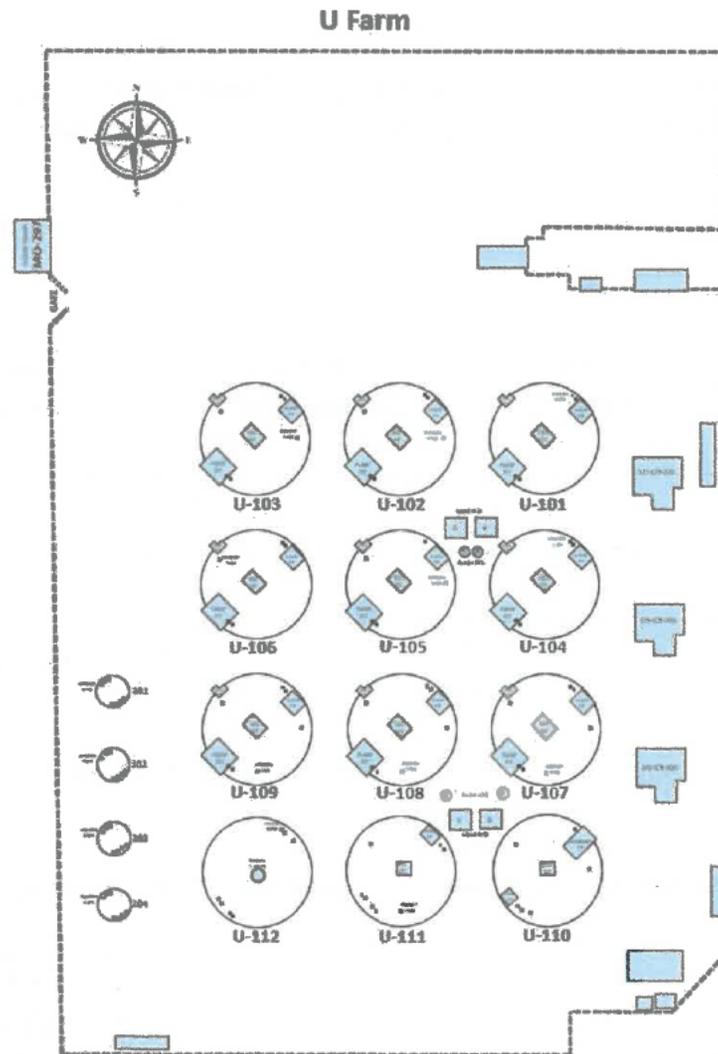
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7-27-23 11:45 AM
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): 4
- Your name and the work you were performing: [Redacted] U Farm CA Change Trailer
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction): CA Change Trailer
- Name(s) of others in or near the affected area: [Redacted]
- Was Industrial Hygiene present, who? YES
- 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.

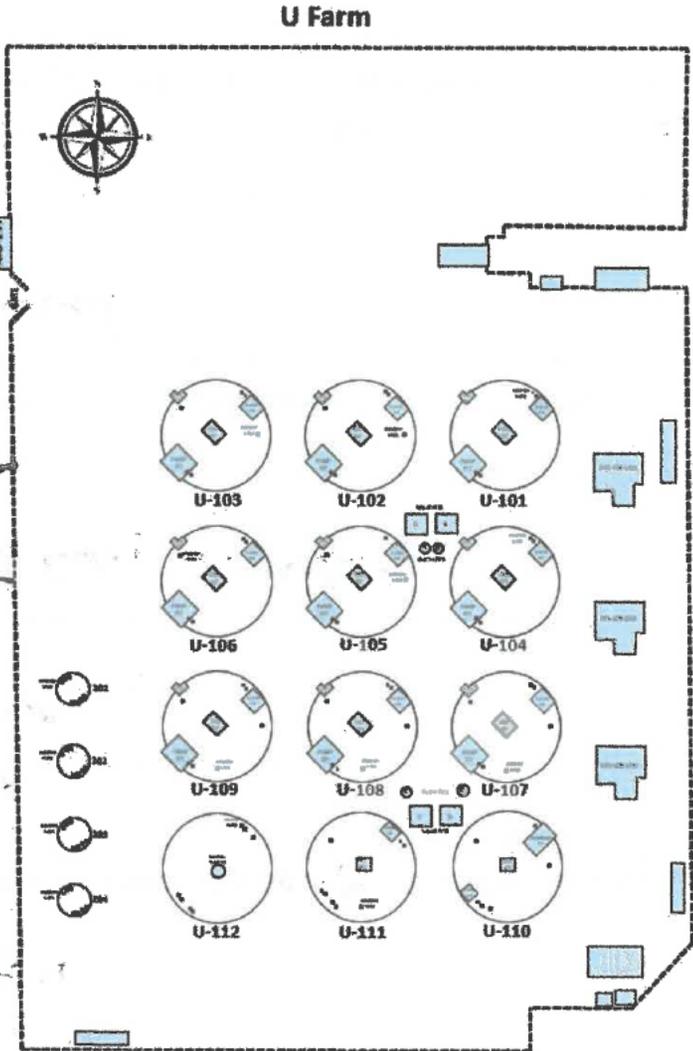
ODOR/VAPOR RESPONSE CARD - 241 U FARM

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.

Mo-2-19-17



ODOR/VAPOR RESPONSE CARD - 241 U FARM

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

• Date and time of event: 7/27/23 12:00 A.M

• Check Applicable:

Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): 9 ppm

• You were performing: HPT SOP

• Other Work underway? Describe: U-Farm pavement prep

• Location of event (mark area on map and wind direction): Mo-2194

• Name(s) of others in, or near the affected area: 25+ individuals in trailer

• Was Industrial Hygiene present, who? Yes,

• Describe the odor:

Sweet Sour Smoky Septic/Sewer Musty Rotten
 Metallic Onion Earthy Ammonia Citrus Solvent
 Other (describe): No odor smelled

• 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):

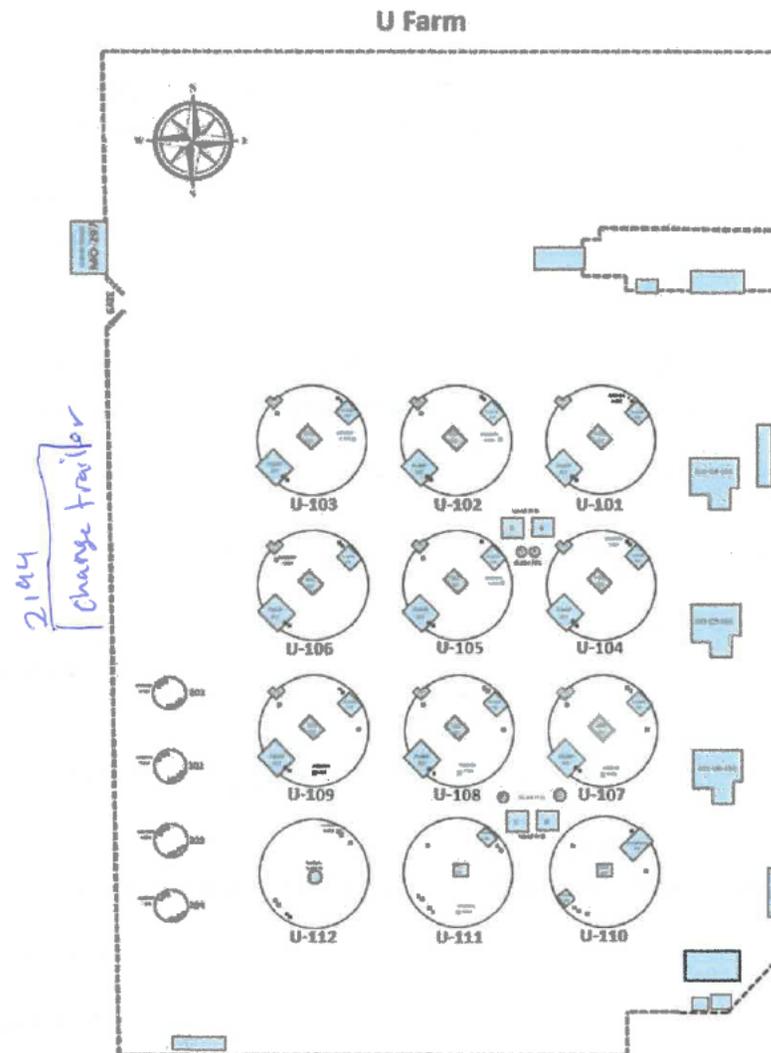
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 11:55 7-27-23
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] standing in cheese trailer
- Other Work Underway? Describe:
N/A
- Location of event (mark area on map and wind direction):
U-farm cheese trailer
- Name(s) of others in or near the affected area: [REDACTED]
multiple
- Was Industrial Hygiene present, who?

- Describe the odor:
 Sweet Sour Smoky Septic/Sewer Musty Rotten
 Metallic Onion Earthy Ammonia Citrus Solvent
 Other (describe): no odor
- 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.

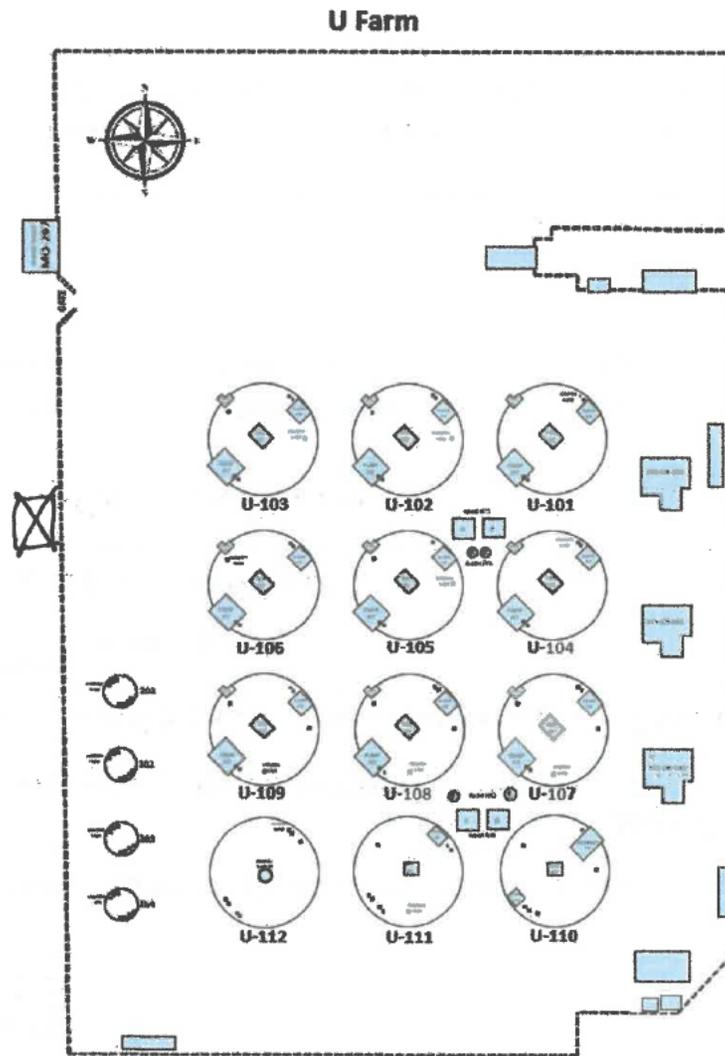
ODOR/VAPOR RESPONSE CARD - 241 U FARM

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.

↑
WIND



ODOR/VAPOR RESPONSE CARD - 241 U FARM

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

- Date and time of event: 7-27-23 1155
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): N/A
- Your name and the work you were performing:
[REDACTED] PREPARING TO ENTER FARM.
- Other Work Underway? Describe: GETTING DRESSED IN CHANGE TRAILER
- Location of event (mark area on map and wind direction): MO-2194
- Name(s) of others in or near the affected area: [REDACTED]
- Was Industrial Hygiene present, who? YES. [REDACTED]
- Describe the odor:
 Sweet Sour Smoky Septic/Sewer Musty Rotten
 Metallic Onion Earthy Ammonia Citrus Solvent
 Other (describe): NONE.
- 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):

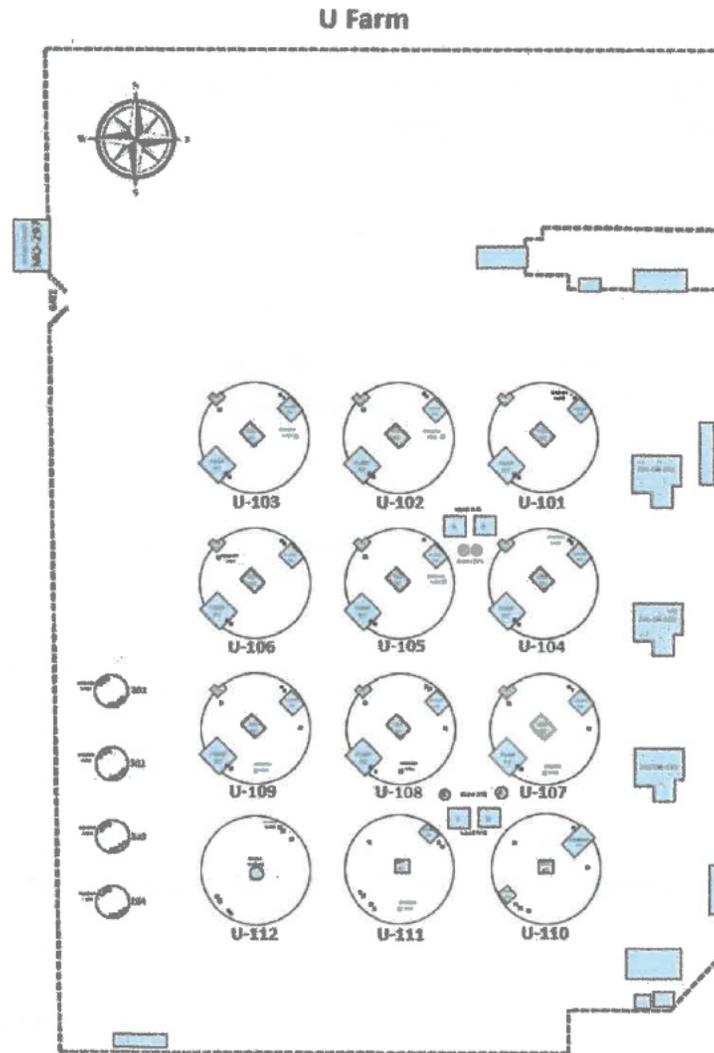
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 12/18
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] HPT stop off pad duties
- Other Work Underway? Describe:
N/A
- Location of event (mark area on map and wind direction):
MO-2199
- Name(s) of others in or near the affected area:
N/A
- Was Industrial Hygiene present, who? [REDACTED]
yes
- 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>N/A</u>					
- 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): _____				

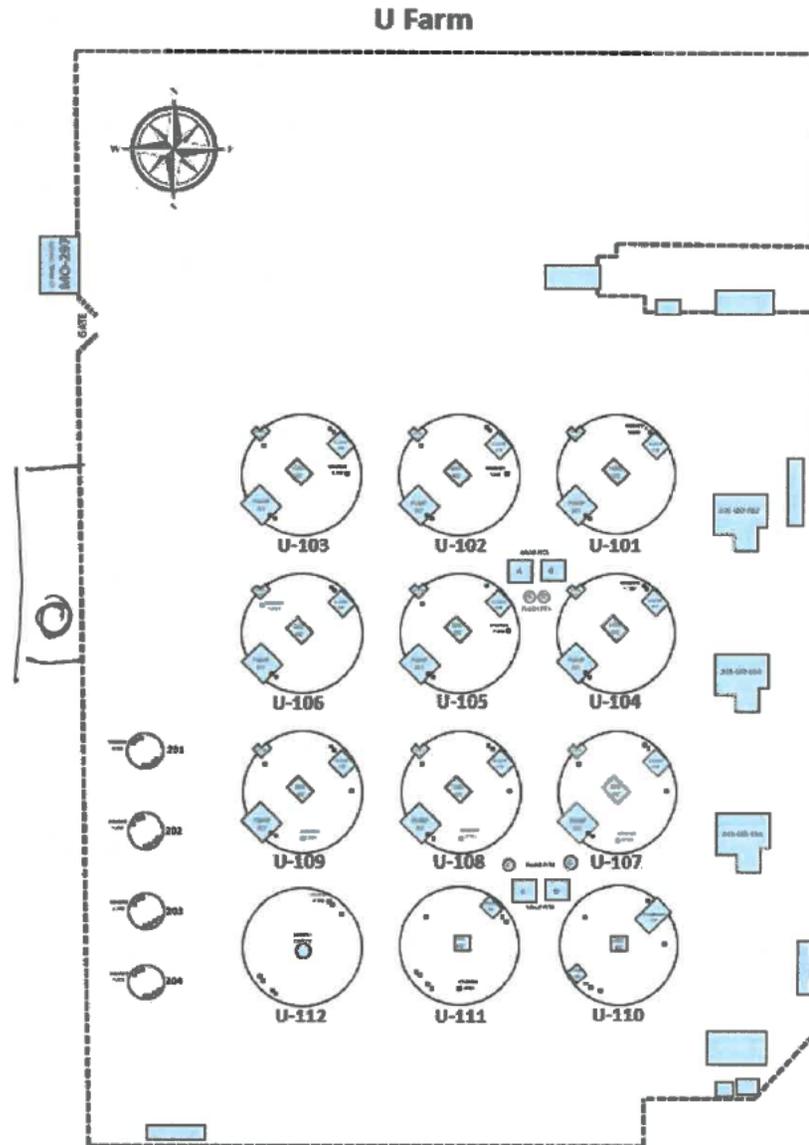
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7/27/23 1150
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm) ^{3.4/21/25}
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): N/A
- Work you were performing: IHT Monitoring
- Other Work Underway? Describe: Break between gravel leveling
- Location of event (mark area on map and wind direction): MO 2194
- Name(s) of others in or near the affected area:
- Was Industrial Hygiene present, who?
- Describe the odor:
 - Sweet
 - Sour
 - Smoky
 - Septic/Sewer
 - Musty
 - Rotten
 - Metallic
 - Onion
 - Earthy
 - Ammonia
 - Citrus
 - Solvent
 - Other (describe): None
- Is source known/likely? Describe: No ^{confirmed 2 personnel}
- Your symptoms? None
 - Headache
 - Dizziness
 - Nausea
 - Cough
 - Fatigue
 - Weakness
 - Sore Throat
 - Difficulty Breathing
 - Eye Irritation
 - Rash
 - Itch
 - Tingling
 - Numbness
 - Taste
 - Other (describe):

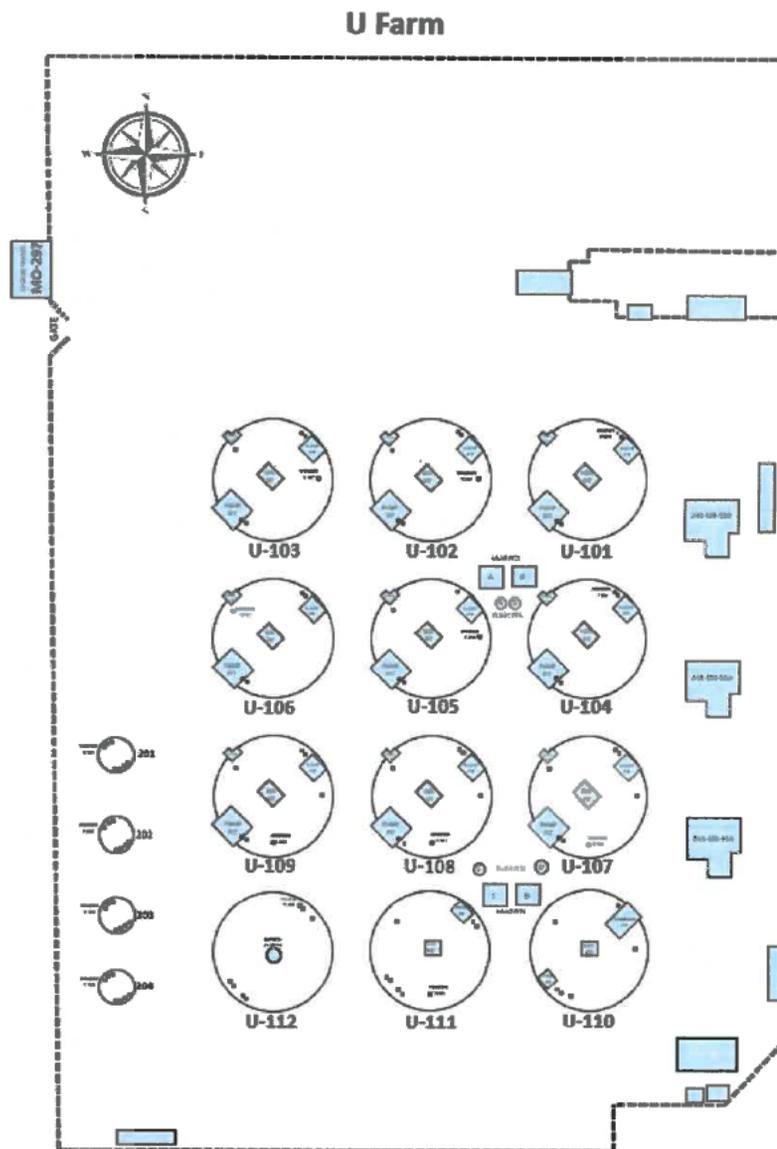
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 is provided to the CSM.



ODOR/VAPOR RESPONSE CARD - 241 U FARM

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

- Date and time of event: 7/27/23 1150 AM
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm)
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): Elevated levels (3 ppm)
- Your name and the work you were performing:
[REDACTED] IHT Monitoring [REDACTED]
- Other Work Underway? Describe:

- Location of event (mark area on map and wind direction):
MO-297
- Name(s) of others in or near the affected area:
U-FARM work crew
- Was Industrial Hygiene present, who?
Yes [REDACTED]
- Describe the odor:
 - Sweet
 - Sour
 - Smoky
 - Septic/Sewer
 - Musty
 - Rotten
 - Metallic
 - Onion
 - Earthy
 - Ammonia
 - Citrus
 - Solvent
 - Other (describe): None
- Is source known/likely? Describe:
[REDACTED] confirmed personnel
- 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 U 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 U FARM

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

• Date and time of event: 07/27/23 11:55am

• Check Applicable:

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

• Your name and the work you were performing:

 undressing

• Other Work Underway: Describe: _____

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

Change trailers

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

CO workers

• Was Industrial Hygiene present, who?

Yes, don't know names

• 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.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 11:38 AM
- Check Applicable:
 - Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): DID NOT ALARM PEAKED AT 9 PPM
- Your name and the work you were performing:
[REDACTED] was on break in change trailer
- Other work underway? Describe:
NONE RESTING
- Location of event (mark area on map and wind direction):
INSIDE A FARM change trailer
- Name(s) of others in or near the affected area:
[REDACTED]
- Was Industrial Hygiene present, who?
Don't know their names Yes
- Describe the odor:

<input type="checkbox"/> Sweet	<input type="checkbox"/> Sour	<input type="checkbox"/> Smoky	<input type="checkbox"/> Septic/Sewer	<input checked="" type="checkbox"/> Musty	<input type="checkbox"/> Rotten
<input type="checkbox"/> Metallic	<input type="checkbox"/> Onion	<input checked="" 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: NO
- 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):				

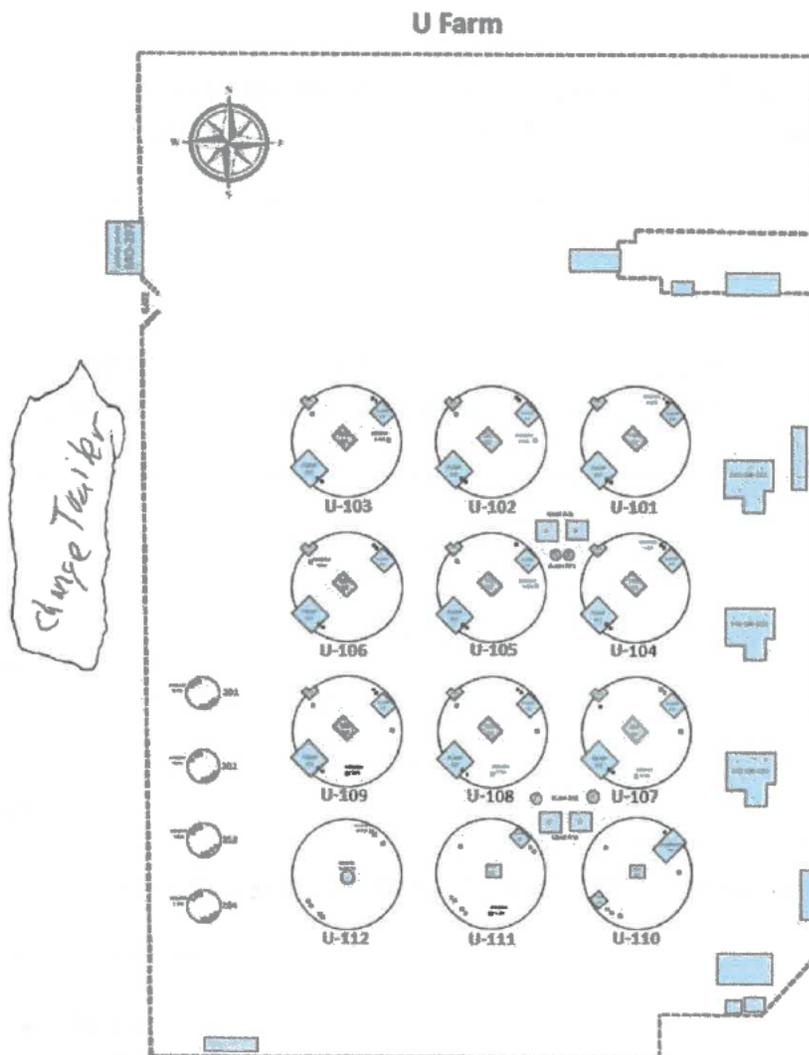
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

Date and time of event: 07-27-23 11:55

Check Applicable:

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

Your name and the work you were performing: Laborer [redacted]

Other Work Underway? Describe: Change Trailer

Location of event (mark area on map and wind direction): [redacted]

Name(s) of others in or near the affected area: [redacted]

Was Industrial Hygiene present, who?

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):

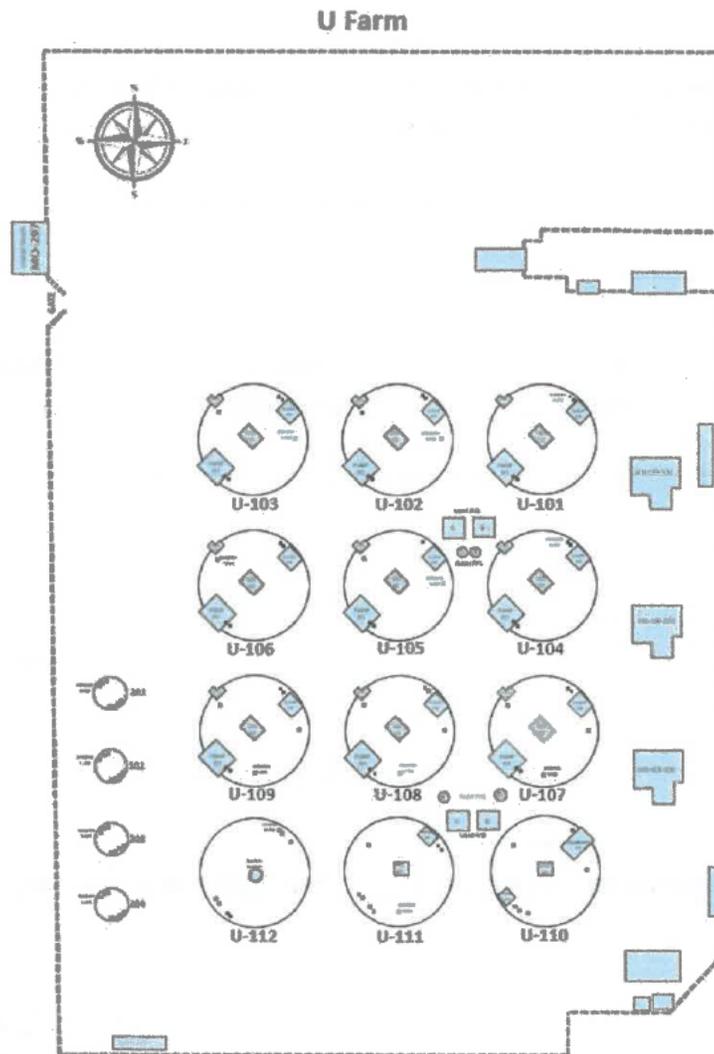
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7/27/23 11:55 am
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[REDACTED] Change Trailer
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
U-Farm
- Name(s) of others in or near the affected area: _____
- Was Industrial Hygiene present, who?
yes
- 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 type="checkbox"/> Other (describe): _____					
- Is source known/likely? Describe:
no
- Your symptoms? None

<input checked="" 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): _____				

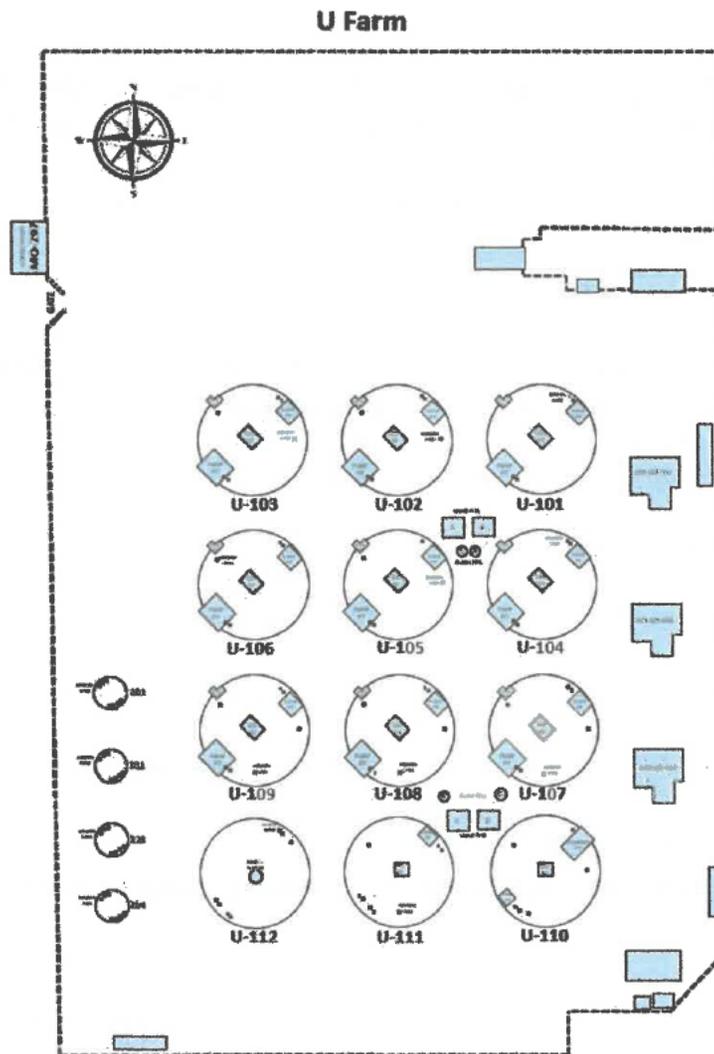
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 7/27/23 11:55 am
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): Someise vents pro
- Your name and the work you were performing:
[REDACTED] Docking out
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
Changlay Trailer
- Name(s) of others in or near the affected area:
Co-workers
- Was Industrial Hygiene present, who?
YES do NOT know NAME
- Describe the odor:
 Sweet Sour Smoky Septic/Sewer Musty Rotten
 Metallic Onion Earthy Ammonia Citrus Solvent
 Other (describe): _____
- Is source known/likely? Describe: N/A
- 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 U 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.

Change Trailer



ODOR/VAPOR RESPONSE CARD - 241 U FARM

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

- Date and time of event: 7-27-2023 11:55 AM
- Check Applicable:
 - Odor
 - Ammonia Alarm (6 ppm)
 - Ammonia Alarm (12 ppm)
 - Alarm (other - describe): Alarm 4 and over
- Your name and the work you were performing: operating George Buggs [redacted]
- Other Work Underway? Describe: Grading, Raking and Mini Escavator
- Location of event (mark area on map and wind direction): East Charger Trailer
- Name(s) of others in or near the affected area: ~~It was present~~ The whole crew
- Was Industrial Hygiene present, who? It was present
- Describe the odor:
 - Sweet
 - Sour
 - Smoky
 - Septic/Sewer
 - Musty
 - Rotten
 - Metallic
 - Onion
 - Earthy
 - Ammonia
 - Citrus
 - Solvent
 - Other (describe): did not smell anything
- 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

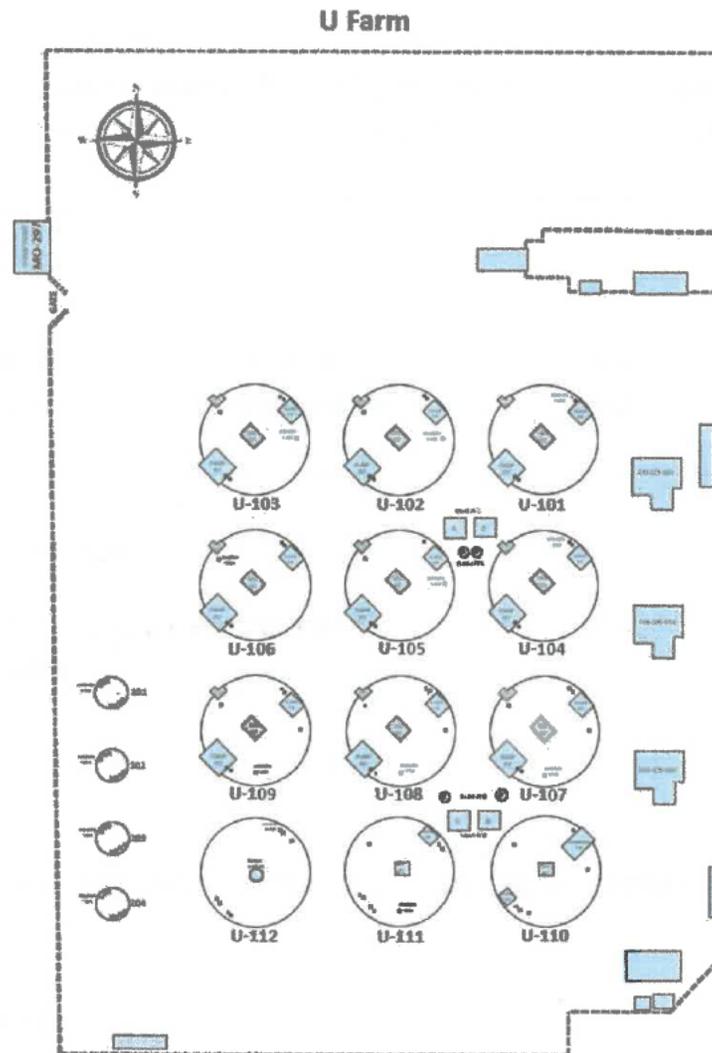
2. Provide this completed card (Page 1 & 2) to Supervisor, Industrial Hygiene, your Union Safety Representative or the CSM. If received by Supervisor/IH/U-SR, Supervisor/IH/U-SR will ensure card is provided to the CSM.

ODOR/VAPOR RESPONSE CARD - 241 U 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 U FARM

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

- Date and time of event: 11:55
- Check Applicable:
 Odor Ammonia Alarm (6 ppm) Ammonia Alarm (12 ppm) Alarm (other - describe): _____
- Your name and the work you were performing:
[Redacted] labor work
- Other Work Underway? Describe: _____
- Location of event (mark area on map and wind direction):
Change trailers
- Name(s) of others in or near the affected area:
Coworkers
- Was Industrial Hygiene present, who?
Yes
- 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 type="checkbox"/> Other (describe): _____					
- 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 checked="" 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.