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: Construction - American Electric **Date:** May 25, 2022

Area/Building/Location: 200 East/A Farm/North of A104&A105 Tanks **Approximate Time of Event:** 1245

AR Number: WRPS-AR-2022-1781 **Responsible Manager:** [redacted]

EIR Number: EIR-2022-044 **Event Investigator:** [redacted]

EVENT SUMMARY PART II

Key Elements of the Investigation *(Key investigation points)*:

From the Industrial Hygiene Investigation Report (IHIR-00039):

At the time of the initiating event the employee who's personal ammonia monitor alarmed was wearing Respiratory Protection Equipment in accordance with the Management Directed Respiratory Protection Form "MDRPF-PLN-173" Task 1: Full Face Air Purifying Respirator (FF-APR) with Gas/Vapor cartridges (MSA GME Chemical Vapor) while sitting in the cab of a crane at 241-A Farm.

Additional Information on the Personal Ammonia Monitors (ToxiRAEs):

The ToxiRAE response time (t90), the time needed for the ToxiRAE to read 90% full-scale of the true concentration of ammonia, is 60 seconds. Blocking the gas inlet of the ToxiRAE, high humidity, and/or water droplets can disturb gas diffusion into the sensor, leading to false readings. The Wearable Ammonia Detector Field Trial report (RPP-RPT-61096) stated that false positive concentration readings (positive bias) can be expected up to 4 ppm with the ToxiRAE Pro.
ToxiRAE 003378 (event initiating ToxiRAE):

- Put into service on 04/16/2019
- Unit Name: ToxiRAE Pro (PGM-1860)
- Unit Serial Number (SN): G024010694
- User ID: USER0000
- Measure Type: Real
- Datalog Mode: Continuous
- Datalog Type: Auto
- Sample Period: 60 seconds

05/25/2022 @ approximately 1328: Production Operations Industrial Hygiene Technician Supervisor tested the Personal Ammonia Monitor sensor, prior to bump test and datalog download. Personal ammonia monitor alarmed in less than 10 seconds after a finger was placed over instrument inlet. This resulted in a peak of 6 ppm on the datalog at 1328, and is indicative of a sensor beginning to fail.

Review of the Data Fusion and Advisor System (DFAS) application for weather details and the Vapor Monitoring Detection System (VMDS) at 1240 on 5/25/22, indicate the cause of the Personal Ammonia Monitor alarm is unlikely to be from Tank Farm Exhauster emissions based on:

- Wind Speed: 6.9 mph
- Wind Direction: 240° (out of Southwest)
- Mixing Height: 1300 feet above grade
- Stability Class: F/G (moderately stable conditions/extremely stable)
- POR126 VMDS: 0 ppm ammonia
- POR127 VMDS: 36 ppm ammonia
- POR518 VMDS: 6 ppm ammonia
- POR519 VMDS: 0 ppm ammonia
- 702AZ VMDS: 29 ppm ammonia

The Event Initiating Personal Ammonia Monitor (ToxiRAE 003378) continued to operate normally and within specifications (passed bump test) after the initiating event. Additional testing revealed that the Event Initiating Personal Ammonia Monitor (ToxiRAE 003378) was easily induced to produce false positive results when the sensor was covered.

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EVENT SUMMARY (Continued)

Project: Construction - American Electric **Date:** May 25, 2022

Area/Building/Location: 200 East/A Farm/North of A104&A105 Tanks **Approximate Time of Event:** 1245

AR Number: WRPS-AR-2022-1781 **Responsible Manager:** [redacted]

EIR Number: EIR-2022-044 **Event Investigator:** [redacted]

Key Elements of the Investigation *(Key investigation points)*:

The Personal Ammonia Monitor alarm event was most likely the result of the ToxiRAE sensor becoming overly sensitive to environmental stimuli/conditions, and not an indication of changing conditions or an employee chemical exposure event. Review of the Data Fusion and Advisor System (DFAS) application, powered by SmartSite™, Weather Details dashboard for the reported time of the Event, and the Vapor Monitoring Detection System (VMDS) indicate the cause of the Personal Ammonia Monitor alarm is unlikely to be from Tank Farm Exhauster emissions.

[All personnel present at the alarm event were offered voluntary medical examination, but declined.]

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.

- ☐ 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:

The Industrial Hygiene Investigation Report (IHIR-00039) has determined that the Personal Ammonia Monitor alarm event was most likely the result of the ToxiRAE sensor becoming overly sensitive to environmental stimuli/conditions, and not an indication of changing conditions or an employee chemical exposure event. Review of the Data Fusion and Advisor System (DFAS) application, powered by SmartSite™, Weather Details dashboard for the reported time of the Event, and the Vapor Monitoring Detection System (VMDS) indicate the cause of the Personal Ammonia Monitor alarm is unlikely to be from Tank Farm Exhauster emissions.

It is recommended that the results of the investigation and the causes of the alarms are communicated to the workers whose Personal Ammonia Monitors (ToxiRAEs) alarmed.

The event investigation process will be exited.

Responsible Manager:

[redacted]	[redacted] Digitally signed by [redacted] Date: 2022.06.07 12:18:52 -07'00'
Print First and Last Name	*Signature / Date*

CAS Manager:

[redacted]	[redacted] Digitally signed by [redacted] Date: 2022.06.07 12:22:31 -07'00'
Print First and Last Name	*Signature / Date*

* Depending on which Part of the form is shown, Part 1 or Part 2 can be hidden