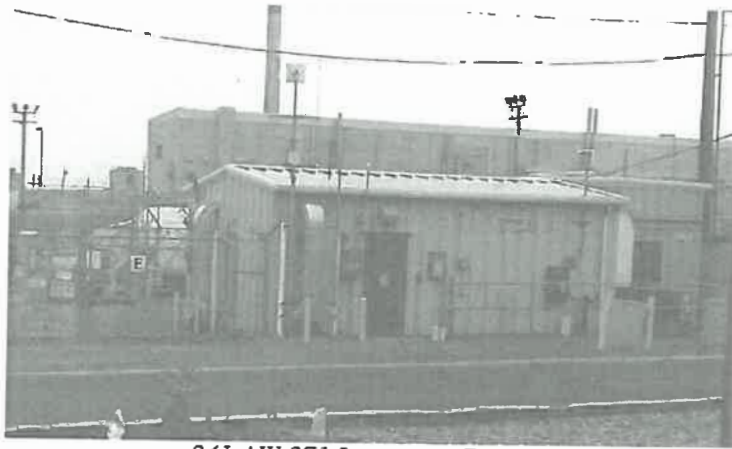


# EVENT INVESTIGATION REPORT

Event Investigation Report, EIR-2017-043, TF-AOP-015  
for Odors Reported Inside 241-AW-271  
EIR-2017-043



*241-AW-271 Instrument Building*

[Redacted Signature]

Event Investigation Team Lead Under Instruction

12/19/17  
Date

[Redacted Signature]

Event Investigation Team Lead

12-19-17  
Date

[Redacted Signature]

PER Responsible Manager

12-19-17  
Date

PER No. WRPS-PER-2017-2651

**AOP-015 for Odors Reported Inside 241-AW-271**

Event	Odors reported inside 241-AW-271 Instrument Building coming from sample storage box
Date/Time of Event	<ul style="list-style-type: none"> <li>November 28, 2017</li> <li>~0850 hours – personnel experience odors</li> </ul>
Location	<ul style="list-style-type: none"> <li>Inside 241-AW-271 Instrument Building</li> <li>Northeast corner of AW Farm</li> </ul>
Personnel Affected	<p>Eight (8) is Total Number of Personnel Present:</p> <ul style="list-style-type: none"> <li>One (1) NCO experienced taste but no odors; went to HPMC for evaluation.</li> <li>Two (2) NCOs experienced odors and symptoms; went to HPMC for evaluation.</li> <li>One (1) NCO experienced no odors and no symptoms</li> <li>One (1) FWS experienced odors and symptoms</li> <li>Three (3) IHTs experienced odors and no symptoms</li> </ul>
Odor / Taste	<ul style="list-style-type: none"> <li>Epoxy/glue</li> <li>Elmers glue</li> <li>Sweet, sour, metallic</li> </ul>
Symptoms	<ul style="list-style-type: none"> <li>Headache</li> <li>Cough</li> <li>Excess mucus</li> </ul>
Direct Read Instrumentation (DRI) Result During Event	<ul style="list-style-type: none"> <li>Ammonia: less than detectable levels</li> <li>VOCs: less than detectable levels</li> </ul>
Industrial Hygiene (IH) Investigative Monitoring / Sampling	<p>Odor grab sampling data results:</p> <ul style="list-style-type: none"> <li>Ammonia: &lt; DL (less than detectable levels)</li> <li>Total VOCs: &lt; DL</li> <li>Telone or Nemex: &lt; 1 ppb (known for a sweet odor)*</li> <li>Furfuraldehyde: &lt; 1 ppb (known to have disagreeable odor of almonds); ~6 ppb odor threshold</li> <li>Nitrous Oxide: Not sampled for or analyzed</li> <li>Mercury: Not sampled for or analyzed</li> </ul> <p>*No odor thresholds to report</p>
Possible Source	Wooden sample box lined with lead blankets
Wind Speed / Direction	<ul style="list-style-type: none"> <li>Inside 241-AW-271 Instrument Building</li> </ul>
Waste Disturbing or Tank Work in Adjacent Area	<ul style="list-style-type: none"> <li>Actual tank sampling had not yet commenced</li> </ul>
Other Work in Adjacent Area	<ul style="list-style-type: none"> <li>No other activities in 241-AW-271 at the time</li> </ul>

### **Investigation Summary**

On Tuesday, November 28, 2017, at approximately 0830 hours, three (3) nuclear chemical operators (NCO) from Tank Farm Projects sampling team entered the 241-AW-271 instrument building to prepare the AW-102 tank grab samples for shipping and transport to the 222-S Lab (work package #350858). Another NCO from EV Team was inside the building performing a visual monitoring of tank pressures to support the sampling activities.

The sampling team NCOs opened a wooden sample storage box (Figure 1) that is used for storing and transporting the metal storage containers of samples (pigs). When they opened the box, the NCOs experienced an odor that they described as sweet, epoxy, Elmers glue, sour, and metallic. The box was lined with lead blankets and did not contain samples.

Two (2) of the NCOs experienced a headache and one (1) NCO experienced an indescribable taste, all of which dissipated after moving to fresh air.

At 0846 hours, the affected personnel notified the field work supervisor (FWS) and a nearby industrial hygiene technician (IHT). Three (3) IHTs responded and performed a courtesy investigation. Using direct read instruments (DRI), they monitored the inside of the wooden box and atmosphere. The DRIs showed less than detectable levels for ammonia and volatile organic compounds (VOCs).

The FWS contacted the Shift Office and the employees were directed to the Central Shift Office to fill out Odor Response Cards. Three (3) NCOs were taken to HPMC for evaluation and were cleared to return to work. At 0914 entry was made into TF-AOP-015 Response to Reported Odors or Unexpected Changes to Vapor Conditions and a shift office event notification (SOEN) was distributed. Access to the immediate area was restricted.

The Industrial Hygiene (IH) vapor response team began initializing the grab sample activities. By 1005 hours the samples had been taken and were transported to 2704HV IH Lab for HAPSITE analysis which provides the gas chromatography/mass spectrometry analysis.

At 1416 hours, TF-AOP-015 was exited after the sampling analysis showed that ammonia and VOCs were at less than detectable levels. Mercury and nitrous oxide were not suspected to be present and therefore, were not included in sampling and analysis. It did reveal the presence of a chemical called Telone/Nemex which is a pesticide with a sweet odor that dissolves in water and evaporates easily and furfuraldehyde which comes from organic sources like bran and is used in making polymers and herbicides. More on this below in the section on potential causes.

On Wednesday, November 29, 2017, the sampling crew brought in a new box with ventilation slits cut into the lid (Attachment 1) in preparation of AW-102 tank sampling activities. On November 30, 2017, the samples were taken and transported. The FWS noted a faint odor when they opened the new box. More on this in the section on potential causes.

**Figure 1 - Images are of Wooden Sample Storage Box at 241-AW-271 Instrument Building**

Images are of wooden sample storage boxes at 241-AW-271 Instrument Building. The top image is the actual box from the event. The box was empty at the time with the exception of the lead blankets. The bottom image is the dome where the box had been stored prior to use.



Wooden Sample Storage Box where odors were reported to be coming from. At the time, the box was lined with lead blankets. The box contained no samples.

Lead blankets like the ones that line the sample box. The lead is covered in an industrial-grade polymer fabric called Herculite.



Dean Dome is located outside of 2704HV where the box was stored prior to being used for AW-271 samples.

### Event Timeline

Date	Time	Sequence of Activities
11/28/17		
	~0830	Three (3) NCOs from Tank Farm Projects sampling team enter the 241-AW-271 instrument building to begin loading of grab samples from 241-AW-102.
	0835	Another NCO from on loan to AW Team is performing a visual monitoring of tank pressure/ventilation while sampling is being performed. Shift office event notification (SOEN) is released, "AW-102 work may cause pressurization alarm. Disregard alarm until further notice. Check in/out with NCO monitoring ventilation in 271-AW. AW ADM"
	0845	NCOs open the wooden storage box that is used to hold the metal containers with the samples (pigs) prior to shipping to the 222-S Labs. The box is lined with lead blankets (Figure 1).  Upon opening the box, the NCOs experience odors that they describe as "Elmers glue, epoxy, sweet, sour, metallic".
	0846	Affected personnel notify FWS and an IHT who are nearby.
	0850	Three (3) IHTs arrive to take readings.
	0855	Personnel are assessed for symptoms. Two (2) NCOs report headaches. One (1) NCO experiences a taste of something. NCOs exit the instrument building to get fresh air. NCOs notice headaches dissipating.
	0901	Call is made to the Shift Office to report the odor and symptoms of personnel.
	0901	Direct reading instruments detect zero (0) hazardous chemicals in the environment in and around the box. The IHTs close the box to trap odors for later collection.
	0905	Personnel are directed to the Shift Office to fill out Odor Response Cards.
	0913	SOEN message goes out, "Entering AOP-015 for 271AW. All personnel perform orderly exit of 271AW. Access is restricted to 271AW. CSM"

Date	Time	Sequence of Activities
	0914	<p>Entry is made into Central Shift Office (CSO) logbook: “Entered TF-AOP-015, Response to Reported Odors or Unexpected Changes to Vapor Conditions. [FWS] reports that prior to obtaining AW102 grab sample, a wooden box used to transport the sample pigs, a “nasty smell” of “Elmers glue” was present when the box was opened. Two NCOs [Names redacted] experienced a headache when the odors were present. The NCOs went outside to get fresh air and the headaches dissipated. Approximately 5 people* were present in 271AW when the box was opened. IHTs were present when the box was opened, all instruments read 0 during the evolution.”</p> <p>*Note: Later shift log entry reads (1026 hours): “Correction to the number of people present when odor was detected, 4 NCOs, 3 IHTs, and 1 FWS.” (Attachment 4 for scanned image of shift log).</p>
	0921	<p>Tank Farm Projects IHTs prepare for odor grab sampling activities and gather instruments, equipment, and SCBA.</p>
	0929	<p>Odor grab sampling is initialized. Samples are collected from inside the box and inside the general atmosphere of 241-AW-271.</p>
	0950	<p>Event Investigation is initiated. The On-call Facility Representative is notified by the Shift Office.</p>
	0955	<p>One (1) NCO is taken to 200W HPMC.</p> <p>Between 1000 hours and 1400 hours two (2) other NCOs are transported to 200W HPMC for evaluation. All three (3) NCOs are medically cleared to return to work.</p>
	1005	<p>Grab samples are taken to 2704HV IH lab for HAPSITE analysis.</p>
	1416	<p>SOEN released: “Sample analysis for the 241-AW-271, TF-AOP-015 event has been completed and the results are below action limits. Exiting TF-AOP-015.”</p>
<b>11/29/17</b>		
	1130	<p>New wooden sample storage box is brought into 241-AW-271 and lined with lead blankets. New box has ventilation slits cut into the lid. (See Attachment 1 for images of new box)</p>

Date	Time	Sequence of Activities
11/30/17	0930	Tank grab samples from AW-102 are contained in pigs and placed into the new wooden sample storage box. FWS noticed a slight odor when they first opened the box but not as strong as the odors experienced on 11/28/17.

### Immediate Actions Taken

- 0845: NCOs experience odors
- 0846: NCOs notify FWS
- 0850: IHTs perform direct read monitoring – zero detectable levels found
- 0853: IHTs close box
- 0901: Shift Office is notified of Odors
- 0905: Personnel go to Shift Office to fill out Odor Response Cards. Symptoms are reported at that time.
- 0914: Entry into AOP-015 is made and access to area is restricted.
- 0914: Three affected personnel are taken to HPMC. All are cleared to return to work.
- 1005: After grab samples taken, box is closed until further instruction.

### Remedial Actions

1. 11/28/17: Original wooden storage box is taken out of commission.
2. 11/29/17: TFP Sampling Team brings in a newly constructed wooden box that has never been used. The new box has slits cut into the lid to facilitate ventilation.

### Preliminary Extent of Condition Review

Operators and FWSs evaluated the wooden sample storage boxes currently being used in the field and determined that the condition and integrity of those boxes were not at risk to emitting strong odors.

### Discussion of Potential Causes

The wooden sample storage box had been staged at the Dean Dome which is a shelter area outside the 2704HV building. It is not likely the box came in contact with direct moisture but it could have absorbed some of the moisture in the environment. There is a coating on inside walls of the box that acts as a flame retardant. The box was moved from the dome to 241-AW-271 instrument building on November 27<sup>th</sup>, the day before grab sampling was to begin. There is some

speculation that the chemicals on the wood combined with the moisture and the warming temperatures inside the 241-AW-271 reaching 70-75° F could have caused the release of gases into the atmosphere. That speculation would correlate with the presence of chemicals that were detected during the HAPSITE analysis.

The HAPSITE analysis shows the presence of a chemical called Telone/Nemex which is a pesticide with a sweet odor that dissolves in water and evaporates easily. It is possible that the area in and around the Dean Dome where the wooden box was kept had been sprayed with Nemex.

Furfuraldehyde is a chemical that was also detected and according to the Industrial Hygiene Investigation Report it comes from organic sources like bran and has a disagreeable almond odor. It is used in the production of polymers. It is possible that furfuraldehyde is present in the Herculite coverings of the lead blankets. As it was noted by the FWS that even with the new box, there was a slight odor. It is not likely that the new box came in contact with pesticides but it did contain the lead blankets with the industrial polymer outer covering.

There is also speculation that the fire retardant that is used to treat the wood was emitting off-gases. However, the HAPSITE analysis does not appear to reveal chemicals associated with the fire retardant. Further analysis would be needed to determine the correlation.

#### **Recommendations/Proposed Corrective Actions**

- 1) Pulling a bag sample of the newly assembled box with the lead blankets and without the lead blankets to determine whether or not the current processes contributed to the chemicals (i.e., Nemex and furfuraldehyde) found on the GC/MS report.
- 2) Cut ventilation slits into the lids of the current wooden sample storage box(es) that are without slits.
- 3) Remove old box from 241-AW-271 Building. Ventilate box in an outdoor area. Prepare to remediate box.
- 4) Dedicate lead blankets specifically for lining the wooden storage boxes. Keep the dedicated lead blankets stored in a climate-controlled area and away from moisture.

#### **Attachments:**

1. Replacement Box Images
2. Industrial Hygiene Investigative Report without Odor Response Cards
3. WRPS-PER-2017-2651
4. Central Shift Office Log



**Attachment 1 – Replacement Box Images**



Slits were made in the wood to facilitate ventilation.

Box is lined with the same type of lead blankets covered with industrial polymer.

**Attachment 2 – Industrial Hygiene Investigative Report without Odor Response Cards**

Washington River Protection Solutions <b>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</b>	<b>PER Number:</b> N/A
<b>Time/Date &amp; Event location:</b> 0830 11/28/2017 241-AW-271 Instrument Building	<b>EIR Number:</b> EIR-2017-043

1. **Event Summary** (including number of workers involved and activity in progress):

At approximately 0830 Tuesday, the 28<sup>th</sup> of November, 2017, 3 NCOs entered the 241-AW-271 instrument building to perform set-up actions related to 241-AW-102 grab sampling. NCOs opened a lead blanket lined wooden sample storage box and smelled an odor described as: "very strong," "sweet, sour, metallic, like epoxy/glue," "compound of some sort," "Elmer's glue". 2 NCOs experienced "headache" and 1 NCO experienced "indescribable taste", all of which dissipated after being moved to fresh air. Affected employees found 2 IHTs, an IH, 2 additional NCOs, and a FWS assigned to the AW-102 grab sample job in a nearby change tent and requested a courtesy investigation by the IHTs. 1 responding NCO, 2 IHTs, and IH also smelled odor. 1 Responding NCO did not smell odor. All responding personnel had no symptoms. IHT DRI readings were < LOD.

- Was an IHT Present during initiating event? [ ] Yes [X] No

IHTs were not present during the initial opening of the sample box. Due to the box being empty, there was no requirement to have IHTs present to open it. After NCOs opened the box, and experienced symptoms, IHTs assigned to the AW-102 Grab Sample Job were summoned from nearby to perform a "courtesy investigation" prior to entering TF-AOP-015.

IH Monitoring/ Sample Survey Reports:

17-10166 241-AW-271 AOP-015 Response (initial)  
 17-10167 241-AW-271 AOP-015 Odor Response

Weather Conditions at Time of Event: N/A (building is a climate controlled facility)

- Weather station: N/A
- Wind Direction and Speed: N/A
- Barometric Pressure (steady/rising/falling): N/A
- Temperature (F°): N/A
- Humidity: N/A

Field Response Timeline:

- 0912 PO IHT Supervisor contacts AN IH to request support at CSO for TF-AOP-015 entry
- 0913 PO IHT Supervisor contacts COMS IH to request support at CSO for TF-AOP-015 entry
- 0913 AN IH requests support from EV IH for TF-AOP-015 entry
- 0913 SOEN: "Entering AOP-015 for 271AW. All personnel perform orderly exit of 271AW. Access is restricted to 271AW. CSM"
- 0914 COMs IH and PO IHT Supervisor arrive at CSO
- 0915 AN IH arrives at CSO
- 0915 COMs IH and AN IH receive brief from CSM
  - "Elmer's Glue" like odor from sample box inside 271AW building.
  - IHTs present. All readings <DL
  - 2 NCOs with symptoms. Declined medical
  - 5-6 personnel in total. All declined medical
- 0916 AN IH contacts PO IH to request support at CSO for TF-AOP-015 entry
- 0916 PO Shift IHTs and EV IH arrive at CSO
- 0916 "Acting" IH Programs Manager calls AN IH for briefing

Washington River Protection Solutions <b>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</b>		<b>PER Number:</b> N/A
<b>Time/Date &amp; Event location:</b> 0830 11/28/2017 241-AW-271 Instrument Building		<b>EIR Number:</b> EIR-2017-043
<p>0917 AZ IH arrives at CSO and notifies AN IH, COMs IH, EV IH, and PO IH that "Acting" IH Programs Manager called for briefing</p> <p>0918 PO Shift IHT Supervisor arrives at CSO</p> <p>0918 PO IH arrives at CSO</p> <p>0918 HAMTC Safety Rep 1 arrives at CSO</p> <p>0920 CSM confirms with FWS that:</p> <ul style="list-style-type: none"> <li>• 2 employees w/ "headache" symptoms were being taken to HPMC</li> <li>• IHTs were present when box was opened and readings were &lt;DL</li> <li>• FWS confirms "IHTs reported zeroes across the board"</li> </ul> <p>0921 PO Shift IHTs sent to collect instruments and grab sample collection equipment and await further direction</p> <p>0922 AN IH and CSM discuss AOP-015 entry criteria and agree "TASK 2" is appropriate. Even though event occurred outside of a tank farm boundary, Tank Waste could be a possible odor source due to box being used previously for grab samples (storage of tank waste samples prior to shipment).</p> <p>0922 Projects IH 1 arrives at CSO and briefs AN IH, COMs IH, EV IH, and PO IH:</p> <ul style="list-style-type: none"> <li>• No IHTs were present when first 3 NCOs opened box and smelled odor</li> <li>• During initial "courtesy investigation", "glue" odors were present and DRI readings were consistent with background levels</li> <li>• Box was closed to trap odor for later collection</li> <li>• Projects IHTs staged with instruments, grab sample equipment, and SCBA</li> </ul> <p>0923 Projects IH 1 contacts Project IHTs and requests they to come to CSO for response briefing</p> <p>0924 COMS IH notifies PO Shift IHTs and PO IHT Supervisor that Projects IHTs will perform response</p> <p>0926 PO IHT Supervisor contacts Programs IHT Lead to ensure HAPSITE was being initialized</p> <p>0928 Projects IHTs arrive at CSO and AN IH confirms readiness of Projects IHTs response equipment</p> <p>0929 AN IH, COMS IH, EV IH, PO IH brief Projects IHTs of response actions:</p> <ul style="list-style-type: none"> <li>• TFC-AOP-015 Task 2</li> <li>• DRI survey into building</li> <li>• Collect grab sample from inside the box with use of Teflon®-lined tubing</li> <li>• Collect grab sample of atmosphere inside of 241-AW-271 (general area)</li> <li>• Report back with readings so that AN IH can notify HAPSITE IHT of method to process grab samples.</li> </ul> <p>0929 PO IHT Supervisor inquires about survey from initiating event, requests one be created</p> <p>0937 Projects IS and Projects IH 2 contact Projects IH 1 to notify that they are in route to HPMC to follow up with personnel</p> <p>0939 Projects IHT Supervisor arrives at CSO</p> <p>0940 First odor response card arrives at CSO</p> <p>0943 Projects Manager contacts CSO to confirm CSO was aware of the "odors/vapors at AW farm"</p> <p>0945 AN IH briefs Projects IHT Supervisor</p> <p>0949 HAMTC Safety Rep 2 arrives at CSO</p> <p>0955 EIR # issued (EIR-2017-043)</p> <p>1003 CSO Manager briefs HAMTC Safety Rep 2 on event</p>		

Washington River Protection Solutions <b>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</b>	<b>PER Number:</b> N/A
<b>Time/Date &amp; Event location:</b> 0830 11/28/2017 241-AW-271 Instrument Building	<b>EIR Number:</b> EIR-2017-043

- 1005 Projects IH returns to CSO with update:
- Grab samples currently in route to 2704HV IH lab for HAPSITE analysis
  - No detectible readings from box or in building general area
- 1007 PO IHT Supervisor contacts EV IS to request electronic delivery of odor response cards, from individuals taken to HPMC, to CSO
- 1010 CSM reviews odor response cards and inquires COMs IH if "taste" is a symptom. CSM requests FWS to contact all workers with symptoms to ensure they report to HPMC for evaluation
- 1012 CSM contacts employee with "taste" symptom to ensure all employees who reported "taste" symptoms report to HPMC for medical evaluation
- 1016 AN IH contacts Programs IH SME with update on TF-AOP-015 response
- 1017 COMs IH requests Projects IH contact Project IHTs about Survey ID #s and instrument posts
- 1020 FWS notifies CSM, 3<sup>rd</sup> affected employee en route to HPMC. Individual wanted to decline, but was required to report to HPMC for medical evaluation due to experiencing symptom
- 1022 CSM contacts 3<sup>rd</sup> affected employee to inquire about the nature of "taste" experienced
- Employee described the taste as "indescribable, did not know, not good"
- 1024 COMs IH clarifies Projects IH sample plan numbers in order to relay to Projects IHTs.
- 1030 COMs IH updates Projects IHT Supervisor of 3<sup>rd</sup> individual going to HPMC
- 1034 PO IHT Supervisor contacts DOE Fac Rep to give briefing and answer questions.
- 1043 Projects IHT Supervisor notifies PO IHT Supervisor that at approximately 1000 grab samples were received for HAPSITE analysis at 2704HV IHT lab
- 1046 Projects IH departs CSO for 2704HV IHT lab. COMs IH requests update regarding Survey ID #s and status of instrument post
- 1046 EV IS arrives at CSO:
- Projects IS took over for EV IS at HPMC
- 1416 SOEN "Sample analysis for the 271AW TF-AOP-015 event has been completed and the results are below action limits. Exiting TF-AOP-015. CSM"

**IH Author:**

[Redacted Name]


*Print First and Last Name*

[Redacted Signature]

*Signature*

[Redacted Phone No.]

*Phone No.*

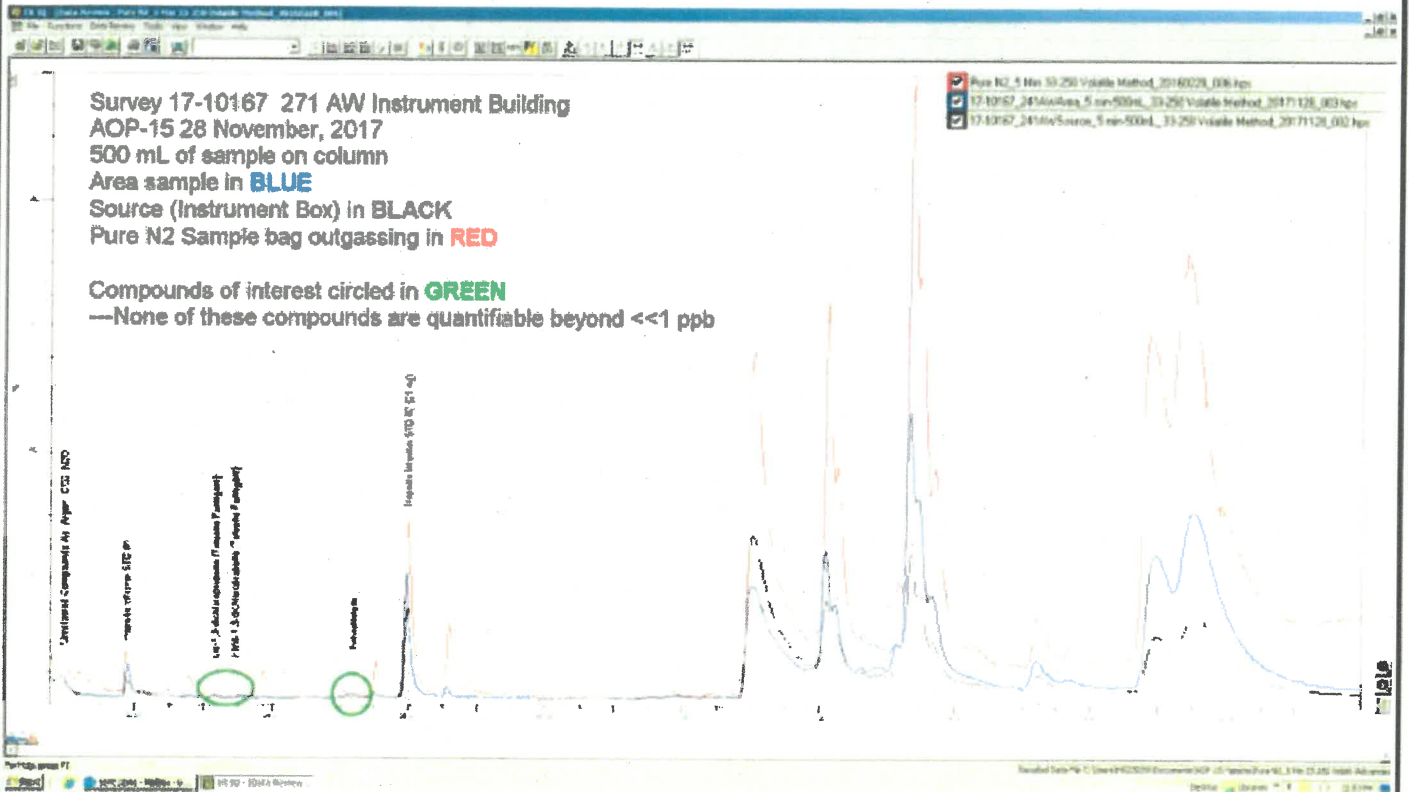
AMB  
~~01/18/2017~~  
 11/28/2017  
 Date  
 01/18/2018  


[Redacted Signature]

2/1/18

Washington River Protection Solutions <b>TF-AOP-015 INDUSTRIAL HYGIENE INVESTIGATION REPORT</b>	<b>PER Number:</b> N/A
<b>Time/Date &amp; Event location:</b> 0830 11/28/2017 241-AW-271 Instrument Building	<b>EIR Number:</b> EIR-2017-043

**2. GCMS Sample Results:**



The direct reading instrument (DRI) results indicate that VOC and ammonia concentrations were less than detectable.

The Hapsite results are shown above. Two compounds other than the bag outgassing (Red) were circled Green.

The first pair is a soil fumigant named Telone or Nemex. It is the enantiomer pair –cis and –trans 1, 3-dichloropropene. The chemical has a sweet odor, and a 2005 TLV 8-hour of 1 ppm. No odor threshold is available for this material.

The second circled compound is furfuraldehyde. It is normally found in bran materials, but is known to occur from the degradation of sugars. Furfuraldehyde has a disagreeable odor of almonds, and its 2005 ACGIH TLV-8 hour is 2 ppm. Its odor threshold is reported as 0,0240 mg/m<sup>3</sup> or approximately 6 ppb.

The two peak sizes are too low to permit quantitation other than to say they are much less than 1 ppb in the samples.

**IH Author:**

[Redacted Name] [Redacted Signature]

*Print First and Last Name*

*Signature*

[Redacted Phone Number]

*Phone No.*

11-30-2017

*Date*

**Attachment 3 – WRPS-PER-2017-2651**



Event Investigation Report, EIR-2017-043, TF-AOP-015 for Odors Reported Inside 241-AW-271

PER

Page 1 of 2

Save

**Problem Evaluation Request (PER)**

**WRPS-PER-2017-2651**

In Process/Work

<b>PER No</b>	<b>Date of Discovery</b>	<b>Time of Discovery (24:00)</b>	<b>Project</b>
WRPS-PER-2017-2651	11/28/2017	08:30	Tank Farm Projects
<b>Location</b>			
AW Farm			
<b>How Was Problem Discovered</b>			
Self-Revealing (Event)			
<b>Description of Concern or Problem</b>			
At the 271AW facility during preparations for grab sampling of tank AW-102 employees opened up a wooden storage box lined with lead blankets that is used for storing shipping containers (pigs) prior to shipping to the 222S labs. During the opening of the box an employee who was performing pressure watch in the room smelled a glue like odor. Management was notified and IH was requested to respond to the area. IH detected no anomalies with direct reading instruments. At this time several employees reported symptoms to the FWS. The FWS notified the SOM and the employees were sent to HPMC and the area was posted a VCZ until further testing of the area could be performed.			
<b>Requirement Not Satisfied</b>		<b>Source Document Number</b>	
<b>Equipment Identification Number</b>		<b>System Identification</b>	
NA		None	
<b>Does issue require immediate actions?</b>			
Yes			
<b>Immediate actions Taken or Planned</b>			
Shift office was notified and initiated AOP-15.			
<b>Recommended Corrective Actions</b>			
Replace wooden box.			
<b>Originator Contact</b>			
No			
<b>Originators Name</b>	<b>Originators ID</b>	<b>Originators Phone</b>	<b>Date Initiated</b>
			11/28/2017
<b>SHIFT OPERATIONS REVIEW</b>			
<b>Title</b>			
271AW Instrument Building AOP-015 Event			
<b>Reportability</b>	<b>SSC Operability</b>	<b>Operability Review</b>	<b>Comp Measures Req</b>
Non-Reportable	N/A	N/A	
<b>Describe actions Taken or Recommended</b>			
No additional actions taken or recommended by the POCSO.			
<b>SO Reviewer Name</b>	<b>SO Reviewer ID</b>	<b>SO Reviewer Phone</b>	<b>SO Review Date</b>
			11/28/2017
<b>SCREENING</b>			
<b>PER Significance Level</b>	<b>Analysis Level</b>		<b>How Discovered</b>
<b>Ind Assessment Rev</b>	<b>Occurrence Rpt #</b>	<b>DOE CAP Required?</b>	
		No	
<b>Assigned Responsible Manager</b>	<b>Facilities Rep / SSO</b>	<b>Safety Mgmt Rep</b>	<b>Potentially Recurring Issue</b>
			No

[Redacted]

11/29/2017

Event Investigation Report, EIR-2017-043, TF-AOP-015 for Odors Reported Inside 241-AW-271

PER

Page 2 of 2

<b>Program</b>		<b>Requirements Area Manager (RAM)</b>	
<b>PER Screening Comments</b>			
EIR-2017-043			
<b>ORPS Code</b>	<b>Functional Area</b>	<b>Work Process</b>	<b>ISMS</b>
<b>PER Screening Chair</b>	<b>PER Screening Chair ID</b>	<b>PER Screening Chair Phone</b>	<b>PER Screening Date</b>
		() -	11/29/2017
<b>PAAA REVIEW</b>			
<b>PAAA Screening</b>	<b>PAAA Codes</b>	<b>Function Codes</b>	
<b>PAAA Cause Analysis Review</b>	<b>NTS Report Number</b>	<b>NTS Report Date</b>	
<b>PAAA Screening Comments</b>			
<b>PAAA Reviewer Name</b>	<b>PAAA Review Date</b>		
<b>PAAA Approver Name</b>	<b>PAAA Approve Date</b>		
<b>ATTACHMENTS</b>			
Link to PER			
<b>AUDIT HISTORY</b>			
<b>Change Date</b>	<b>Auditor</b>	<b>Comments</b>	
11/28/2017 13:58		Initiator Tab initial submission.	
11/28/2017 16:11		SO Tab initial submission.	

-- End of Report --  
11/29/2017 07:08 AM



11/29/2017

**Attachment 4 – Central Shift Office Log**

Event Investigation Report, EIR-2017-043, TF-AOP-015 for Odors Reported Inside 241-AW-271

Filter by Date	Title / Description
11/28/2017 -- 09:14	Entered TF-AOP-015 Response to Reported Odors or Unexpected Changes to Vapor Conditions. [REDACTED] reports that prior to obtaining AW102 grab sample, a wooden box used to transport the sample pgs, a "nasty smell" of "Elmers glue" was present when the box was opened. Two NCOs [REDACTED] and [REDACTED] experienced a headache when the odors were present. The NCOs went outside to get fresh air and the headaches dissipated. Approximately 5 people were present in 271AW when the box was opened. IHTs were present when the box was opened, all instruments read 0 during the evolution.
11/28/2017 -- 09:50	initiated Event Investigation (EIR-2017-043) for 271AW Instrument Building AOP-015 Event. POC: [REDACTED] SOEN Complete. Notified ORP On-Call FR, [REDACTED] initiated Event Investigation (EIR-2017-043) for 271AW Instrument Building AOP-015 Event. [REDACTED]
11/28/2017 -- 09:55	After reviewing Odor Response Cards, it was determined that a third NCO [REDACTED] had a "taste" during the event. [REDACTED] was not able to describe the taste. [REDACTED] is taking [REDACTED] to HPMC. Notified ORP ON-Call FR, [REDACTED] and Injury/Illness Case Manager, [REDACTED]
11/28/2017 -- 10:26	Correction to the number of people present when odor was detected. 4 NCOs, 3 IHTs, and 1 FWS.