EVENT INVESTIGATION REPORT

EVENT INVESTIGATION REPORT, '272AW CONEX AND INSTRUMENTATION SHOP AOP-015 EVENTS,'

EIR-2014-037

(Print and Sign)

Event Investigation Team Lead

(Date)

12/29/14

(Print and Sign)

Responsible Manager

(Date)

12/29/14

PER No. WRPS-PER-2014-1902
Investigation Summary

On October 2, 2014 while performing activities requiring access to the middle conex box west of 272-AW, 2 of 3 workers at the work site entered the conex box and after being inside of the conex, experienced stronger than normal odors within the conex. The third worker at the site also reported the presence of odors outside of the conex. At the time of the event, no workers experienced symptoms however all three accepted medical evaluation and were taken to Hanford Occupational Health Services Corporation (HPMC). Additionally, an MSA worker assisting fire maintenance with work near 272-AW during the event reported to HPMC with symptoms. All WRPS and MSA workers were later returned to work with no work restrictions except a restriction placed by Washington River Protection Solutions LLC (WRPS) until WRPS workers blood work results were returned. In response to this event, ventilation to the 272-AW facility was shutdown to prevent potential vapors being drawn into the building. Workers reported propane like odor. It should be noted that there are no propane sources near this area.

At 1430, workers stationed in 272-AW as their work location, reported chemical smell in the instrument shop. As the odors identified were stronger than normal and reported by multiple workers, a second AOP-015 was entered. The odors reported during this even were glue/paint type odors. Workers reporting the odors did not indicate any symptoms and none accepted offer of medical evaluation. No additional compensatory actions were identified as necessary beyond those implemented during response to the events as a result of the fact finding meeting or interviews conducted.

A fact finding meeting, as part of the event investigation, was held on October 7, 2014 to establish a timeline for the two AOP-015 events. Interview of a Mission Support Alliance (MSA) employee that was working in the area of the conex box related AOP that reported to HPMC with symptoms, his management and Hanford Atomic Metal Trades Council (HAMTC) Safety Representative were conducted October 21, 2014.

This investigation was indeterminate regarding the source of odors for outside and inside the conex box AOP-015 event. The following information (shown in italicized text) is provided verbatim from the IH Monitoring and Sampling results obtained in response to the AOP-015 event, as documented in TF-AOP-015 Industrial Hygiene Investigation Report – AOP-15 272AW Conex Box:

Summary of IH Monitoring and Sampling Data:

a. Monitoring

Readings with Direct Reading (DRI) field instrumentation saw no elevated levels in and around Conex box, Evaporator parking lot, AW farm general area, or drain field NE of 272AW.
<table>
<thead>
<tr>
<th>AGENT</th>
<th>@ODOR</th>
<th>@SOURCE</th>
<th>EXPOSURE LIMIT</th>
<th>REPORTING LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>0ppm</td>
<td>0ppm</td>
<td>25 ppm OEL/35ppm STEL</td>
<td>&gt;0 ppm</td>
</tr>
<tr>
<td>Total VOCs</td>
<td>0ppm</td>
<td>0ppm</td>
<td>2 ppm AL</td>
<td>&gt;0 ppm</td>
</tr>
<tr>
<td>Mercury</td>
<td>n/a</td>
<td>g/m³</td>
<td>0.025 mg/m³ OEL</td>
<td>0.000016 mg/m³</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>n/a</td>
<td>ppm</td>
<td>25 ppm AL</td>
<td>&gt;0 ppm</td>
</tr>
</tbody>
</table>

b. Gas Chromatograph Mass Spectrometer (GCMS) Sample Results:
Multiple bag samples taken at various locations, conex box, evaporator parking lot, AW farm, 242 vessel vent.
Analysis was also performed with Fourier Transform Infrared (FTIR). See Survey for Analysis.

**Weather Conditions at Time of Event:**
- **Wind Direction & Speed** 4NW
- **Barometric Pressure** (steady/rising/falling) 29.49
- **Temperature** (°F) 66

**Recommendations/Conclusions:**
Continue on path to have MSA repair cracked risers at drain field, investigate housekeeping options in co-located conex boxes to ensure no material inside could be causing propane like odors. Recommend restoring normal access to restricted area around 272AW.

**Other:** AreaRaes were located on loading dock and west side of 272AW and ran continuously from previous night shift, highest peak was .2ppm VOC and 0ppm NH3 from AreaRae placed on west side, 0ppm VOC and 0 ppm NH3 from instrument on loading dock.

Two postulated sources were discussed during the fact finding; 1) odors from an adjacent sewer system, and 2) the controlled 242-A Evaporator dump. Pipefitters, during the fact finding, commented that the odors, in their professional judgment, did not reflect odors indicative of sewer type odors. Neither IH sampling performed during the AOP-015 response actions nor information gathered during this initial event investigation confirmed/or dispelled either of these potential sources as the source of odors experience in the conex box.

Response actions related to the conex box AOP-015 event included:
• Establishment of road barriers to prevent access to the areas of reported odors
• Communications of the event, environmental conditions during the event and resulting controls during event response, and communications with 272-AW building residents
• Communications with MSA
• IH investigation surveys and sampling
• Isolation of Building 272-AW ventilation
• Establishment of barriers to prevent egress from the 272-AW with the exception of …
• Medical evaluation of effected workers

This investigation did not reveal any new information regarding the source of the odor initiating the event. However, the fact finding and interviews conducted did reveal that improvements in Tank Farm response to AOP-015 events when they occur outside of a tank farm boundary in several of the areas of response identified above can be improved. For example:

• Barriers used to blockade road ways were cones and trucks. During interview with the MSA employee, when he was driving out of the area, two cones were encountered in the roadway, but left adequate space to allow access and no manned watch was provided to ensure the area was not accessed.
• Communications to 272-AW occupants was less than adequate during the event. Although a Shift Office Event Notification (SOEN) message and all call radio announcement was made, most building occupants do not receive these messages. The building warden was not notified and managers that were cognizant of the AOP-015 had intermittent instruction regarding barriers being placed at building access points and what was expected regarding access and egress creating confusion and uneasiness amongst the building occupants.
• All call radio announcements do not reach non-WRPS personnel that may be working in the affected area and thus, the employee relies upon action by their company representatives upon receipt of WRPS SOEN

These recommendations will be discussed below under Recommendations/Proposed Corrective Actions and will be further evaluated as part of the causal analysis associated with WRPS-PER-2014-1902. Additionally, it is believed as a result of this investigation that isolation of Building 272-AW ventilation in response to the conex AOP-015 was a contributing cause for the 272-AW AOP-015 event that followed.

The 272-AW AOP-015 event followed roughly an hour following isolation of the building 272-AW ventilation system creating situation in the building that limited air exchange. Odors experienced by building residents were identified in the instrument shop area in the northwest corner of the shop according to odor response card provided to the Central Shift office. Odors were reported as a glue/paint type odor, which is not typical of odors reported for tank farm vapor related odors. IH investigative survey and monitoring (TF-AOP-015, Industrial Hygiene Investigation Report – 272AW Building adjacent to Instrument Tech Shop) conducted as part of the AOP response resulted in the following (table information provided verbatim from the IH report including strikeout):
<table>
<thead>
<tr>
<th>AGENT</th>
<th>@ODOR</th>
<th>@SOURCE</th>
<th>EXPOSURE LIMIT</th>
<th>REPORTING LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>0 ppm</td>
<td>0 ppm</td>
<td>25 ppm OEL/35 ppm STEL</td>
<td>&gt;0 ppm</td>
</tr>
<tr>
<td>Total VOCs</td>
<td>.036 ppm</td>
<td>2.27 – 2.6 ppm</td>
<td>2 ppm AL</td>
<td>&gt;0 ppm</td>
</tr>
<tr>
<td>Mercury</td>
<td>n/a mg/m³</td>
<td>n/a mg/m³</td>
<td>0.025 mg/m³ OEL</td>
<td>0.000016 mg/m³</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>n/a ppm</td>
<td>n/a ppm</td>
<td>25 ppm AL</td>
<td>&gt;0 ppm</td>
</tr>
</tbody>
</table>

Note: Both the 10.6 and 11.7 Lamp ppb Rae’s were used for investigation. Not presumed tank waste so 2 ppm AL is irrelevant for sources in shop with the numerous chemical storage areas.

Also noted in the IH Investigation Report: “Building ventilation was turned off earlier in day in response to the first AOP-15 entered on 10/2/2014. Turning this off in a large building with multiple shops (painters, pipefitters, and electrical areas) could have a possible effect in regards to building occupants normal day to day smells. The garbage can in the instrument shop when opened had similar smell as described on odor response cards and showed some VOC’s…”

**Event Timeline**

**THURSDAY, OCTOBER 2, 2014**

0900/0930  Pipefitter stated conex was open earlier in the morning and there was no odor then.

0930  Employees stated [at the fact finding] that Porta Potty pumping in the area had been completed and truck had left the area.

0949  242-A initiates controlled dump of 242-A C-A-1 contents. 242-A vessel ventilation system is operating.


1015  Two pipefitters (fitters) were at middle conex west of 272AW, objective was to find a place to store aluminum pipe for order coming in. Millwright (MW) was to look at tripod for future job.

Fitter 1 and millwright entered the conex which was open from an entry by a pipefitter earlier in the day. Fitter 2 stayed outside of conex. Fitter 1 and millwright smelled an odor and exited the conex and warned Fitter 2. Fitters closed the conex and made their way on the west side of the building (along sidewalk).

Fitters/millwright got an odor response card, had to make copies of the card, and headed to the Shift Office.
Fitters/millwright notified Central Shift Manager (CSM) of smell inside and outside of conex outside of 272AW.

CSM talked with employees who smelled the odor outside of 272AW and in conex box. CSM received the Odor Response Cards and interviewed the employees regarding the odors experienced and if they were experiencing symptoms. CSM then made notifications over the Radio under AOP.

Safety and Health representatives arrived.

Observations made during the fact finding were that due to many incoming phone calls to the shift office, the ongoing operations drill and the AOP-015 event, the activity level for the CSM to manage was challenging.

CSM Entered AOP-015.

CSM notified from the employees that the wind was out of the north. Fitters and millwright stated to CSM that the smell entered the conex from the outside and that they believed the odor was from the Evaporator Pot being dumped and exiting through vessel vent and that it is in line with parking lot and nearly in line with conex box. [The source of the odor could not be confirmed by this investigation.]

IH representative and HAMTC safety representative stepped outside of Shift Manager Office to talk about sampling areas and how to respond.

Discuss sampling for conex box and other potential sources of the smell

CSM briefed on IHT on response plan

Industrial Hygiene Technician (IHT) waiting for word from the shift manager on how to respond

Central Operations & Maintenance Manager received call about the 3 employees who were going to HPMC

Central Operations Maintenance Systems (COMS) Manager contacted Fitter/millwright supervisor to take the fitters/millwright to HPMC

IHTs step back into shift manager office to discuss/pre-job how to and where to sample and pull bags.

Employee affected by odors states odor is possibly from the vessel vent of the evaporator exhauster
Employees that were affected point out that the wind direction at the evaporator is different than the wind at 272-AW. Flag at evaporator blowing from north, flag at 272-AW blowing from east.

Fitters and millwright found it frustrating that they had to continuously describe where the conex was and where the smell was. *(During the fact finding a suggestion was made by the fitters to have a map in the Shift Office of outside farm area for all buildings)*

Planning response to event with affected employees input and other possible sources.

Discuss 3 possible sources to pull samples from along with the bag sample from conex.

Affected employees continue to disagree with IH direction of samples and potential sources.

Affected employees leave shift managers office to go to HPMC

IH leaves to notify mask station of AOP-015 response and IHT’s that will be needing masks.

Continue to discuss how to and where to take sample with responding IHT’s.

Discussion of getting more IHT’s to help respond to the multiple locations and possible sources identified by IH.

CSM and Operations employees supporting the AOP response worked with Operators to put up roadblocks to restrict access by putting cones in the roadway to barricade the area off.

IH returns to shift office from mask station

IHT confirms with shift manager of response plan
IHTs leave shift office to get SCBA and respond according to the shift manager instructions

MSA employee arrives at 272-AW to support Radio & Alarm Reporter system (RAFAR) Box maintenance by the Hanford Fire Department.

COMS Manager was called by HPMC stating that they were too busy and needed to split the group and some of the personnel getting medical evaluation were taken to 1979 Snyder.
SOEN Message sent made by CSM “Entering AOP-015 for odors reported near 272AW. Road blocks are put in place East and West of 242-A on 4th St and South of AW Farm on Canton Ave.

During fact finding, several employees indicated that Porta potty truck drove by mask station and that the truck drove from north side of AP farm around AP farm to mask station. [Interview with MSA representative indicated that no porta potty pumping was conducted near 272AW the morning of the event]

COMS Manager 2 went out west door, Operations staff started at south end of building then the back dock area and Danger tape was put up to prevent egress from 272AW from East, South and North doors.

Two doors left without a barricade. Operations staff put Danger tape over the garage doors.

According to employees in the fact finding, no communications went out to the building occupants. [Note: It was indicated that not all occupants receive SOEN notices. However it is presumed that all managers are included and are to notify their employees. TF-AOP-015 requires that a field lead be assigned to implement Solid Waste Information Management System (SWIMs). However, it does not specify a need to contact the Building Warden to implement facility actions. Additionally, in an interview with a CSM, concern was raised that an all employee SOEN may prompt a plethora of calls to the shift office creating overwhelming distraction to the CSMs response to the event]

MSA employee indicated smelling sewer type smell and that the odor was smelled off and on during the work that was being performed. Employee indicated that at the time of smelling odors that no symptoms were experienced

COMS Manager 1 called COMS Manager 3 to ask what was going on at 272AW. COMS Manager 3 was at the back door.

MSA employee completed work. Employee noted that during work activity he witnessed several people come out of 272AW but no one indicated that an AOP-015 was ongoing and that the employee should leave the area or go into 272AW as part of ongoing response actions

In leaving the area the MSA employee indicated that he observed a truck parked west of 272AW on 4th St and East of 272AW on 4th St. He indicated at no time did any WRPS employee stop him from driving from 272-AW. He indicated that he then drove along AP farm to Canton and then drove north on Canton Ave where he encountered two orange cones in the roadway but nearer the gravel area adjacent to the road. It was unclear what the purpose of the cones in the roadway
was to the employee. However he indicated that he determined he should not drive through the cones and went the alternate direction.

1116 Upon receipt of WRPS SOEN, MSA sent notification out to MSA employees of AOP-015. MSA employee’s manager indicated that he received the MSA notification but could not reach the MSA employee and was unaware of his location

1121 IHTs arrive at mask station

1125 Block valves HV-CA1-7 and HV-CA1-9, feed valve HV-CA1-1 are all closed. 242-A C-A-1 controlled dump complete

1126 IHTs leave mask station to respond to odor in conex box

1130 Fitter Supervisor transported workers and they arrived at 1979 Snyder. Safety and Health met the group in town.

MSA employee experience a headache

1135-1145 Shift IHTs use DRI instrumentation to investigate inside and outside conex box area and collect bag samples. (DRI 14-06628)

MSA employee contacted his supervisor regarding his symptoms and opted to report to HPMC for medical evaluation where he was met by an MSA safety representative

1140 Roadblocks were established

1140-1237 2\textsuperscript{nd} team of IHTs use DRI instrumentation to investigate drain field NE of 272AW, Evaporator parking lot and AW farm. 4 Bag samples were collected at locations (DRI 14-06637)

1157 MSA employee, working within the AOP-015 area, went into HPMC reporting symptoms. Safety Rep was there and observed.

1200 MSA employee released back to work by HPMC without work restrictions

1215/1220 Pipefitter 3 noted that he saw IHT in SCBA walking past building and he stepped outside to see what was happening, went out lunchroom door and noticed there were no postings, just the tape. The west end of the building also had tape. HAMTC representative told Fitter 3 that they were under AOP-015.

1217 Fitter 3 called CSM and asked if the ventilation had been turned off but couldn’t reach the Shift Manager so called Shift Production Team Manager. Asked about
the ventilation being turned off, but the Shift Production Team Manager didn’t have an answer.

Fitter 2 indicated during the fact finding that he made a second call to the Shift Production Team Manager and was instructed by him to shut down the ventilation.

1220/1230 Fitter 3 went to the COMS building administrator.

COMS Manager 3 tried to call the Shift Office. Was told that yes they were under a take cover.

Operator turning off the breakers was under the Shift Manager.

1256 2nd IHT sample bags delivered to 2704 HV for analysis

1258 Road barricades came down / barricades were shrunk down.

CSM shrinking original footprint of restricted area after preliminary field readings show no elevated levels of VOCs and Ammonia.

1300/1310 Shift IHTs perform readings on 242A vessel vent and collect bag samples. (DRI-14-06628) Deliver to 2704HV for analysis. [Note: 242-A vessel dump completed at 1125]

1345 272-AW tool crib attendant got HAMTC safety representative and noted that the backside ventilation was still operating.

1347 All ventilation was turned off

1400/1430 Multiple workers report glue/solvent odor in the north end of the 272AW adjacent in and around the instrument tech shop. Building ventilation was inoperable due to previous AOP-015 outside building, shut down earlier in day.

1425 272-AW tool crib attendant came across a couple of the fitters. Asked if they knew where Fitter supervisor was, told them about the smell, and the fitters went in to verify the odor.

1430 Original workers from prior 272-AW Conex box AOP-015 event returned from 1979 Snyder and reported back to the Shift office to see what was going on.

1430/1445 Multiple workers in shift office completing odor response cards. No symptoms reported.

1500 272-AW building administrator went to the Shift Office.
1503  SOEN message sent out for the 272AW shop area, back shop area controlled. No one sent to medical after being offered.

1515/1530  IHTs and Supervisor enter building to investigate source and monitor with DRI instrumentation and pull polypropylene bag samples in back shop area and inside instrument tech area.

1545  COMS Manager 2 and COMS Manager 3 went to shift office and told CSM 272AW building was secured in the area of the odor. Personnel were cleared of the area of the building and located in rooms away from the odor. Samples delivered to 2704HV for analysis.

2251  Bag analysis and write up complete

2315  Surveillance done in building with IHT and instrumentation, elevated readings again found in garbage can, strong odor, 4ppm VOC, taped bag and disposed of contents in outside waste bin.

2354  Bag analysis write up complete

FRIDAY, OCTOBER 3, 2014

1220  Sample analysis for AOP-015 Instrument Tech Shop in 272AW have been completed and are or below exposure. SOEN sent and all call announcement made.

Compensatory Measures

IMMEDIATE ACTIONS

1. Entered AOP-015 for stronger than normal odors by multiple people
2. All call radio announcement made for personnel to avoid that area and move upwind
3. SOEN message sent for AOP-015 Entry
4. Road blocks established east and west of 242A on 4th Avenue, and Canton Avenue South of AW Farm.
5. Ventilation secured for 242 AW Building
6. IH responded and implemented Tank Waste Odor Sampling Plan (IHP-09001)
7. Samples pulled at conex in question, 242A Evaporator Ammonia Monitor Stack, AW Exhauster and Sewer Drain Field east of 242A.
8. Notified MSA Management
9. Entered AOP-015 for chemical smell in Instrumentation Shop in 272AW
10. IH performed sampling
11. SOEN and TFC all call radio announcements made.
COMPENSATORY ACTIONS:

No additional compensatory actions necessary as a result of this event investigation.

Preliminary Extent of Condition Review

Conex Box AOP-015 Event: Agreements are in place between WRPS and MSA regarding notification of the WRPS CSM when MSA employees will be working within or adjacent to a tank farm boundary. However, this agreement does not specifically address communications by MSA to the WRPS CSM or Area Day shift manager(s) (ADM) when an MSA employee is working with in the Tank Farms support areas, as occurred in this event. In similar events or more severe events, communication with personnel or their management by the CSM or ADM (as appropriate) to take actions, particularly in the event of AOP-015 events outside of tank farm boundary’s needs to occur to allow for safe and timely response.

Since an MSA employee was involved in the event, MSA representatives indicated that they believe their companies’ IH should also be involved with sampling and monitoring of the effected work area. It is unclear what corporate conditions or requirements govern this point but a recommendation is provided below to evaluate and address the comment.

272-AW AOP-015 Event: Other tank farm facilities containing areas where volatile chemical are stored and vented into the building space and could encounter similar issues when ventilation systems, relied upon to provide sufficient air exchange, are shut down during an event. A recommendation is provided to evaluate this condition and appropriate response actions in the case of a Take Cover or AOP-015 event that may require shutdown of the ventilation system.

Discussion of Potential Causes

Conex Box AOP-015 Event: Based on input from workers during the fact finding meeting, review of information and investigative IH monitoring and sampling, the source of odors detected by workers inside of the Conex Box near 272-AW is unknown. As discussed previously, the IH sampling that was performed following the report of the odors and information collected by this initial event investigation was inconclusive as to the source of the odors encountered by the pipelayers and millwright.

272-AW AOP-015 Event: Based on input from workers during the fact finding meeting, review of information and investigative IH monitoring and sampling, the source of odors detected by workers within the instrument shop has not been determined. However, within the instrument shop there is a flammable material storage cabinet that is ventilated to the room and during IH sampling, sample results from a sample taken within the garbage can in the room indicated that VOCs were detected within the garbage can. However, the contents of the garbage can were not noted in the IH report. These sources, coupled with reduced air exchange caused by the shutdown of the building ventilation system in response to the Conex Box AOP-015 Event likely resulted in a buildup of VOCs within the room resulting in stronger than normal odors being detected by building occupants.
Discussion of barriers that could have impacted the cause

272AW ventilation is designed to ensure sufficient air exchanges occur to prevent buildup of odors and vapors during normal conditions. Chemical hazards in the building are known and should be considered when taking response actions including shutting down building ventilation. Response planning and understanding what occurs within the building when ventilation is shut down and planned actions (i.e., relocating shop residents to an alternate location during the event) for this response would have prevented the 272AW AOP-015 event

Recommendations/Proposed Corrective Actions

1. Update 272-AW Take Cover Exhaust System Isolations information provided building administrator and craft to identify appropriate isolation points to shut down ventilation system in the case of event response. See WRPS-PER-2014-2187.

2. Consider instituting Operational Drills for support facilities such as 272-AW for AOP-015 event response. In addition, consider instituting Operational Drills for response to AOP-015 events outside of tank farm boundaries to include establishment of barriers and road blocks, limiting access and egress from adjacent structures, and communications.

3. Evaluate identification of Building Warden, and backup that resides within the building to aid in event response activities.

4. Evaluate need for additional review or training of Building Wardens and building occupants regarding response actions to vapors and other airborne irritants, as detailed in WRPS Building Warden Guide.

5. For non-tank farm related AOP-015 events, evaluate inclusion or reference of actions outlined in WRPS Building Warden Guide within Abnormal Operating Procedure TF-AOP-015.

6. Evaluate adequacy of communication mechanisms for notification of non-WRPS workers that may be working within Tank Farm areas (not within a Tank Farm) which likely, under current methods or practices, may not receive timely notice of entry to AOP-015 in or around a work area.

7. Evaluate coordinated involvement of MSA IH when MSA employees are involved in an AOP-015 event in the sampling and monitoring of the event site

8. Evaluate TOC facility (i.e., buildings) hazards that could produce vapors that are ventilated into a room or building space (i.e., chemical storage cabinets) that rely upon building ventilation to ensure air exchanges prevent a buildup of vapors. Develop appropriate response actions in the case of a Take Cover or AOP-015 event that would require the shutdown of the ventilation system.
Attachments (as they apply):

1. List of personnel contacted (only those contacted beyond those identified on Fact Finding attendance rosters)
2. Event Investigation Attendance Rosters (Attached)
3. Log Book Entries (Attached)
List of Personnel Contacted

MSA Communications Specialist
MSA Supervisor
MSA Steward
MSA HAMTC Safety Representative

Note: See Event Investigation Meeting Attendance Roster for Additional List of Personnel Contacted
# EVENT INVESTIGATION ATTENDANCE FORM

**Date:** 10/7/14

**Event Title:** 2724W Connex Instrument Tech Shop

**Event Number:** EIR-2014-034 EIR-2014-037 12/29/14

<table>
<thead>
<tr>
<th>Print Name</th>
<th>Signature</th>
<th>HID</th>
<th>Job Position</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>123</td>
<td>123</td>
<td>WRPS</td>
<td></td>
</tr>
<tr>
<td>456</td>
<td>456</td>
<td>456</td>
<td>P.O.</td>
<td></td>
</tr>
<tr>
<td>789</td>
<td>789</td>
<td>789</td>
<td>OCP</td>
<td></td>
</tr>
<tr>
<td>INST</td>
<td>INST</td>
<td>INST</td>
<td>P.O.</td>
<td></td>
</tr>
<tr>
<td>IH</td>
<td>IH</td>
<td>IH</td>
<td>PC</td>
<td></td>
</tr>
<tr>
<td>IH</td>
<td>IH</td>
<td>IH</td>
<td>Prod Ops!!</td>
<td></td>
</tr>
<tr>
<td>IHT</td>
<td>IHT</td>
<td>IHT</td>
<td>P.O.</td>
<td></td>
</tr>
<tr>
<td>987</td>
<td>987</td>
<td>987</td>
<td>UNFEB</td>
<td></td>
</tr>
<tr>
<td>654</td>
<td>654</td>
<td>654</td>
<td>P.O.</td>
<td></td>
</tr>
<tr>
<td>ABC</td>
<td>ABC</td>
<td>ABC</td>
<td>P.O.</td>
<td></td>
</tr>
</tbody>
</table>

---
10/14  B-shift
2138 (cont) values are currently in service on the
physically connected vessel transfer system
in support of 30A operations.

2330 Notified Sec. Nat. who wanted

to get

concur on path forward

2345 Based on discussion with

I have directed 244-A SU to place 30-A
in shutdown mode & perform a flash.

2445 Do not perform any vessel transfers using

AUXPB-WT-V-312 or AUXPB-WT-V-313 until

 queer operability has been demonstrated.

2447 Notified EOC to declare a Group 4 Subgroup

A) 7-3 occurrence

2448 Notified DFRP & instructed with

Sec Nat.

SPO's complete:

2455 Discussed possible TSR violations with

and all agree that no violations

existed.

2455 Declared AUXPB-WT-V-312 & 313 INOPERABLE.

Engineering currently working on operability

with extremely high priority.

2457 Relieved on CSU by.

2457 Problem:

1st Feed pump service
2 nd Feed pump service
1st & 2nd Feed pumps (R&I) service
1st Feed pump & NDS
2 nd Feed pumps service
2nd Feed pumps (R&I) service

CMR Relieved as can be

by

other AREDS TASK: CDU-36-CSU.

07322-

which will to arrive with the MSG

for low bomb seat. Recommended to work (can't bid)
10/2/14
(Cont'd in next action) with no restriction.

(Cont'd)

0931: BASED ON REVISION TO THE PROCEDURE
(CFR-BSM-1R-CM-6-04) REVISION THAT
INCLUDES MEDICAL EVALUATIONS AND RESULTS.
RED ARROW STOP WORK RESTRICTIVE ACCESS
TO ALL TDC FOR EMPLOYEES AWAITING
MEDICAL RESULTS IS LIFTED.

0906: Approved non-electronic first time use
of TD-230-275 EVAP MONITORING FOR
AW-107 TO AP-107.

0911: Reports returned to work w/ restriction.
Notified. Scene sent.

0904: Released to return to work.
Notified.

0931: Taken to KPMC for evaluation of
swollen knee from injury reported

0832: Taken to KPMC for evaluation of
pneumonic illness. Body was
released to return to work.

0831: No scene sent.

0814: Assumed duties as CSM.

0804: Releasor to CSM.

10/2/14

(Cont'd)
10/2/14  

C-SHIFT

1025. 3 employees reported a stronger than normal odor while accessing the middle corner west of 272-AW. 2 filters were changed, millwright entered AOP-015 for stronger than normal odor by multiple personnel. Employees did not have any symptoms. Offered medical surveillance and all 3 accepted. They were taken to HMHC by their supervision, millwright was taken to HMHC and due to overload at that station the two filters were taken to Snyder.

All call radio announcement made for personnel to avoid that area and move upwind. SOEN message sent for AOP-015 entry. Contacted senior management.

1210. 1 employee was notified that MSA employee (Computer Tech) was taken to HMHC. He was working on east side of 272-AW fixture box and exited via his vehicle out of the area. He had symptoms of headache. Notified the MSA employee's manager. MSA on call senior management.

1314. Released to return to work with no restrictions.

1330. Released CSI by (no restrictions) released.

1400. Released back to work with no restrictions.

1430. Entered AOP-015 for a chemical spill in the instrument shop in 272-AW. Multiple personnel reported odors, no symptoms were reported and all personnel were offered HMHC treatment, none accepted. Industrial Hygiene is performing sampling. SOEN and TFC.

1649. NCO received a spider bite on his right forearm. He was taken to HMHC by his manager, notified his safety representative, SOEN sent.

1725. and were returned to work with no restrictions. (See 1025 entry) SOEN sent and notifications made to and.

02/2/14
10-2-14  B-SHIFT

0001  242-A is in Operations Mode, C-A-I 101

is approx 24,000, Feed from AW-102-1

slowing as we ramp down steam to 8

is 10,000 lbs/m, boil off rate decreasing

k-1-5-1, k-1-5-2, k-2-5-1, k-2-5-3 and vessel V-6

are operating.

0005 Continue controlled shutdown per

0450 Relieved by AS 242-A SM

0450 - Relieved, as 242-A SM

0458 - C-A-I in recirculation without vacuum

0910 - Directed AL to perform controlled of

C-A-I contacts to AW-102.

0950 - C-A-I dump to AH-100 started, contro

dump.

1001 - Supply steam condensate samples.

1053 - Inhibited UV-1 C-A-I-3 alarm, ranging.

1125 - Completed controlled dump of C-A-I to

AH-102.

1127 - C-A-I vessel is empty, 242-A is

now in shutdown mode.

1447 - Relieved, 242-A SM

1447 - Assumed 242-A SM

1449 - Second Seal water in PB-1 and PB-2

1450 - Re-established Adam lows on PB-2

and Feed Pump.

1725 - Relieved as 242-A SM by

1725 - Assumed duties as 242-A SM

2400 - No further entries the date.
10-2-14  B-Shift

0000- 242-A is in Operation Mode. K15-1 is on
K25-1 is on. K15-3 is STBY. K15-2 is on.

0030- Finished Steam Condensate Condenser Sapping

0038- Steam off to Reboiler
0051- Stop Feed 162-AW pump is off
0053- PB2 is off per TO-600.060
0051- Started Slurry line flush to 107-AP
0053- De-Entrain Sparys are off
0200- Started Cool Down off per TO-600.060
0720- Set PLC-CA1-7 Auto 30 sec.
0731- De-Entrain Sprays Start 300 sec level 1-4-1
0630- Turn down to SU
0630- Received Turnover from

0710- Starting to take vacuum off of the vessel.
0745- HPT doing an OPS-5 on the V.V. system, and K1
system COME.
0753- Both OPS-5's have been completed, HPT leaving.
0805- Operator taking the steam condensate samples to
the lab.
0929- Notified SCI that we would be shutting down the 90°
steam.
0932- Have turned the steam off to the jets, HV-EC2/3-1
is closed.
0938- We are in recirculation without vacuum. S.M. aware.
0942- Valves 5-91, and 9-19 are closed.
0943- Notified Tank farm operator and TAMC's operators of
impending dump to 102-AW.
0949- We have started dumping.
1053- Inhibited F%6 UX5-CA1-3. It is cycling to fail
AS we are dumping the vessel.
1105- Vessel is empty, block valves and HV-CA1-1 will be open
for 20 minutes to assure everything is drained.
1125- Block valve HV-CA1-7 and HV-CA1-9, feed valve HV-CA1-4 are
All closed. Vessel is officially dumped.
10-2-14
C-Shift AM

1127- We have declared we are in "Shutdown" Mode.
1140- We are going into a short term shutdown of
the PB-1 and PB-2 seal water. Valves 5-43 and 5-45A
are closed.
1126- We have electricians to open the switch gear
for the feed pump on MCC-1 and the Slurry pump
VFD. Turning them off.
1130- We have placed admin locks on both the feed
pump on MCC-1, and the PB-2 VFD.
1140- We already have an admin lock on value 5-46.
So the Steam Jet for the sump is locked out. We
are going to do one last MBD, and then secure
the MBD paper work.
1500- MBD is complete and secured.
1600- A temporary round has been issued for the problem
of the purge air line trying to plug. We are monitoring
"PT-CAI-18" for signs of plugging. The temp. round
will be every two hours during operation with vacuum.
1600- We have a high ammonia monitor reading and alarm.
ARP is no help, have called for an IH tech and HPT
to come over check it out. S.M. aware.
1643- IH tech found no ammonia readings in the condenser
room at all. He only got a reading of 5 ppm in the U.U.
stack. That is higher than the 1 or 2 ppm that they
have been getting, but nowhere near the almost 5,000 ppm,
they the MCS is showing.
1702- The ammonia reading on the MCS dropped down to
a more normal reading of 12 ppm.
1707- An HPT has gone into the truck load-out room and
we have down posted the area from ARD to CA. We
have opened the curtain.
1840- Turnover to...