Response to Reported Odors or Unexpected Changes to Vapor Conditions

Tank Farm Abnormal Operating Procedure 200E/200W

Changes “Other Than Inconsequential” Require These Additional Reviews:

<table>
<thead>
<tr>
<th>Industrial Hygiene (Program)</th>
<th>Radiological Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ken Way</td>
<td>Lee Livesey’s Organization</td>
</tr>
</tbody>
</table>

USQ # GCX-2

<table>
<thead>
<tr>
<th>CHANGE HISTORY (≤ LAST 5 REV-MODS)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-5</td>
<td>06/25/2018</td>
<td>Inconsequential Change</td>
<td>Bolded actions in Step 3.1.5. The words “IF” and “CALL.”</td>
</tr>
<tr>
<td>G-4</td>
<td>03/22/2018</td>
<td>Operation request</td>
<td>Updated authentication requirements on data sheets</td>
</tr>
<tr>
<td>G-3</td>
<td>03/16/2017</td>
<td>Operations request to address additional criteria performed during AOP-015 response</td>
<td>Added Steps and wording to provide a new Attachment 2 and 3 to be filled in electronically and sent to DL - WRPS AOP-015.</td>
</tr>
<tr>
<td>G-2</td>
<td>01/26/2017</td>
<td>Operation request</td>
<td>Added i9n requirements for odors detected outside Tank Farm boundaries. Moved Step 3.1.7 to Step 3.1.5.</td>
</tr>
<tr>
<td>G-1</td>
<td>04/21/2016</td>
<td>Operations request to address WRPS-PER-15-2316</td>
<td>Added step Added step 3.1.10 to complete odor response card and submit to Central Shift Manager.</td>
</tr>
</tbody>
</table>

Type: REFERENCE
Document No.: TF-AOP-015
Rev/Mod: G-5
Release Date: 06/25/2018
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1.0 AFFECTED PERSONNEL, FACILITIES, EQUIPMENT, OR AREAS

This procedure applies to WRPS personnel and subcontractors doing work in 200 East Area, 200 West Area, and 600 Area controlled by WRPS and equipment in these areas. This procedure does not apply to WRPS personnel and subcontractors doing work at the 222-S Laboratory Complex.

2.0 ENTRY CONDITIONS

NOTE - If the odor source is readily apparent, such as vehicle exhaust, septic systems, herbicides, pesticides, animal odors, or at a general purpose facility, this AOP does not need to be entered, refer to TFC-OPS-OPER-C-67 for required actions.

- This AOP is for odors reported at the time the event occurred, so that timely data collection is achievable.

2.1.1 NOTIFICATION from personnel that odors are present and meet any of the following conditions:

- Odors have caused symptoms of exposure (e.g., headaches, irritation of the skin, eyes, nose, or lungs, nausea, difficulty breathing, metallic taste in mouth)
- A stronger than normal odor is detected by multiple personnel outside of areas where potential or actual vapor concerns are expected such as waste transfers, 242-A operations, or cover block removal.

2.1.2 IF at any time event meets an Emergency Action Level (EAL), Emergency Response Procedure (ERP) Initiating Condition, or TFC-OPS-OPER-C-24, Attachment A criteria, EXIT this AOP AND IMPLEMENT DOE-0223, RLEP 1.1, BED Checklisted Duties.

2.1.3 IF at any time the odor source is determined to be related to a spill or release, EXIT this AOP AND ENTER TF-AOP-011.
3.0 ACTIONS

3.1 Immediate Actions

**Implement SWIM Response Actions at Event Scene**

3.1.1 **ASSIGN** field lead to implement SWIM response actions.

**NOTE**- Evacuation does not include the Tank Farm change trailers or facilities such as the 242-A Evaporator building, unless odor issues are impacting the interior of the facility.

3.1.2 **ANNOUNCE** entering TF-AOP-015 over Tank Farms radio channel(s) **AND**

**SEND** SOEN message that includes the following:
- Entry into TF-AOP-015
- Event and location
- Required actions for affected personnel/protective actions as applicable
- Access approval and authority as applicable.

3.1.3 **STOP** access to affected area except for activities required for safe operations or the TF-AOP-015 response.

3.1.4 **NOTIFY** other personnel as needed in adjacent work areas and/or other facilities that may not receive radio communication.

3.1.5 **IF** emergency assistance is required, **CALL** Hanford Fire Department (HFD) at 911 (373-0911 for cell phones).

3.1.6 **IF** the odor could impact a large area, **CONSIDER** activating a take cover per TF-ERP-001 and RLEP 1.1.

3.1.7 **ISOLATE** area **AND**

**MINIMIZE** personnel exposure by preventing inadvertent entry into hazardous area.

3.1.8 **ENSURE** employees exhibiting symptoms report to Occupational Medicine for medical surveillance. (See TFC-ESHQ-S_CMLI-C-02).

3.1.9 **OFFER** medical surveillance to employees who detected odors.

3.1.10 **REQUEST** odor response card be completed and submitted to the Central Shift Manager.
3.1 Immediate Actions (Cont.)

3.1.11 IF odor source is suspected to be from tank waste and is within a Tank Farm boundary, PERFORM the following:

3.1.11.1 DIRECT Industrial Hygiene Technician (IHT) to implement Tank Waste Odor Sample Plan IHP-09001.

3.1.11.2 ENSURE Form A-6005-744, TF-AOP-015 Industrial Hygiene Investigation Report is initiated.

3.1.11.3 IDENTIFY the proper respiratory protection prescribed on TF-AOP-015 response Respiratory Protection Form Task 1.

3.1.12 IF odor source is suspected to be from tank waste and is outside a Tank Farm boundary, PERFORM the following:

3.1.12.1 DIRECT Industrial Hygiene Technician (IHT) to implement Tank Waste Odor Sample Plan IHP-09001.

3.1.12.2 ENSURE Form A-6005-744, TF-AOP-015 Industrial Hygiene Investigation Report is initiated.

3.1.12.3 IDENTIFY the proper respiratory protection prescribed on TF-AOP-015 response Respiratory Protection Form Task 2.

3.1.13 IF odor source is not suspected to be from tank waste and is outside a Tank Farm boundary and respiratory protection is required by management, PERFORM the following:

3.1.13.1 NOTIFY the On-Call Safety and Health professional.

3.1.13.2 IMPLEMENT Odor Response Plan (Attachment 1) utilizing necessary resources.

3.1.13.3 IDENTIFY the proper respiratory protection prescribed on TF-AOP-015 response Respiratory Protection Form Task 3.
3.1 Immediate Actions (Cont.)

3.1.14 **IF** odor source is not suspected to be from tank waste and is outside a Tank Farm boundary, **PERFORM** the following:

3.1.14.1 **NOTIFY** the On-Call Safety and Health professional.

3.1.14.2 **IMPLEMENT** Odor Response Plan (Attachment 1) utilizing necessary resources.


3.1.15 **EVALUATE** event against TFC-OPS-OPER-C-24 to ensure occurrence categorization and notification are completed as required.

3.1.16 **NOTIFY** management per TFC-OPS-OPER-C-57.

3.1.17 **COMPLETE** electronic version (e.g., Word file) of Attachment 2 - Communication Template **AND**

**SEND** to DL – WRPS AOP-015 Event Notification as soon as enough information is available.

3.1.17.1 **PRINT** a copy of the electronic file of Attachment 2 for Record Retention.

**NOTE** - Step 3.1.18 is not required to be completed prior to exiting TF-AOP-015.

3.1.18 **COMPLETE** electronic version (e.g., Word file) of Attachment 3 - Follow-Up Event Summary **AND**

**SEND** to DL – WRPS AOP-015 Event Notification once event is stabilized and all details are known.

3.1.18.1 **PRINT** a copy of the electronic file of Attachment 3 for Record Retention.
**4.0 EXIT CRITERIA**

4.1.1 **CONFIRM** all actions described in Section 3.1 have been completed.

4.1.2 **CONFIRM** from Safety and Health professional that IHP-09001 sampling is complete and no hazards were detected, or identified hazards are controlled;

**OR**

**CONFIRM** from Safety and Health professional that Odor Response Plan (Attachment 1) has been completed and no hazards were detected or identified hazards are controlled.

**OR**

**CONFIRM** an EAL, ERP, or TFC-OPS-OPER-C-24, Attachment A (Base Program Operational Emergency) criteria is met and RLEP 1.1 has been entered.

4.1.3 **IF** sample analysis results are at or below background levels, **PERFORM** the following:

4.1.3.1 **SEND** SOEN stating “Sample analysis for the TF-AOP-015 event has been completed and the results are at or below background levels. Exiting TF-AOP-015”.

4.1.3.2 **ANNOUNCE** exiting TF-AOP-015 over tank farm radio(s).

4.1.4 **IF** sample analysis results are above background but below action limits, **PERFORM** the following:

4.1.4.1 **SEND** SOEN stating “Sample analysis for the TF-AOP-015 event has been completed and the results are below action limits. Exiting TF-AOP-015”.

4.1.4.2 **ANNOUNCE** exiting TF-AOP-015 over tank farm radio(s).
Response to Reported Odors or Unexpected Changes to Vapor Conditions

5.0 RECORDS

5.1.1 PERFORM the following for records identified within this procedure.

5.1.1.1 RECORD the number of times the record was generated in applicable column

OR

PLACE a check mark (✓) in the N/A column.

5.1.1.2 SUBMIT the package to the central shift office.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment 1 – Odor Response Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment 2 - Communication Template (Printed copy of electronic version)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attachment 3 - Follow-Up Event Summary (Printed copy of electronic version)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FWS/OE/Shift Manager SEND the completed records to the Central Shift Office for records retention.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature / Print (First and Last) / Date

FWS/OE/Shift Manager

The record custodian identified in the company-level Records Retention and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
# Response to Reported Odors or Unexpected Changes to Vapor Conditions

## Attachment 1 – Odor Response Plan

**DESCRIPTION OF EVENT** (date/time & description of odors detected, location, symptoms, etc):

**RESPONSE STEPS:** *Attach additional pages as needed*

IH Sampling Plan #: ___________________________  RWP #: ___________________________

JHA: ________________________________________  Other ____________________________

### REQUIRED APPROVAL SIGNATURES

<table>
<thead>
<tr>
<th>Industrial Hygiene:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signature / Print (First &amp; Last) / Date</td>
<td></td>
</tr>
</tbody>
</table>

Shift Manager:

|                     | Signature / Print (First & Last) / Date |

### ADDITIONAL SIGNATURES (as determined by Shift Manager or Safety & Health Rep; N/A if not applicable)

**RadCon:**

|                     | Signature / Print (First & Last) / Date |

**Environmental:**

|                     | Signature / Print (First & Last) / Date |

**Engineer:**

|                     | Signature / Print (First & Last) / Date |

**Industrial Safety:**

|                     | Signature / Print (First & Last) / Date |

**Odor Response Plan Notes** (monitoring data, results of actions taken, etc. Use more sheets as necessary)

### RESPONSE PLAN COMPLETED:

**Safety & Health Rep:**

|                     | Signature / Print (First & Last) / Date |

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Attachment 2 - Communication Template

The following is example of detail to provide in the electronic form of Communication Template.

<table>
<thead>
<tr>
<th>Hanford workers were taken to HPMC/Kadlec or have declined precautionary medical evaluation after reporting odors at location. #X of workers that reported symptoms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The employees were description of what work they were performing at the time of reported odors and were or were not in an area that requires use of a supplied air respirator.</td>
</tr>
<tr>
<td>Workers were instructed to leave the area, and access to the area has been restricted.</td>
</tr>
</tbody>
</table>

NOTE - This communication template is to be completed as soon as enough information is available.

| Central Shift Manager: __________________________ / __________________________ / __________ |
|---|---|---|
| Signature | Print (First and Last) | Date |
Attachment 3 - Follow-Up Event Summary

The following is an example of detail to provide in the electronic form of Follow-Up Event Summary.

TF-AOP-015 Initial Report

<table>
<thead>
<tr>
<th>Date: Month/day/year</th>
<th>Time: XXXX hours</th>
<th>Location: XX Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Workers Involved: XX</td>
<td>Sampling Results #: Add DRI Survey #</td>
<td></td>
</tr>
</tbody>
</table>

Event Summary

At approximately XXXX hours X# workers description of event. Initially no workers reported symptoms and declined medical evaluations or were transported to HPMC or Kadlec via ambulance.

At approximately XXXX hours provide updated information to included additional workers reporting symptoms, description of symptoms and status on medical evaluation.

At the time odors were reported, the individuals were or were not working in an area requiring use of supplied-air respiratory protection. All workers were instructed to leave the area. Access to the area was restricted.

IHTs responded to the area and took DRI readings and a bag sample. DRI instrument readings were above or below action levels. Analytical results for bag samples are being analyzed and will be posted upon receipt or Bag samples have been analyzed the results allowed the restricted area to be down posted.

Provide any subsequent information

An event investigation has been initiated.

**Return to Work Status**

<table>
<thead>
<tr>
<th>Number of workers returned to work without restriction</th>
<th>X#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of workers returned to work with restriction</td>
<td>X#</td>
</tr>
<tr>
<td>Number of workers referred for further evaluation</td>
<td>X#</td>
</tr>
</tbody>
</table>

NOTE - Complete once event is stabilized and all details are known.


Central Shift Manager: ___________________________ / ___________________________ / ____________

Signature                        Print (First and Last)         Date