Changes “Other Than Inconsequential” Require These Additional Reviews:

Radiological Controls:
Central Radcon Organization

USQ # TF-15-0395-S, Rev.5

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-3</td>
<td>07/23/2015</td>
<td>Radcon request</td>
<td>Added additional bullet in Note above Step 3.1.3. Added Ref. to TF-116 for minimum respiratory protection to Step 3.2.1 as well as adding “for IH purposes” to 3rd bullet. Added new Step 3.2.6.1 for Grab air sample. New Steps 3.2.8.1 and 3.2.14.1 for IHT minimum surveys. New Step 3.2.9 for evaluating affected workers. Additional change to Step 3.2.1 to address development of a new RWP.</td>
</tr>
<tr>
<td>D-2</td>
<td>04/23/2015</td>
<td>Operations request</td>
<td>Added Step 3.2.16 and moved Step 3.2.14.2 to level 3 Step 3.2.15. Updated cross reference to Step 3.2.17. Replaced Area Dayshift Manager with “Operations Manager”</td>
</tr>
<tr>
<td>D-1</td>
<td>03/05/2015</td>
<td>POR03 is no longer being used.</td>
<td>Delete reference to POR03 and BRK-207 from attachment 2.</td>
</tr>
</tbody>
</table>
1.0 AFFECTED PERSONNEL, FACILITIES, EQUIPMENT, OR AREAS

This procedure applies to WRPS personnel and subcontractors doing work in 200 East Area and 200 West Area and equipment in these areas. This procedure does not apply to WRPS personnel and subcontractors doing work at the 222-S Laboratory Complex or 242-A/242-S Evaporators.

The intent of this abnormal operating procedure is to ensure personnel and environmental safety under certain primary tank primary ventilation upset conditions, or when a primary ventilation CAM high radiation alarm has been activated.

This procedure provides steps necessary to implement protective actions for personnel and the environment, to stabilize the affected area and equipment, and to restore normal ventilation system operation and access to the affected tank farm. Under certain circumstances (e.g., when a primary ventilation system must be repaired prior to being restarted), this procedure may be exited prior to restoring normal ventilation after management has ensured that appropriate controls are in place.

2.0 ENTRY CONDITIONS

2.1.1 Central Shift Office receives notification of any of the following:

- Report of a tank primary ventilation exhaust stack CAM high radiation alarm (includes portable exhausters)
- Unplanned DST primary ventilation shutdown
- Unplanned DST high pressure alarm
- DST primary ventilation system manual shutdown directed by an ARP.
3.0 ACTIONS

NOTE - Actions in Section 3.0 can be performed in any logical order or concurrently as directed by the Central Shift Manager.

- Protection of personnel must be the overriding consideration for determining the order in which the steps are performed.

3.1 Immediate Actions

3.1.1 STOP waste disturbing activities and all work not associated with response to the event in the affected tank farm.

3.1.2 ANNOUNCE entering TF-AOP-021 over Tank Farm radio channel(s) AND SEND SOEN message that includes the following:

- Entry into TF-AOP-021
- Tank Farm Event and location
- Required actions for affected personnel/protective actions as applicable
- Access approval and authority as applicable.

NOTE - The next three announcements are not required if the affected tank farm is vacant.

- Personnel inside affected tank farm must exit the farm
- Personnel must move to an indoor location upwind of the stack and remain segregated until surveyed.
- If a CAM High Radiation Alarm is active exiting personnel must perform a whole body exit survey, otherwise perform surveys in accordance with exit survey requirements for the posted area.

3.1.3 EVALUATE location and safety of personnel in adjacent areas AND DIRECT protective actions as appropriate to ensure personnel safety.

3.1.4 DIRECT field personnel to post affected DST tank farm as a farm-wide VCZ or affected SST tank farm as restricted access.
3.2 Follow-On Actions

3.2.1 DIRECT personnel to use the following during completion of activities under this procedure within affected farm: (See Attachment 1 for farm-specific TVIS and IHSP numbers.)

- PPE and RWP void limits listed in RWP TF-116 when responding to an exhaust stack CAM high radiation alarm
- PPE and RWP void limits listed in RWP TF-121 when responding to a primary ventilation shutdown
- Minimum required respiratory protection for IH purposes in accordance with TVIS SEG 4
- IHSP for SEG 4 work activities in affected farm when ventilation system is not operating and/or tank pressures are not within normal range in DST farms
- IHSP for restoration of affected farm to routine access when ventilation system is operating and tank pressures are within normal range in DST Farms.

Respond to Primary Tank Ventilation Stack CAM High Radiation Alarm (Steps 3.2.2 through 3.2.9)

3.2.2 EVALUATE conditions (e.g., wind direction and speed) that could influence potential exposure of response personnel.

3.2.3 IF affected farm ventilation system did not shut down, DIRECT appropriate personnel to shut down the operating ventilation system using one of the following methods:

- Remotely from HMI or MCS (when possible)
  
  OR

- Remotely using electrical disconnect switch and PPE specified in Attachment 2. (Electrical disconnect switches should be manipulated by an electrician, if immediately available.)
  
  OR

- Remotely by requesting Hanford Site Utilities to isolate power to the affected farm.

3.2.4 RECOMMEND, based on results of Step 3.2.2, to personnel appropriate route of travel to affected CAM.

3.2.5 DIRECT IHT to perform monitoring at work location when system is opened during performance of Step 3.2.6.
3.2 Follow-On Actions (Cont.)

3.2.6 DIRECT HPT to perform the following:

3.2.6.1 OBTAIN a grab air sample.

3.2.6.2 SURVEY CAM and Record Sampler filter paper.

3.2.6.3 IF filter paper needs exchanged, EXCHANGE filter paper.

3.2.6.4 REPORT survey results to Central Shift Manager.

3.2.7 IF filter paper contamination survey results are greater than alarm setpoint value EXIT this procedure AND

ENTER TF-AOP-011.

3.2.8 IF filter paper contamination survey results are less than alarm set point DIRECT HPT and IHT to perform monitoring to restore routine access.

3.2.8.1 AT a minimum, HPT PERFORM removable contamination surveys of primary tank pit covers, inlet breather filter screens, ENRAFs, manual tapes, and valve pit covers.

3.2.8.2 IF HPT and IHT report that monitoring indicates routine access can be restored, DIRECT NCO to ensure affected farm is down-posted appropriately in accordance with Radiological and Industrial Hygiene requirements AND

NOTIFY the Central Shift Manager when down-posting is complete.

3.2.9 DIRECT Radiological Control to evaluate affected workers for bioassay needs.
3.2 Follow-On Actions (Cont.)

Respond to Primary Tank Ventilation System Shutdown (Steps 3.2.10 through 3.2.17)

3.2.10 INVESTIGATE cause of exhauster shutdown AND DETERMINE if restarting ventilation is appropriate.

3.2.11 IF not restarting ventilation GO TO Step 3.2.16.

3.2.12 DIRECT NCO to perform the following actions:

3.2.12.1 ATTEMPT to restart primary ventilation and restore tank pressures to normal in accordance with applicable operating procedure.

3.2.12.2 REPORT results of attempt back to the Central Shift Manager.

3.2.13 IF ventilation system has been restarted and tank pressures have returned to normal, DIRECT IHT and HPT to perform the following actions:

3.2.13.1 AT a minimum, HPT PERFORM removable contamination surveys of primary tank pit covers, inlet breather filter screens, ENRAFs, manual tapes, and valve pit covers.

3.2.13.2 MONITOR affected farm for restoration to routine access.

3.2.13.3 REPORT results of monitoring back to the Central Shift Manager.

3.2.14 IF HPT and IHT report that monitoring indicates routine access can be restored, PERFORM the following actions:

3.2.14.1 DIRECT NCO to perform the following:

a. ENSURE affected farm is down-posted appropriately in accordance with Radiological and Industrial Hygiene requirements.

b. NOTIFY the Central Shift Manager when down-posting is complete.

3.2.15 IF any required ARP actions remain to be finished, REQUEST the Operations Manager (or designee) for the affected farm to direct the NCO to return to applicable ARP and complete actions.
3.2 Follow-On Actions (Cont.)

3.2.16 IF ventilation system is not restarted and tank pressures are not returned to normal, PERFORM the following actions:

3.2.16.1 DIRECT NCO to perform the following:

a. ENSURE affected farm is posted appropriately in accordance with Radiological and Industrial Hygiene requirements.

b. NOTIFY Central Shift Manager when posting is correct.

3.2.16.2 IF affected farm’s Operations Manager (or designee), requests this procedure be exited, ENSURE the following:

- Operations Manager (or designee) is fully briefed on condition of affected farm, including applicable HPT and IHT monitoring results
- Operations Manager (or designee) has taken appropriate actions (e.g., rescinding work release approval for impacted work packages) to ensure access to affected farm is satisfactorily controlled.

AND GOTO Section 4.0.

3.2.16.3 IF affected farm’s Operations Manager (or designee), requests to remain in this procedure, PERFORM OR DELEGATE to the Operations Manager (or designee) Steps 3.2.16.3.a and 3.2.16.3.b.

a. ENSURE performance of activities in affected farm (e.g., ventilation system repairs) comply with this procedure.

b. WHEN appropriate (e.g., upon completion of ventilation system repairs), GO TO Step 3.2.12 to restart ventilation system.

3.2.17 PROCEED to Section 4.0 to exit this procedure.
3.3 Administrative Actions

NOTE - When practical, steps in Section 3.3 should be completed concurrently with steps in Sections 3.1 and Section 3.2 as long as the administrative actions do not interfere with timely completion of actions that are protective of personnel and the environment.

3.3.1 IF DST Primary Ventilation is not operating, PERFORM the following:

3.3.1.1 EVALUATE LCO 3.1, “DST Primary Tank Ventilation Systems” AND

INITIATE time monitoring per LCO 3.1.A. (LCO 3.1)

3.3.1.2 EVALUATE LCO 3.4, “DST Induced Gas Release Event Flammable Gas Control”. (LCO 3.4)

3.3.2 EVALUATE the need to enter TFC-OPS-OPER-C-24 for categorizing and/or reporting abnormal event or occurrence.

3.3.3 NOTIFY management per TFC-OPS-OPER-C-57.

3.3.4 EVALUATE the need to notify Environmental on-call per TF-REC-001.

3.3.5 IF primary ventilation system repair is needed, ENSURE a work request to correct the failure has been or will be submitted.

4.0 EXIT CRITERIA

4.1 Criteria to Exit TF-AOP-021

4.1.1 One of the following has occurred;

- An Emergency Action Limit criterion was met (DOE-0223, RLEP 1.1, Appendix 1-2.A)
- A radiological release emergency response procedure initiating condition was met (TF-ERP-005)
- A Base Program Operational Emergency criterion was met (TFC-OPS-OPER-C-24. Attachment A)
- A step in Section 3.2 has directed the user to exit the procedure.

4.1.2 ANNOUNCE exiting TF-AOP-021 over Tank Farm radio channel(s) AND

SEND SOEN message.
5.0 RECORDS

No records are generated during the performance of this procedure.

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
Attachment 1 - Farm Specific Industrial Hygiene Documents

<table>
<thead>
<tr>
<th>Tank Farm</th>
<th>TVIS</th>
<th>IHSP for SEG 4 Work Activities¹</th>
<th>IHSP for Restoration of Farm to Routine Access²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN</td>
<td>TVIS-AN-001</td>
<td>EABO-11064</td>
<td>EABO-11065</td>
</tr>
<tr>
<td>AP</td>
<td>TVIS-AP-001</td>
<td>EABO-11074</td>
<td>EABO-11075</td>
</tr>
<tr>
<td>AW</td>
<td>TVIS-AW-001</td>
<td>EABO-11063</td>
<td>EABO-11076</td>
</tr>
<tr>
<td>AY/AZ</td>
<td>TVIS-AZ-AZ-001</td>
<td>EABO-11057</td>
<td>EABO-11002</td>
</tr>
<tr>
<td>SY</td>
<td>TVIS-SY-001</td>
<td>WABO-11022</td>
<td>WABO-11050</td>
</tr>
</tbody>
</table>

¹ Use IHSP for SEG 4 work activities when ventilation system is not operating and/or tank pressures are not within normal range.
² Use IHSP for restoration of farm to routine access if ventilation system is operating and tank pressures are within normal range.

<table>
<thead>
<tr>
<th>Tank Farm</th>
<th>TVIS</th>
<th>IHSP for SEG 4 Work Activities¹</th>
<th>IHSP for Restoration of Farm to Routine Access²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AX</td>
<td>TVIS-AX-001</td>
<td>EABO-11103</td>
<td>N/A</td>
</tr>
<tr>
<td>C</td>
<td>TVIS-C-001</td>
<td>EABO-12010</td>
<td>RCO-14001</td>
</tr>
<tr>
<td>T</td>
<td>TVIS-T-001</td>
<td>WABO-12003</td>
<td>N/A</td>
</tr>
</tbody>
</table>

¹ Use IHSP for SEG 4 work activities when Report of a tank primary ventilation exhaust stack CAM high radiation alarm.
### Attachment 2 - Electrical Disconnect Switches and PPE for Step 3.2.3

<table>
<thead>
<tr>
<th>Tank Farm</th>
<th>Affected Primary Exhauster Train</th>
<th>Disconnect Switch No.¹</th>
<th>Disconnect Switch Location (Building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN</td>
<td>A and B</td>
<td>AN271-EDS-DS-127</td>
<td>241-AN-271 (Southeast exterior wall)</td>
</tr>
<tr>
<td>AP</td>
<td>A and B</td>
<td>AP271-EDS-BKR-104</td>
<td>Normal Power AP241-EDS-BKR-100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternate Power AP241-EDS-DS-002</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>East of 271 Building on pole</td>
</tr>
<tr>
<td>AW</td>
<td>A and B</td>
<td>AW271-EDS-BKR-115</td>
<td>241-AW-271 (West interior wall)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MCC AW271-EDS-MCC-001</td>
</tr>
<tr>
<td>AY/AZ</td>
<td>A</td>
<td>AZ702-EDS-DS-101</td>
<td>241-AZ-701 Transfer Switch Room # 1 (102) (East wall)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Standby Panel Board No. 1</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>AZ702-EDS-DS-102</td>
<td>241-AZ-701 Transfer Switch Room # 2 (104) (East wall)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Standby Panel Board No. 2</td>
</tr>
<tr>
<td>C</td>
<td>POR-107</td>
<td>C241-EDS-BKR-101</td>
<td>DP120 adjacent to MO579</td>
</tr>
<tr>
<td>SY</td>
<td>A</td>
<td>SY272-EDS-BKR-131</td>
<td>241 SY-272 (Northeast wall) SY272-EDS-MCC-003, Compartment 7FE</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>(Normal) SWG-E-001, Compartement 6B</td>
<td>252-S (West end)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Temporary) SALW-DS-D-SDIL</td>
<td>241-S Farm West of tank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>241-S-103</td>
</tr>
<tr>
<td>T</td>
<td>POR-06</td>
<td>T241-EDS-DS-120</td>
<td>Inside T Farm, South side near change trailer</td>
</tr>
</tbody>
</table>

¹ Use of an alternative disconnect switch is allowed if authorized by Shift Manager.

**PPE**

Operation of electrical disconnect switches with doors closed and covers in place shall require as a minimum:

- Hearing protection
- Non-melting (untreated natural fiber) pants and long sleeve shirt
- Safety glasses
- Leather gloves