Table of Contents

1.0 PURPOSE AND SCOPE ........................................................................................................ 3
  1.1 Purpose .......................................................................................................................... 3
  1.2 Scope ............................................................................................................................. 3

2.0 INFORMATION .................................................................................................................. 3
  2.1 Terms and Definitions ................................................................................................... 3

3.0 PRECAUTIONS AND LIMITATIONS ......................................................................... 4
  3.1 Personnel Safety ........................................................................................................... 4
  3.2 Equipment Safety ......................................................................................................... 4
  3.3 Radiation and Contamination Control ......................................................................... 4
  3.4 Environmental Compliance ......................................................................................... 5
  3.5 Limits ............................................................................................................................ 5

4.0 PREREQUISITES ............................................................................................................ 6
  4.1 Special Tools, Equipment, and Supplies ....................................................................... 6
  4.2 Performance Documents .............................................................................................. 6
  4.3 Training Requirements ................................................................................................. 6

5.0 PROCEDURE .................................................................................................................. 7
DST Daily CAM and Record Sampler Inspections

5.1 Use and Notification .................................................................................................................. 7
5.2 Daily AMS-4 CAM Inspection .................................................................................................. 8
5.3 Daily Record Sampler Inspection ............................................................................................... 15
5.4 Data Sheet Completion .............................................................................................................. 17
5.5 Records ..................................................................................................................................... 18

Data Sheet 1 - A/AX/AY/AZ Area ................................................................................................. 19
Data Sheet 2 – AN/AP/B/BX/BY/C Area ...................................................................................... 20
Data Sheet 3 - AW Farm ................................................................................................................... 21
Data Sheet 4 - 242-A Evaporator .................................................................................................. 22
Data Sheet 5 - S/SX/SY/T/TX/TY/U Area ..................................................................................... 23

Figure 1 - Data Sheet Entry Definitions .......................................................................................... 24
Figure 2 - HMI-AW-Farm Primary Ventilation Exhausters Screen (Example) ................................. 25
Figure 3 - AW Exhauster Process Details Screen (Example) ............................................................ 26
Figure 4 - AW Exhauster Stack Sampler Screen (Example) ............................................................... 27
Figure 5 - AW Exhauster AMS-4 Screen (Example) ....................................................................... 28
Figure 6 - AW Exhauster Totalized Parameters Screen (Example) ................................................... 29
Figure 7 - Tank Farm Monitoring and Control System Screen (Example) ........................................ 30
Figure 8 - SY-B-Train Primary Exhauster SY241-VTP-ENCL-107 Alarm Cabinet ............................ 31
Figure 9 - SY241-VTP-ENCL-107 Alarm Cabinet .......................................................................... 32
Attachment 1 - Daily CAM and Record Sampler Inspection .......................................................... 33
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for performing daily inspections of CAMs and Record Air Samplers to meet the requirements of TFC-ESHQ-ENV-STD-05, Radioactive Airborne Effluent Sampling. The data sheets are completed in accordance with TFC-OPS-OPER-C-60, Surveillance Rounds procedure.

1.2 Scope

1.2.1 This procedure involves inspections of Environmental monitoring equipment including the following:

- AMS-3 and AMS-4 CAMs
- Record Air Samplers
- HMI controlled ventilation systems (HMI Exhausters)
- Leak Detection CAMs.

2.0 INFORMATION

2.1 Terms and Definitions

- ASP - Alarm Set Point
- RAS - Record Air Sampler.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Non-electrical worker accessing electrical enclosures must ensure the following:
- The enclosure must have a white label indicating that it has been evaluated.
- The work activity within the enclosure does not involve:
  - Reaching around or moving electrical equipment
  - Contacting electrical connectors/connections
  - By-passing protective shielding/barriers.

3.1.1.1 Stop and notify management if these conditions cannot be met, or if discrepancies exist (e.g. conflicting or missing labels, missing or damaged protective barriers).

3.2 Equipment Safety

3.2.1 Compliance with DOE-0359, Hanford Site Electrical Safety Program is required.

3.2.2 During windy conditions the CAM cabinet door(s) may swing out of control when opened causing damage to the cabinet.

3.3 Radiation and Contamination Control

3.3.1 Work in Radiological Areas will be performed using a Radiological Work Permit following review by Radiological Control per the ALARA Work Planning procedure TFC-ESHQ-RP_RWP-C-03.

3.3.2 When work is performed in a high contamination, high radiation, or airborne radioactivity area, then an approved work package must be developed which is reviewed by Radiological Control per the ALARA Work Planning procedure TFC-ESHQ-RP_RWP-C-03.
3.4 Environmental Compliance

3.4.1 In accordance with WAC-246-247, WDOH must be notified at least 7 calendar days prior to any planned operational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit. WDOH reserves the right to witness such tests [WAC-246-247-060(4)].

3.4.2 Tank Farm ventilation systems and exhaust monitoring systems are regulated under WAC Chapters 173-400, 173-460, and 246-247 and applicable NOC issued to ensure compliance with these regulations. To ensure reporting requirements are met, all planned and unplanned outages of Tank Farm ventilation systems, abatement control equipment, and exhaust monitoring systems (including portable exhausters) must be reported to Environmental per the Environmental On-Call List in accordance with TFC-ESHQ-ENV_FS-C-01.

3.4.3 During periods of record sampler outage, waste-disturbing activities (e.g., waste transfers, sluicing, or other waste-disturbing activities) within tanks served by the affected exhauster must be shut down.

3.5 Limits

NOTE - This procedure complies with the Environmental Specification Requirements listed in this section.

RPP-16922, Environmental Specification Requirements
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:
- 2-way radio (portable/handheld)
- Hearing protection
- Small screwdriver (for flow adjustments)
- CAM tool (for CAMs without Alarm Set Points (ASP) knob adjustment)
- Access keys
- Red and black pens.

4.2 Performance Documents

The following documents may be needed to perform this procedure:
- TFC-ESHQ-ENV-STD-05, Radioactive Airborne Effluent Sampling
- TFC-OPS-OPER-C-60, Surveillance Rounds
- H-14-020101, P&ID AN Farm Primary Ventilation
- H-14-020102, P&ID AW Farm Primary Ventilation
- H-14-020103, P&ID AP Farm Primary Ventilation.

4.3 Training Requirements

First Line Manager

4.3.1 Review records to ensure the HPT has completed the following training requirements:
- HPT Initial qualification
- Orientation Checklist (site form A-6003-481)
- AMS-4 course (course number 356030)

OR

OJT, Daily CAM & Record Inspections (course number 351572).

4.3.2 Only assign qualified personnel to perform this procedure activity.
5.0 PROCEDURE

5.1 Use and Notification

NOTE - The sections in this procedure may be performed in any sequence and independently as necessary.

5.1.1 IMMEDIATELY NOTIFY Shift Manager of any unplanned exhauster shutdowns.

5.1.2 IF any item is identified as out-of-specification, IMMEDIATELY NOTIFY Shift Manager.
5.2 Daily AMS-4 CAM Inspection

5.2.1 IMMEDIATELY NOTIFY Shift Manager of any unplanned exhauster shutdowns.

5.2.2 IF the Shift Manager requests HPT to perform an inspection of Annulus or Primary Tank Exhauster CAMs with an unexpected High Radiation alarm, FOLLOW actions specified in the appropriate ARP.

5.2.3 RECORD CAM Serial Number on applicable Data Sheet.

5.2.4 IF Exhauster/Annulus CAM is shut down for planned outage, PERFORM the following:

5.2.4.1 RECORD in Comments section on applicable Data Sheet.

5.2.4.2 CONTINUE with procedure for other operating CAMs and Record Samplers.

5.2.5 PRESS (9) AND

ENSURE that CAM display indicates INSTRUMENT STATUS NORMAL, OR

PRESS [-] until display returns to INSTRUMENT STATUS NORMAL.
5.2 Daily AMS-4 CAM Inspection (Cont.)

5.2.6 PERFORM one of the following:

5.2.6.1 IF readings are being taken on 241-SY Primary Exhauster B-Train, GO TO Step 5.2.7, OR

5.2.6.2 IF readings are to be taken on AW, AP or AN Farm HMI controlled Exhausters, GO TO Step 5.2.10, OR

5.2.6.3 IF taking readings on any other than the above, GO TO Step 5.2.8.

5.2.7 IF readings are being taken on 241-SY Primary Exhauster B-Train, PERFORM the following:

NOTE - For 241-SY Primary Exhauster B-Train pressing [F1] and then [F5] on the HMI will display Environmental data for current and total flows for stack, record sampler, and CAM sampler. Pressing [F1] will activate monitor and/or return to main menu.

5.2.7.1 PRESS [F1] activate monitor and return to main menu.

5.2.7.2 PRESS [F5] to display Environmental Data screen for current and total flows for stack, record sampler, and CAM sampler.

NOTE - Step 5.2.7.3 may be performed in parallel with Section 5.3.

5.2.7.3 RECORD As-Found and As-Left CAM sample flow on applicable Data Sheet.

5.2.7.4 IF flow rate is not within acceptable range specified on applicable Data Sheet, RECORD findings in Comments section.

5.2.7.5 PRESS [F1] to return to main menu.

5.2.7.6 IF performing inspection of SY-B Train, GO TO Section 5.3.
5.2 Daily AMS-4 CAM Inspection (Cont.)

5.2.8 PERFORM the following steps to obtain CAM flow rate:

5.2.8.1 IF system is equipped with a Masstron, GO TO Step 5.2.8.4.

5.2.8.2 PRESS (2) AND OBSERVE display indicates as follows:

##.# ft³/min

###.# ft³

5.2.8.3 PRESS ENTER to ensure displayed format is as follows:

SAMPLE FLOW RATE
TOTAL FLOW VOLUME.

NOTE - Display will return to previous format in approximately 5 seconds.
- CAM flows are recorded from Masstron digital flow meter on systems with Masstrons installed.

5.2.8.4 RECORD As-Found SAMPLE FLOW RATE value on applicable Data Sheet.

5.2.8.5 IF As-Found flow rate is not within acceptable range specified on applicable Data Sheet, PERFORM the following:

a. RECORD findings in the Comments section on applicable Data Sheet.

b. NOTIFY applicable Shift Manager.
5.2 Daily AMS-4 CAM Inspection (Cont.)

NOTE - The CAM flow rate may be adjusted to anywhere within the acceptable range.

5.2.9 ADJUST flow rate to any setting within the range specified on applicable Data Sheet AND RECORD findings in the Comments section on the applicable Data Sheet.

5.2.9.1 RECORD As-Left flow rate.

5.2.9.2 GO TO Step 5.2.21.

NOTE Figure 2 to Figure 7 shows the AW Exhauster “A” for “A” Train but the same process will hold true for AW Exhauster “B” for “B” Train (“A” would need to be replaced with Exhauster “B”).

5.2.10 LOG IN to HMI as HPT as follows

5.2.10.1 PRESS Ctrl + Alt + Delete.

5.2.10.2 ENTER User Name (HPT).

5.2.10.3 ENTER Password.

5.2.11 CLICK Exh. A or Exh. B button under Applicable Farm to navigate from TFMCS Overview Screen (See Figure 7) to the AN, AP or AW Farm Primary Ventilation Exhausters screen as desired (See Figure 2).

5.2.12 CLICK on the Exhauster AW (or AN, AP) Exhauster A or AW (or AN, AP) Exhauster B button to navigate to the Exhauster Process Details screen. (See Figure 3)

5.2.13 RECORD Stack Flow from the Exhauster Process Details screen (See Figure 3) on applicable HMI Exhauster Data Sheet).

5.2.14 CLICK Stack Sampler button to navigate to Exhauster Stack Sampler screen (See Figure 4).
5.2 Daily AMS-4 CAM Inspection (Cont.)

5.2.15 FROM Stack Sampler Screen, CLICK on the AMS-4 button (See Figure 4)

5.2.16 RECORD the As-Found CAM Sample Flow from AMS-4 screen (See Figure 5) on applicable Data Sheet.

5.2.17 CHECK As-Found CAM Sample Flow is within expected value (1.9 scfm to 2.1 scfm).

5.2.17.1 IF AS-Found CAM Sample Flow is not within expected value of 1.9 scfm to 2.1 scfm, PERFORM the following:
   a. NOTIFY applicable Shift Manager.
   b. CIRCLE Out of Specification reading in red on applicable HMI Exhauster Data Sheet.
   c. RECORD findings in the Comments Section on applicable Data Sheet.

5.2.18 RECORD As-Found Record Sampler Flow from AMS-4 screen (See Figure 5) on applicable HMI Exhauster Data Sheet.

5.2.19 IF As-Found Record Sampler flow is not within range of Stack Flow / 1,000 ± 10% recorded from stack sampler screen, PERFORM the following:

5.2.19.1 NOTIFY applicable Shift Manager.

5.2.19.2 CIRCLE Out of Specification reading in red on applicable HMI Exhauster Data Sheet.

5.2.19.3 RECORD findings in the Comments Section on applicable Data Sheet.

5.2.20 FROM the AMS-4 screen, CLICK Totalizers button (See Figure 5).

5.2.20.1 RECORD both of the following from the Totalized Parameters screen on applicable Data Sheet (See Figure 6):
   - Total Record Sampler Flow Volume [Lifetime]
   - Total Stack Flow Volume [Lifetime].
5.2 Daily AMS-4 CAM Inspection (Cont.)

5.2.21 LOGOUT of the system when finished taking readings as follows.

5.2.21.1 PRESS Ctrl + Alt + Delete.

5.2.21.2 CLICK Log Off.

5.2.22 PERFORM the following steps to OBSERVE CAM meter ASP are per Attachment 1:

5.2.22.1 PRESS (7) or [-] until display indicates BETA ASP.

5.2.22.2 OBSERVE display indicates as follows:

###.# CPM
###.# CPM

5.2.22.3 PRESS ENTER to ensure displayed format is as follows:

BETA ALARM SETPOINT
BETA ALARM MDNCR

NOTE - Display will return to previous format in approximately 5 seconds.

5.2.23 IF BETA ASP are not observed within values as specified on Attachment 1, PERFORM the following:

5.2.23.1 NOTIFY applicable Shift Manager.

5.2.23.2 RECORD findings in Comments section of the applicable Data Sheet.

5.2.24 PERFORM the following steps to obtain CAM meter reading:

5.2.24.1 PRESS (8) AND OBSERVE that display indicates as follows:

###.# DPM/ft³
###.# CPM

5.2.24.2 PRESS ENTER to ensure displayed format is as follows:

FAST ALARM CONC.
BETA NET COUNT RATE

NOTE - Display will return to previous format in approximately 5 seconds.

5.2.24.3 RECORD BETA NET COUNT RATE value on applicable Data Sheet.
5.2 Daily AMS-4 CAM Inspection (Cont.)

5.2.25 PRESS (9) AND ENSURE CAM display indicates INSTRUMENT STATUS NORMAL,

OR

PRESS [-] until display returns to INSTRUMENT STATUS NORMAL.

5.2.26 ENSURE READY green light is lit and INSTRUMENT STATUS NORMAL is displayed.

NOTE - Items identified as discrepancies from Attachment 1 do not affect system operability.

5.2.27 PERFORM inspection of CAM per Attachment 1.

5.2.28 IF CAM discrepancies are identified, PERFORM the following:

5.2.28.1 NOTIFY applicable Shift Manager.

5.2.28.2 RECORD discrepancies in Comments section of applicable Data Sheet.

5.2.29 CIRCLE any Out-of-Specification readings in red on applicable Data Sheet.
5.3 Daily Record Sampler Inspection

5.3.1 IF the applicable Shift Manager requests HPT to perform an inspection of Annulus or Primary Tank Exhauster CAMs with an unexpected High Radiation alarm, FOLLOW the actions specified in the appropriate ARP.

5.3.2 IF Exhauster is shut down for planned outage, RECORD on applicable Data Sheet AND

CONTINUE with procedure for other operating CAMs and Record Samplers.

5.3.3 IF readings are being taken on 241-SY Primary Exhauster B-Train, PERFORM the following:

NOTE - For 241-SY Primary Exhauster B-Train pressing [F1] and then [F5] on the HMI will display Environmental data for current and total flows for stack, record sampler, and CAM sampler. Pressing [F1] will activate monitor and/or return to main menu.

5.3.3.1 PRESS [F1] activate monitor and return to main menu.

5.3.3.2 PRESS [F5] to display Environmental Data screen for current and total flows for stack, record sampler, and CAM sampler.

NOTE - Step 5.3.3.3 may be performed in parallel with Section 5.2.

5.3.3.3 RECORD As-Found and As-Left record sample flow on applicable Data Sheet.

5.3.3.4 IF As-Found flow rate is not within acceptable range specified on applicable Data Sheet, RECORD findings in the Comments section AND

NOTIFY applicable Shift Manager.

5.3.3.5 PRESS [F1] to return to main menu.

5.3.3.6 GO TO Step 5.3.6.
5.3 Daily Record Sampler Inspection

NOTE - The record sampler flow rate may be adjusted to anywhere within the acceptable range to allow a margin for change in performance as long as the As-Left Flow Rate is recorded in Step 5.3.5.

5.3.4 IF flow rate is out of range, NOTIFY applicable Shift Manager.

5.3.5 ADJUST flow rate to any setting within the range specified on applicable Data Sheet AND

RECORD As-Left flow rate on applicable Data Sheet.

NOTE - Items identified as discrepancies from Attachment 1 do not affect system operability.

5.3.6 PERFORM inspection of Record Sampler per Attachment 1.

5.3.7 IF record sampler inspection has deficiencies, RECORD deficiencies on applicable Data Sheet.

5.3.8 CIRCLE any Out-of-Specification readings in red on applicable Data Sheet.
5.4 Data Sheet Completion

5.4.1 DOCUMENT inspection on the Shifter Daily Checklist.

5.4.2 ENSURE Sections 5.2 through 5.3 have been completed as required and systems/components performed as specified.

5.4.3 SIGN the work area section of applicable Data Sheet.

5.4.4 FORWARD completed applicable Data Sheet to the applicable Shift Manager.
5.5 Records

NOTE - Some data contained in this procedure needs to be saved and filed as required by Dangerous Waste Regulations of the Washington Administrative Code (WAC) 173-303-380 “Facility Record Keeping.”

5.5.1 PERFORM the following for records identified within this procedure.

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

OR

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

5.5.1.2 SUBMIT the package(s) for verification of completed records.

<table>
<thead>
<tr>
<th>Records Submittal Checklist</th>
<th>Number of times completed</th>
<th>N/A (✓)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Sheets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 1 - A/AX/AY/AZ Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 2 - AN/AP/B/BX/BY/C Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 3 - AW Farm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 4 - 242-A Evaporator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Sheet 5 - S/SX/SY/T/TX/TY/U Area</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FWS/OE/Shift Manager SEND the completed records to the Central Shift Office for records retention.

_________________________ / _______________________ / ____________
Signature Print (First and Last) Date

FWS/OE/Shift Manager

The record custodian identified in the Company Level Records Retention and Disposition Schedules (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
### DST Daily CAM and Record Sampler Inspections

**Data Sheet 1 - A/AX/AY/AZ Area**

<table>
<thead>
<tr>
<th>DATE:</th>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>AS LEFT</th>
<th>Meter Reading (cpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>241-AY/AZ: Primary Tank Exhauster (702-AZ) (296-A-42)</td>
<td>BETA*</td>
<td>E153</td>
<td>Auto. Adjust. 0.5 - 1.7 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 702-AZ: Building Exhauster (296-A-43)</td>
<td>RECORD*</td>
<td>E147</td>
<td>Auto. Adjust 0.5 - 1.7 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 101: Annulus Exhauster (296-A-18)</td>
<td>RECORD</td>
<td>E148</td>
<td>Auto. Adjust 0.5 - 2.1 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 101: Annulus (296-A-19)</td>
<td>BETA</td>
<td>E145</td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 102: Annulus (296-A-19)</td>
<td>BETA</td>
<td>E146</td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 101: Annulus (296-A-20)</td>
<td>BETA</td>
<td>E195</td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>241-AZ 102: Annulus (296-A-20)</td>
<td>BETA</td>
<td>E196</td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Waste disturbing activities must be secured immediately if CAM or associated record sampler is not operable.

1 Both the CAM and Record Sampler are required instruments. Contact Environmental On-Call regarding continued exhauster operation when abnormal conditions exist.

2 CAM not required for emissions monitoring. If record sampler flow rate is out-of-range, continued exhauster operation is allowed. During last month of calendar quarter, consult with Environmental regarding time to fix problem.

**Comments:**

---

<table>
<thead>
<tr>
<th>Print Name (First and Last)</th>
<th>Signature</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Physics Technician</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>AS LEFT</th>
<th>Meter Reading (cpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AN² Annulus Exhauster (296-A-30)</td>
<td>BETA**</td>
<td>E904</td>
<td></td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECORD</td>
<td>E903</td>
<td></td>
<td></td>
<td>108-132 scfh</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>241-AP² Annulus Exhauster (296-A-41)</td>
<td>BETA**</td>
<td>E016</td>
<td></td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RECORD</td>
<td>E015</td>
<td></td>
<td></td>
<td>108-132 scfh</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>Stack Flow Rate (scfm)</th>
<th>Meter Reading (cpm)</th>
<th>Total Flow Stack/Record (scf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AN³ “A” Train Primary Tank Exhauster (296-A-44)</td>
<td>BETA*</td>
<td>E921</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E920</td>
<td></td>
<td></td>
<td>Stack Flow / 1,000 + 10% scfm</td>
<td></td>
<td></td>
<td>Record:</td>
<td></td>
</tr>
<tr>
<td>241-AN³ “B” Train Primary Tank Exhauster (296-A-45)</td>
<td>BETA*</td>
<td>E923</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E922</td>
<td></td>
<td></td>
<td>Stack Flow / 1,000 + 10% scfm</td>
<td></td>
<td></td>
<td>Record:</td>
<td></td>
</tr>
<tr>
<td>241-AP¹ “A” Train Primary Tank Exhauster (296-A-48)</td>
<td>BETA*</td>
<td>E987</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E986</td>
<td></td>
<td></td>
<td>Stack Flow / 1,000 + 10% scfm</td>
<td></td>
<td></td>
<td>Record:</td>
<td></td>
</tr>
<tr>
<td>241-AP¹ “B” Train Primary Tank Exhauster (296-A-49)</td>
<td>BETA*</td>
<td>E989</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E988</td>
<td></td>
<td></td>
<td>Stack Flow / 1,000 + 10% scfm</td>
<td></td>
<td></td>
<td>Record:</td>
<td></td>
</tr>
</tbody>
</table>

* Waste disturbing activities must be secured immediately if CAM or associated record sampler is not operable.
** Equipment O.O.S.
¹ Both the CAM and Record Sampler are required instruments. Contact Environmental On-Call regarding continued exhauster operation when abnormal conditions exist.
² CAM not required for emissions monitoring. If record sampler flow rate is out-of-range, continued exhauster operation is allowed. During last month of calendar quarter, consult with Environmental regarding time to fix problem.

Comments:

Print Name (First and Last) | Signature | Date | Time:
--- | --- | --- | ---
Health Physics Technician | | | |
Shift Manager | | | |
## DST Daily CAM and Record Sampler Inspections

### Data Sheet 3 - AW Farm

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>AS LEFT</th>
<th>Meter Reading (cpm)</th>
<th>TOTAL FLOW STACK/RECORD (scf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECORD</td>
<td>E272</td>
<td></td>
<td>108-132 scfh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>Stack Flow Rate (scfm)</th>
<th>Meter Reading (cpm)</th>
<th>Total Flow Stack/Record (scf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AW¹ A-Train Primary Tank Exhauster (296-A-46)</td>
<td>BETA*</td>
<td>E925</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E924</td>
<td></td>
<td>Stack Flow / 1,000+ 10% scfm</td>
<td></td>
<td>Record:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>Stack Flow Rate (scfm)</th>
<th>Meter Reading (cpm)</th>
<th>Total Flow Stack/Record (scf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-AW¹ B-Train Primary Tank Exhauster (296-A-47)</td>
<td>BETA*</td>
<td>E927</td>
<td></td>
<td>Auto Adjust. 1.9 - 2.1 scfm</td>
<td></td>
<td></td>
<td>Stack:</td>
<td></td>
</tr>
<tr>
<td>RECORD*</td>
<td>E926</td>
<td></td>
<td>Stack Flow / 1,000+ 10% scfm</td>
<td></td>
<td>Record:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Waste disturbing activities must be secured immediately if CAM or associated record sampler is not operable.

**Equipment O.O.S.

¹ Both the CAM and Record Sampler are required instruments. Contact Environmental On-Call regarding continued exhauster operation when abnormal conditions exist.

² CAM not required for emissions monitoring. If record sampler flow rate is out-of-range, continued exhauster operation is allowed. During last month of calendar quarter, consult with Environmental regarding time to fix problem.

Comments:

### Print Name (First and Last) - Signature - Date - Time:

| Health Physics Technician |  |
| Shift Manager |  |
## DST Daily CAM and Record Sampler Inspections

### Data Sheet 4 - 242-A Evaporator

<table>
<thead>
<tr>
<th>DATE:</th>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>AS LEFT</th>
<th>Meter Reading (cpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>242-A^2 Building Exhauster (296-A-21A)</td>
<td>BETA</td>
<td>E652</td>
<td>1.9 to 2.1 scfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RECORD</td>
<td>E651</td>
<td>1.9 to 2.1 scfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>242-A^1 Vessel Vent Exhauster (296-A-22)</td>
<td>BETA</td>
<td>E642</td>
<td>1.8 to 2.2 scfm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RECORD*</td>
<td>E643</td>
<td>90-100 scfh</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Waste disturbing activities must be secured immediately if CAM or associated record sampler is not operable.

1. Both CAM and Record Sampler are required instruments when waste is in 242-A Vessel. (See Note 2).

2. CAM not required for emissions monitoring. If record sampler flow rate is out-of-range, continued exhauster operation is allowed. During last month of calendar quarter, consult with Environmental regarding time to fix problem.

Comments:

---

<table>
<thead>
<tr>
<th>Print Name (First and Last)</th>
<th>Signature</th>
<th>Date</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Physics Technician</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift Manager</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## DST Daily CAM and Record Sampler Inspections

### Data Sheet 5 - S/SX/SY/T/TX/TY/U Area

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EQUIP TYPE</th>
<th>EDP CODE</th>
<th>CAM S/N</th>
<th>FLOW RATE</th>
<th>AS FOUND</th>
<th>AS LEFT</th>
<th>Meter Reading (cpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>241-SY¹</td>
<td>BETA</td>
<td>W146</td>
<td></td>
<td>Auto. Adj. (1.4-1.9 cfm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-Train Primary Tank Exhauster (296-S-25)</td>
<td>RECORD *</td>
<td>W145</td>
<td></td>
<td>Auto. Adj. (1.4-1.9 cfm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>241-SY¹</td>
<td>BETA</td>
<td>W199</td>
<td></td>
<td>Auto. Adj. (0.75-1.25 cfm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-Train Primary Tank Exhauster (296-P-23)</td>
<td>RECORD *</td>
<td>W190</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>241-SY¹</td>
<td>BETA</td>
<td>W198</td>
<td></td>
<td>1.8-2.2 cfm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annulus Exhauster (296-P-22)</td>
<td>RECORD</td>
<td>W191</td>
<td></td>
<td>108-132 scfh</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Waste disturbing activities must be secured immediately if record sampler is not operable.
2. CAM not required for emissions monitoring. If record sampler flow rate is out-of-range, continued exhauster operation is allowed. During last month of calendar quarter, consult with Environmental regarding time to fix problem.

**Comments:**

---

### Print Name (First and Last) | Signature | Date | Time:

| Health Physics Technician |          |      |      |
| Shift Manager             |          |      |      |
## Figure 1 - Data Sheet Entry Definitions

<table>
<thead>
<tr>
<th>Status Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>Not operating; available for manual operation. Data limits not applicable.</td>
</tr>
<tr>
<td>N/A</td>
<td>Not Applicable. No data collected. Note reason in remarks.</td>
</tr>
<tr>
<td>Red Circle</td>
<td>Red circle all out of spec. and O/S readings. Note reason in remarks.</td>
</tr>
</tbody>
</table>
Figure 2 - HMI-AW-Farm Primary Ventilation Exhausters Screen (Example)

NOTE - AN, AP and AW have identical screens.

CLICK Applicable Train for the Exhauster Process Details Screen.
Figure 3 - AW Exhauster Process Details Screen (Example)

NOTE - AN, AP and AW have identical screens.
NOTE - AN, AP and AW have identical screens.

CLICK for CAM and Record Sampler Flows from AMS-4 Screen.
Figure 5 - AW Exhauster AMS-4 Screen (Example)

NOTE - AN, AP and AW have identical screens.
- AN, AP and AW are interchangeable, and Exhauster A and Exhauster B are interchangeable also.
NOTE - AN, AP and AW have identical screens.
Figure 7 - Tank Farm Monitoring and Control System Screen (Example)

NOTE - TFMCS Overview Screen
Figure 8 - SY-B-Train Primary Exhauster SY241-VTP-ENCL-107 Alarm Cabinet
(Sample view of [F1] screen)

(Sample view of [F5] screen)
Figure 9 - SY241-VTP-ENCL-107 Alarm Cabinet

Panel View Plus1000 Main Menu Keyboard Commands

<table>
<thead>
<tr>
<th>Keystroke</th>
<th>Screen Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Main Menu</td>
</tr>
<tr>
<td>F2</td>
<td>Alarm History</td>
</tr>
<tr>
<td>F3</td>
<td>Current Alarms</td>
</tr>
<tr>
<td>F4</td>
<td>Engineering Tools</td>
</tr>
<tr>
<td>F5</td>
<td>Environmental Data</td>
</tr>
<tr>
<td>F6</td>
<td>Time</td>
</tr>
<tr>
<td>F7</td>
<td>Current Set Points</td>
</tr>
<tr>
<td>F8</td>
<td>Indicators</td>
</tr>
</tbody>
</table>
### DST Daily CAM and Record Sampler Inspections

#### Attachment 1 - Daily CAM and Record Sampler Inspection

<table>
<thead>
<tr>
<th>Inspection Criteria for CAM &amp; Record Sampler (as applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. &quot;Ready&quot; (GREEN) light is lit</td>
</tr>
<tr>
<td>2. &quot;Malfunction&quot; (RED) light is NOT lit</td>
</tr>
<tr>
<td>3. Stack monitor alarms clear (NOT in Alarm)</td>
</tr>
<tr>
<td>4. Vacuum inside range (1.5-12 Hg)*</td>
</tr>
<tr>
<td>5. No loose components or fitting/tubing connections*</td>
</tr>
<tr>
<td>6. Sample holder(s) properly closed*</td>
</tr>
<tr>
<td>7. Flow totalizer operating (if installed)</td>
</tr>
<tr>
<td>8. Cabinet or housing in serviceable condition (lighting, door latches, etc.) *</td>
</tr>
<tr>
<td>9. No visible damage on sample equipment</td>
</tr>
<tr>
<td>10. ASP (NET ALARM SETPOINT):</td>
</tr>
<tr>
<td>- Primary, Annulus &amp; Building Exhausters and 242A Vessel Vent: 3000 CPM</td>
</tr>
<tr>
<td>- 242-A Bldg. Exh. CAM &amp; Annulus Tank Leak Detector CAM’s: 2000 CPM.</td>
</tr>
</tbody>
</table>

* NOTIFY applicable Shift Manager of the deficiency in the items above that may affect the emissions sampling period data for the CAM/Record Sampler, and require data correction by Environmental.

** These items are considered “Discrepancies” and do not affect system operability.