Communication System Operations and Testing

Tank Farm Plant Operating Procedure
Effluent Treatment Facility

USQ Not Required – ETF is a < Hazard Category 3 Radiological Facility

CHANGE HISTORY (≤ LAST 5 REV-MODS)

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>A-2</td>
<td>02/01/2018</td>
<td>Operations request</td>
<td>Updated Records Section and signature authentications.</td>
</tr>
<tr>
<td>A-1</td>
<td>11/29/2016</td>
<td>Records update</td>
<td>Inconsequential change to update records section</td>
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<tr>
<td>A-0</td>
<td>10/15/2015</td>
<td>Conversion to WRPS Format</td>
<td>New procedure – Supersedes ETF-PRO-OP-51499 (POP-10-001)</td>
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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
  2.2 General Information ............................................................................................................................. 3

3.0 PRECAUTIONS AND LIMITATIONS ........................................................................................................ 4
  3.1 Radiation and Contamination Control .................................................................................................. 4
  3.2 Environmental Compliance .................................................................................................................. 4

4.0 PREREQUISITES ........................................................................................................................................ 4
  4.1 Performance Documents ....................................................................................................................... 4
  4.2 Field Preparations .................................................................................................................................. 4

5.0 PERFORMANCE ......................................................................................................................................... 5
  5.1 Testing WHELEN System Take Cover Alarm ......................................................................................... 5
  5.2 Testing of WHELEN System Evacuation Alarm .................................................................................... 7
  5.3 Initiating Public Address Test .............................................................................................................. 8
  5.4 Facility Radio Checks ............................................................................................................................ 10
  5.5 Providing Facility Notification .............................................................................................................. 11
  5.6 Records .................................................................................................................................................. 12

Rounds Sheet 1 - Take Cover Alarm Test (RCRA) ..................................................................................... 13
Rounds Sheet 2 - Evacuation Alarm Test (RCRA) ..................................................................................... 14
Rounds Sheet 3 - Public Address Test (RCRA) ......................................................................................... 15
Rounds Sheet 4 - Radio Test* .................................................................................................................. 16

Figure 1 - WHELEN Control Panel (E-969 Encoder) ............................................................................. 17
1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for testing the ETF alarm and communication systems. While this procedure provides the instructions for operating the evacuation and take cover sirens, as well as the PA system, the facility response for take cover and evacuation activities is described in ETF-ERP-85B-007, Take Cover at ETF, and ETF-ERP-85B-008, Evacuation at ETF, respectively.

1.2 Scope

This procedure involves instructions for PA announcements and testing the evacuation alarm and take cover alarm on the WHELEN system, located in the control room of 2025E. The WHELEN system is connected to the facility speakers for PA announcements.

2.0 INFORMATION

2.1 Terms and Definitions

- DTMF - Dual Toned Multi-Frequency
- EFR - Environmental Field Representative
- HSEAS - Hanford Site Emergency Alerting System.

2.2 General Information

2.2.1 The WHELEN system is operated from the ETF Control Room.

2.2.2 There will be no maintenance performed on the WHELEN system by ETF personnel. This system is supported by Lockheed Martin under an MSA contract.

2.2.3 The alarms and notifications systems are intended as an emergency notification system; high noise levels may be present when activated.

2.2.4 Testing of the PA or radio system can be performed at any time and does not require the approval of the Hanford Emergency Operations Center, per DOE-RL-94-02.

2.2.5 “RCRA” entries on rounds sheets identify the rounds are required by the LERF and 200 Area ETF unit-specific portion of the Resource Conservation and Recovery Act (RCRA) permit. Any non-compliance with a RCRA-required rounds that endangers human health or the environment must be immediately reported to Ecology. Rounds Sheets 1, 2, and 3 are RCRA-required rounds.
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Radiation and Contamination Control

3.1.1 Work in radiological areas will be performed using a radiological work permit following review by Radiological Control per ALARA Work Planning procedure, TFC-ESHQ-RP_RWP-C-03.

3.2 Environmental Compliance

3.2.1 In the event of a spill/leak/release, notify the SOM/FWS and respond per ETF-ERP-85B-003, Emergency Spill or Release at ETF.

4.0 PREREQUISITES

4.1 Performance Documents

The following documents may be needed to perform this procedure:
- DOE-RL-94-02, Hanford Emergency Response Plan (notification for alarms)
- TFC-ESHQ-ENV_FS-C-01, Environmental Notification.

4.2 Field Preparations

4.2.1 CONFIRM personnel are available at locations listed in the rounds sheets for recording purposes.
5.0 PERFORMANCE

Special Instructions

NCO performs all action steps unless stated otherwise.

Sections will be performed as directed by the SOM or BED.

5.1 Testing WHELEN System Take Cover Alarm

Special Instructions

PA operation does not require notification per DOE-RL-94-02.

Testing the take cover and evacuation alarms is allowed only in conjunction with monthly HSEAS testing, generally performed on the last Monday of the month.

Testing of the facility sirens at any other time will require written permission from the EOC per DOE-RL-94-02.

Activate PA

5.1.1 PRESS ON/OFF until display is activated.

5.1.2 PRESS “PA” call key.

5.1.3 PRESS “SEND” button.

5.1.4 KEY the microphone AND

MAKE the following announcement.

“The following is a test of the take cover alarm. Disregard this alarm.”

5.1.5 REPEAT announcement.

Terminate PA

5.1.6 RELEASE the microphone switch.

5.1.7 PRESS “CANCEL” call key.

5.1.8 PRESS “SEND” button. (DTMF will sound.)

5.1.9 PRESS “RESET” button to ensure WHELEN panel is in “Standby.”
5.1 Testing WHELEN System Take Cover Alarm (Cont.)

Initiate Fifteen-Second Take Cover Siren

5.1.10 PRESS “TAKE COVER” call key.

5.1.11 PRESS “SEND” button.

5.1.12 WAIT approximately fifteen seconds for take cover alarm operation.

5.1.13 PRESS “CANCEL” call key to terminate take cover siren, THEN PRESS “SEND” button. (DTMF tones will sound.)

5.1.14 RECORD data on Rounds Sheet 1 - Take Cover Alarm Test (RCRA).

Activate PA

5.1.15 PRESS ON/OFF until display is activated.

5.1.16 PRESS “PA” call key.

5.1.17 PRESS “SEND” button

5.1.18 KEY the microphone AND

MAKE the following announcement as directed by SOM or BED:

“Test of the take cover alarm has been completed. Regard all further alarms as real.”

5.1.19 REPEAT announcement.

Terminate PA

5.1.20 RELEASE the microphone switch.

5.1.21 PRESS “CANCEL” call key.

5.1.22 PRESS “SEND” button. (DTMF will sound.)

5.1.23 GO TO Section 5.5, Providing Facility Notification.
5.2 Testing of WHELEN System Evacuation Alarm

**Activate PA**

5.2.1 PRESS ON/OFF until display is activated.

5.2.2 PRESS “PA” call key.

5.2.3 PRESS “SEND” button.

5.2.4 KEY the microphone AND MAKE the following announcement:

“The following is a test of the evacuation alarm. Disregard this alarm.”

5.2.5 REPEAT announcement.

**Terminate PA**

5.2.6 RELEASE the microphone switch.

5.2.7 PRESS “CANCEL” call key.

5.2.8 PRESS “SEND” button. (DTMF will sound.)

5.2.9 PRESS “CANCEL” call key to ensure WHELEN panel is in “Standby.”

**Initiate Fifteen-Second Evacuation Siren**

5.2.10 PRESS “EVACUATE” call key.

5.2.11 PRESS “SEND” button.

5.2.12 WAIT approximately fifteen seconds for evacuation alarm operation.

5.2.13 PRESS “CANCEL” call key to terminate siren, THEN

5.2.14 PRESS “SEND” button. (DTMF tones will sound.)

5.2.15 RECORD data on the Rounds Sheet 2 - Evacuation Alarm Test (RCRA).
5.2 Testing of WHELEN System Evacuation Alarm (Cont.)

*Activate PA*

5.2.16 PRESS ON/OFF until display is activated.

5.2.17 PRESS “PA” call button.

5.2.18 PRESS “SEND” button.

5.2.19 KEY the microphone AND MAKE the following announcement as directed by SOM or BED:

“Test of the evacuation alarm has been completed. Regard all further alarms as real.”

5.2.20 REPEAT announcement.

*Terminate PA Announcement*

5.2.21 RELEASE the microphone switch.

5.2.22 PRESS “CANCEL” call key.

5.2.23 PRESS “SEND” call key button. (DTMF will sound.)

5.2.24 GO TO Section 5.5, Providing Facility Notification.

5.3 Initiating Public Address Test

**NOTE** - PA operation does not require notification per DOE-RL-94-02.

*Activate PA*

5.3.1 PRESS ON/OFF until display is activated.

5.3.2 PRESS “PA” call key.

5.3.3 PRESS “SEND” button.

5.3.4 KEY the microphone AND MAKE the following announcement:

“The following is a test of the public address system.”

5.3.5 REPEAT announcement.
5.3 Initiating Public Address Test (Cont.)

5.3.6 RELEASE the microphone switch AND
PAUSE for five seconds.

5.3.7 PRESS the microphone switch AND
COUNT (slowly) “1…10” on the microphone.

5.3.8 RELEASE the microphone switch AND
PAUSE for five seconds.

5.3.9 PRESS the microphone switch AND
MAKE the following announcement:
“Test of the public address system has been completed.”

5.3.10 REPEAT announcement.

Terminate PA Announcement

5.3.11 RELEASE the microphone switch.

5.3.12 PRESS “CANCEL” call key.

5.3.13 PRESS “SEND” button. (DTMF will sound.)

5.3.14 DOCUMENT findings on the Rounds Sheet 3 - Public Address Test (RCRA)

5.3.15 GO TO Section 5.5, Providing Facility Notification.
5.4 Facility Radio Checks

NOTE - Section 5.4 is performed when directed by SOM.

5.4.1 OBTAIN radio(s) to be checked.

5.4.2 RECORD radio numbers on Rounds Sheet 4 - Radio Test*.

NOTE - Radio Channels include local antenna (on 2025E) and site antenna (Gable Mountain).
- Local channels are ETF 1, ETF 2, ETFM, Radcon.
- Site Antenna channels are ETF 1L, ETF 2L, All Call, Emergency, (All Call and Emergency not tested).
- Trunked channels, such as ETF 1L, use both the facility antenna and site antenna; non-trunked channels use only building antenna and portable radio antenna.

5.4.3 (SOM) DESIGNATE which portable radios, locations, and channels are to be tested.

5.4.4 SET radios to first channel to be tested.

5.4.5 VERIFY portable radio transmits and receives a communication on the channel selected AND RECORD results on Rounds Sheet 4. (N/A channel(s) not being tested.)

5.4.6 SET radios to next selected radio channel/location.

5.4.7 REPEAT steps 5.4.5 and 5.4.6 until all selected channel/locations have been tested for portable radio being tested.
5.5 Providing Facility Notification

5.5.1 UPON completion of testing, DOCUMENT discrepancies on the appropriate rounds sheet(s).

5.5.2 INFORM SOM of system status AND PROVIDE SOM appropriate rounds sheet(s).

5.5.3 (SOM) REVIEW discrepancies noted on rounds sheet(s) during testing.

5.5.4 (SOM) IF communication equipment and warning systems are degraded or have become inoperable, EVALUATE need to notify Environmental AND NOTIFY Environmental if appropriate.

Special Instructions

Rounds Sheets 1, 2, and 3 are RCRA-required rounds. Non-compliance of a RCRA-required rounds requires notifications be made. (“RCRA” entries identify those rounds required by the LERF and 200 Area ETF unit-specific portion of the RCRA permit.)

5.5.5 IF a RCRA-required rounds entry is found out of compliance and endangers human health or the environment, PERFORM the following:

5.5.5.1 NOTIFY Central Shift Manager of the non-compliance AND REQUEST they contact Environmental On-Call per TFC-ESHQ-ENV_FS-C-01 (Environmental On-Call is responsible for calling Ecology).

5.5.5.2 FOR any non-compliance, NOTIFY the EFR by phone or email (no EFR response is required).

5.5.6 (SOM) SIGN appropriate rounds sheet(s) provided.
5.6 Records

5.6.1 **PERFORM** the following for records identified within this procedure.

5.6.1.1 **RECORD** the number of times the record was generated in applicable column

OR

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

5.6.1.2 **SUBMIT** the package 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>Round Sheets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds Sheet 1 - Take Cover Alarm Test (RCRA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds Sheet 2 - Evacuation Alarm Test (RCRA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds Sheet 3 - Public Address Test (RCRA)</td>
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<td></td>
</tr>
<tr>
<td>Rounds Sheet 4 - Radio Test*</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 & Last)        Date
FWS/OE/Shift Manager

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.
# Rounds Sheet 1 - Take Cover Alarm Test (RCRA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Alarms Heard Clearly</th>
<th>Acceptable</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Evaporator Vapor Compressor/ Skid area (2025E Room 131)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>Reverse Osmosis Skid area (2025E Room 131)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>Air Compressor Skid area (2025E Room 134)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>2025E lunchroom (Room 100)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>Outside 2025E</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>Inside 2025EA</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
</tbody>
</table>

____________________ / ______________________ / __________ / __________
Signature                     Print (First & Last)         Date                  Time
Operator

____________________ / ______________________ / __________
Signature                     Print (First & Last)         Date
SOM Completion Review
## Rounds Sheet 2 - Evacuation Alarm Test (RCRA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Alarms Heard Clearly</th>
<th>Acceptable</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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<td>YES / NO  (Circle)</td>
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</tr>
<tr>
<td>Reverse Osmosis Skid area (2025E Room 131)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO  (Circle)</td>
<td></td>
</tr>
<tr>
<td>Air Compressor Skid area (2025E Room 134)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO  (Circle)</td>
<td></td>
</tr>
<tr>
<td>2025E lunchroom (Room 100)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO  (Circle)</td>
<td></td>
</tr>
<tr>
<td>Outside 2025E</td>
<td>YES / NO (Circle)</td>
<td>YES / NO  (Circle)</td>
<td></td>
</tr>
<tr>
<td>Inside 2025EA</td>
<td>YES / NO (Circle)</td>
<td>YES / NO  (Circle)</td>
<td></td>
</tr>
</tbody>
</table>

_________________________ / ______________________ / ______________ / __________
Signature                  Print (First & Last)              Date                  Time
Operator

_________________________ / ______________________ / ______________
Signature                  Print (First & Last)              Date
SOM Completion Review
## Rounds Sheet 3 - Public Address Test (RCRA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Heard Clearly</th>
<th>Acceptable</th>
<th>Comments</th>
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</thead>
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<tr>
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<td>YES / NO (Circle)</td>
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<tr>
<td>Reverse Osmosis Skid area (2025E Room 131)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
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<tr>
<td>Air Compressor Skid area (2025E Room 134)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
<td></td>
</tr>
<tr>
<td>2025E lunchroom (Room 100)</td>
<td>YES / NO (Circle)</td>
<td>YES / NO (Circle)</td>
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</tr>
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Signature / Print (First & Last) / Date / Time

Signature / Print (First & Last) / Date

Signature / Print (First & Last) / Date

SOM Completion Review
# Rounds Sheet 4 - Radio Test*

<table>
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<th>Channel</th>
<th>Clear Communications</th>
<th>Comments</th>
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<tr>
<td></td>
<td>Non-Trunked (ETF 2)</td>
<td>Y / N / NA</td>
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</tr>
<tr>
<td></td>
<td>Non-Trunked (ETFM)</td>
<td>Y / N / NA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Trunked (RADCON)</td>
<td>Y / N / NA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trunked (ETF 1L)</td>
<td>Y / N / NA</td>
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<td>Trunked (ETF 2L)</td>
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<tr>
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<td>Non-Trunked (ETFM)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Non-Trunked (RADCON)</td>
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<tr>
<td></td>
<td>Trunked(ETF 1L)</td>
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<td>Trunked (ETF 2L)</td>
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<td>Non-Trunked (RADCON)</td>
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<td>Trunked(ETF 1L)</td>
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<tr>
<td></td>
<td>Trunked (ETF-2L)</td>
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<td></td>
</tr>
</tbody>
</table>

* Copy rounds sheet for each portable radio being tested.

---

Signature / Print (First & Last) / Date / Time
Operator

Signature / Print (First & Last) / Date
SOM Completion Review
Figure 1 - WHELEN Control Panel (E-969 Encoder)

*Figure dated 10/14/15