

Test Case AvnFPS TAF 2.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0001

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 9 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO9 Test Case AvnFPS TAF 1.0

2.2 Reference Documents

- Legacy NWS Test Case: Baseline_AvnFPS_TAF_OB8.1.
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

Test case verifies that the 30-Hour TAF functionality works properly **with or without the transmit privilege**.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- The Text Workstation has been started.
- This test case is a regression test of capabilities delivered in TO9 with the introduction of the 30-Hour TAF.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The AvnFPS Monitor dialog and configuration files are displayed and the results outlined in section 4.0 are met. The AvnFPS GUIs to be tested include:

- AvnFPS Menu
- AvnFPS Monitor
- AvnFPS TAF Editor
- AvnFPS Loader
- AvnFPS QC
- AvnFPS Transmission Queue
- Directory

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--|--|---|-----------|
| Test User should not be able to transmit a TAF product with xmit_privilege = '0' | | | |
| 1. | From the CAVE menu bar, Mouse Button (MB) 1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...' | The AvnFPS Menu window appears. | |
| 2. | Verify user 'Test2' is not present. | The user 'Test2' is not present. | |
| 3. | Open a terminal and navigate to the operator's local copy of the aviation configuration file (e.g., cave/etc/aviation). | A terminal opens. The aviation configuration file is present. | |
| 4. | Edit the aviationForecasterConfig.xml file, adding 'Test2' as a new forecaster and setting the transmit privilege to '0' . Save the changes to the configuration file. | The new forecaster and transmit privilege in the aviationForecasterConfig.xml file is saved. | |
| 5. | Close the terminal window. | The terminal closes. | |
| 6. | Close and restart the AvnFPS Menu (refer to step 1). | The AvnFPS Menu window appears. | |
| 7. | Verify user 'Test2' is present. | The user 'Test2' is present. | |
| 8. | Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button. | The AvnFPS Monitor window opens. | |
| 9. | Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button. | The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green. | |
| 10. | Select the TAF Editor button to edit the TAF. | The AvnFPS TAF Editor window displays without loading a TAF forecast (blank screen). | |
| 11. | Verify the Editor recipe tab near the top of the TAF Editor is selected. Verify that there is no 'Send' button in the top row of buttons. Verify that the buttons appear in the following order: 'Load', 'Syntax', 'QC', 'Save', and 'Restore'. Note that for TO 10, the 'Send' button appears between the 'QC' and 'Save' buttons. MB1 click the Viewer tab. | No 'Send' button is present. The top row of buttons is in the stated order. The Viewer tab displays in the AvnFPS TAF Editor window. | |

| Step # | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 12. | Select 'File' -> 'Close' in the AvnFPS TAF Editor. Select 'File' -> 'Quit' in the AvnFPS Monitor. Click on the 'X' in the AvnFPS Menu window. | The AvnFPS TAF Editor, AvnFPS Monitor, and AvnFPS Menu windows close. | |
| Test User is able to transmit a TAF product with xmit_privilege = '1' | | | |
| 13. | Open a terminal and navigate to the aviation configuration file (e.g., /cave/etc/aviation). | A terminal opens. The aviation configuration file is present. | |
| 14. | Edit the aviationForecasterConfig.xml file by setting the transmit privilege for user 'Test' to '1'. Save the changes to the configuration file. | The transmit privilege in the aviationForecasterConfig.xml file is saved. | |
| 15. | On the terminal, select 'File' -> 'Close'. | The terminal closes. | |
| 16. | Restart the AvnFPS Menu by repeating step 1 above. | The AvnFPS Menu window appears. | |
| 17. | Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button. | The AvnFPS Monitor window opens. | |
| 18. | Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify that the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button. | The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green. | |
| 19. | Select the TAF Editor button to edit the TAF. | The AvnFPS TAF Editor window displays without loading forecast (blank screen). | |
| 20. | Verify that the Editor tab near the top of the TAF Editor is selected. Verify that the following appear in the top row of buttons, in the following order: 'Load', 'Syntax', 'QC', 'Send', 'Save', and 'Restore'. Verify the TAF Editor's menu bar contains the 'File', 'Options', 'Edit', and 'Help' pull-down menus. | The top row of buttons is in the stated order | |
| 21. | Select the 'Load' button to load the TAF forecast. | The AvnFPS Loader window displays along with the different products and sites. Verify the Forecast Type 'Routine' radio button is selected. | |

| | | | |
|-----|--|---|--|
| 22. | <p>From the AvnFPS Loader window, select any combination of products and sites. Then select 'latest' from the 'Initialize from:' drop-down menu and MB1 click the 'OK' button.</p> <p><i>Note:</i> If you want to select more than one products or sites, either MB1 click and drag the cursor (this works for consecutive items), MB1 click at the items while pressing down the Ctrl key, or MB1 click and drag the cursor while pressing down the Shift key. Edit the TAF(s).</p> | <p>The AvnFPS Loader window closes.</p> <p>The selected product and site data displays and the associated site id displays on the first tab.</p> <p>The TAF(s) is/are editable.</p> | |
| 23. | <p>In the 'Tools' text field, use the pull-down menu to select the 'AdjustTimes' tool. Then MB1 click the 'Apply' button to update the TAF start times.</p> | <p>One or more group valid times changed to reflect current hour.</p> | |
| 24. | <p>In the 'Tools' text field, use the pulldown menu to select the 'UseMetarForPrevailing' tool. Then MB1 click the 'Apply' button to update the TAFs.</p> | <p>One or more TAFs changed to reflect the current METAR.</p> | |
| 25. | <p>Select the 'Syntax' button to perform the Syntax Quality Control for TAF. If an error is found, continue to step #26. Otherwise continue to step #27.</p> | <p>The system attempts to decode all forecasts and check their syntax.</p> <p>If any errors are found, the whole relevant phrase is highlighted in color according to the type of errors.</p> | |
| 26. | <p>To view an explanatory message, MB1 the message display button at the very bottom right corner of the 'AvnFPS TAF Editor' dialog. Verify an explanatory message displays.</p> | <p>An explanatory message displays in the message log.</p> | |
| 27. | <p>To check the Quality Control (QC) of individual TAFs, MB3 click the 'QC' button.</p> | <p>The AvnFPS QC pop-up window displays.</p> | |
| 28. | <p>To perform a current weather check, select the Current Wx check box. If Error found, continue to step #29, else continue to step #30.</p> | <p>The system performs a quick check for changing conditions while forecasts are prepared or when a routine issue forecast is prepared well in advance of the transmission window. If there are no invalid entries found during the checking process then the "Wx QC - OK" message displays on the status bar at the bottom of the screen. If current observation and the weather in the first line of the forecast do not match, an explanatory message displays in the message log.</p> | |

| | | | |
|-----|---|--|--|
| 29. | To view a message of the highlighted text, MB1 while pointing at the offending text. Note: If you have an error flagged, but are certain that the forecast is correct and either the software or directive is wrong, MB1 'Clear Errors' (located under the 'File' menu) before MB1 clicking 'Send'. | The balloon message shows output of the current weather check. | |
| 30. | Note: The forecast must successfully pass QC in order to be sent. Select the 'Send' button. | The AvnFPS Send dialog window displays and verifies the Transmit time. | |
| 31. | Select a forecaster from the list and set the 'Transmit at' time. Then MB1 click the 'OK' button. | The AvnFPS Send dialog closes. The forecast is transmitted to the Queue in the pending section. Record the transmit time. _____ | |
| 32. | To view the transmission log file, select 'Open Terminal window' and type in the following: <code>cd /awips/adapt/avnfps/3.4/xmit/pending</code> | Verify that the file is in the pending directory. | |
| 33. | To view the forecast that was transmitted, MB1 click the 'Queue' button on the AvnFPS Monitor GUI. | The AvnFPS Transmission Queue dialog displays with the following buttons are enabled: Close, Refresh, View, Remove, Retransmit, and Help. | |
| 34. | Under the Directory section, select the 'Pending' pop-up button. | The forecast entry transmitted from Step 30 displays on the list of the products waiting for a specific time before they are transmitted. | |
| 35. | Note: The transmission server checks the queue every 15 seconds. When the transmission time recorded in step 31 is reached, the forecast is sent to the NWS gateway. It may take awhile for the product from the pending directory to appear in the sent directory. To verify the forecast entry that was transmitted from Step 31 was sent successfully, select the 'Send' pop-up button under the Directory section. | Verify that the transmitted forecast entry displays on the list of the products that were successfully sent. | |
| 36. | To view the transmission log file, select 'Open Terminal window' and type in the following: <code>cd /awips/adapt/avnfps/3.4/xmit/sent</code> | Verify that the file is in sent directory. | |
| 37. | MB1 click the 'Close' button from the AvnFPS Transmission Queue dialog. | The AvnFPS Transmission Queue dialog closes. | |

| | | | |
|-----|---|---|--|
| 38. | In the AvnFPS TAF Editor window, MB1 click the 'Save' button to save the current TAF. | The current TAF bulletin is saved into a temporary text database product, 'CCCWRKTAF', where CCC is your node id (provided the Text Workstation has been started from the 'CAVE' -> 'New' menu prior to MB1 clicking the 'Save' button to save the current TAF). | |
| 39. | MB1 click the 'Clear' button. | The current TAF bulletin is removed. | |
| 40. | Select the 'Restore' button to restore the previously saved current TAF bulletin. | The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' -> 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database). | |
| 41. | MB1 click the 'Clear' button. | The restored current TAF bulletin is removed. | |
| 42. | Select 'Restore From' under the 'File' menu. | The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' -> 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database). | |
| 43. | Select a filename. | The pop-up window displays along with the filename. | |
| 44. | MB1 click the 'OK' button. | The saved current TAF is restored and displays on the screen. | |
| 45. | Close all opened windows and exit the AvnFPS application. | All windows close. | |
| 46. | End of test. | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------------|---|--------------|
| SYSR2073.40 | AvnFPS TAF Monitor Window's File pulldown's Quit selection shall provide the capability to close of AvnFPS TAF Monitor Window. | 12 |
| SYSR2073.48 | The TAF Editor shall provide forecaster-specific functionality including syntax checking, climate and current weather consistency checks. | 25-29 |
| SYSR2073.49 | The TAF Editor shall allow the user the capability to invoke the editor in either of two distinct modes: edit mode and view mode. | 10-11 |
| SYSR2073.51 | The TAF Editor shall allow the user the capability to apply predefined operations to the text in the editor. | 21-22 |
| SYSR2073.52 | The TAF Editor shall provide the predefined Load capability, which shall invoke the forecast selection dialog. | 21 |
| SYSR2073.53 | The Forecast Selection Dialog shall provide the user the capability to load a text product based on the parameters of: product identifier, site, initialization option, and forecast type. | 22 |
| SYSR2073.54 | The TAF Editor shall provide the predefined Syntax Quality Check capability, which shall follow the guidance specified by NWSI 10-813. | 25 |
| SYSR2073.55 | The TAF Editor shall provide the predefined Weather Check capability, which shall provide an indication of whether the current observation and the weather in the first line of the forecast are consistent. | 28 |
| SYSR2073.56 | If inconsistent, Weather Check shall highlight the first line of the forecast. | 28 |
| SYSR2073.57 | The TAF Editor shall provide the predefined Climate Quality Check capability, which shall follow the prescribed algorithm cited in Appendix C of Aviation Forecast Preparation System: System and User Guide, V3.5, 15 June 2007. | 27 |
| SYSR2073.60 | The TAF Editor shall provide the predefined Save capability to save the current TAF bulletin as a temporary file. | 38, 42-44 |
| SYSR2073.61 | The TAF Editor shall provide the predefined Restore capability to restore a TAF bulletin previously stored as a temporary file. | 40 |
| SYSR2073.62 | The TAF Editor shall provide the predefined Send capability to send a TAF bulletin. | 30-31 |
| SYSR2073.64 | The TAF Editor shall provide the predefined Clear capability to clear the current TAF bulletin from the text editor. | 39 |
| SYSR2073.65 | The TAF Editor shall allow the user the capability to apply user-defined operations to the text in the editor. | 22-24 |
| SYSR2073.70 | The TAF Editor's Menu Bar shall provide the user three distinct pulldown menus: File, Options, and Edit. | 20 |
| SYSR2073.77 | The TAF Editor's File pulldown's Close selection shall shut down the TAF Editor. | 12 |
| SYSR2073.157 | The aviation plug-in shall provide the operator the capability to configure the names of the forecasters. | 2-7 |
| SYSR2937 | The AWIPS System shall create the TAF product as produced by the Aviation Services AVNFPS Application. | ALL |

Test Case AvnFPS TAF 2.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0001

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 9 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO9 Test Case AvnFPS TAF 1.0

2.2 Reference Documents

- Legacy NWS Test Case: Baseline_AvnFPS_TAF_OB8.1.
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

Test case verifies that the 30-Hour TAF functionality works properly **with or without the transmit privilege**.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- The Text Workstation has been started.
- This test case is a regression test of capabilities delivered in TO9 with the introduction of the 30-Hour TAF.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The AvnFPS Monitor dialog and configuration files are displayed and the results outlined in section 4.0 are met. The AvnFPS GUIs to be tested include:

- AvnFPS Menu
- AvnFPS Monitor
- AvnFPS TAF Editor
- AvnFPS Loader
- AvnFPS QC
- AvnFPS Transmission Queue
- Directory

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--|---|--|-----------|
| Test User should not be able to transmit a TAF product with xmit_privilege = '0' | | | |
| 1. | From the CAVE menu bar, Mouse Button (MB) 1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...' | The AvnFPS Menu window appears. | |
| 2. | Verify user 'Test2' is not present. | The user 'Test2' is not present. | |
| 3. | Open a terminal and navigate to the operator's local copy of the aviation configuration file (e.g., cave/etc/aviation). | A terminal opens. The aviation configuration file is present. | |
| 4. | Edit the aviationForecasterConfig.xml file, adding 'Test2' as a new forecaster and setting the transmit privilege to '0'. Save the changes to the configuration file. | The new forecaster and transmit privilege in the aviationForecasterConfig.xml file is saved. | |
| 5. | Close the terminal window. | The terminal closes. | |
| 6. | Close and restart the AvnFPS Menu (refer to step 1). | The AvnFPS Menu window appears. | |
| 7. | Verify user 'Test2' is present. | The user 'Test2' is present. | |
| 8. | Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button. | The AvnFPS Monitor window opens. | |
| 9. | Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button. | The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green. | |
| 10. | Select the TAF Editor button to edit the TAF. | The AvnFPS TAF Editor window displays without loading a TAF forecast (blank screen). | |
| 11. | Verify the Editor recipe tab near the top of the TAF Editor is selected. Verify that there is no 'Send' button in the top row of buttons. Verify that the buttons appear in the following order: 'Load', 'Syntax', 'QC', 'Save', and 'Restore'. Note that for TO 10, the 'Send' button appears between the 'QC' and 'Save' buttons. MB1 click the Viewer tab. | No 'Send' button is present. The top row of buttons is in the stated order. The Viewer tab displays in the AvnFPS TAF Editor window. | |

| Step # | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 12. | Select 'File' -> 'Close' in the AvnFPS TAF Editor. Select 'File' -> 'Quit' in the AvnFPS Monitor. Click on the 'X' in the AvnFPS Menu window. | The AvnFPS TAF Editor, AvnFPS Monitor, and AvnFPS Menu windows close. | |
| Test User is able to transmit a TAF product with xmit_privilege = '1' | | | |
| 13. | Open a terminal and navigate to the aviation configuration file (e.g., /cave/etc/aviation). | A terminal opens. The aviation configuration file is present. | |
| 14. | Edit the aviationForecasterConfig.xml file by setting the transmit privilege for user 'Test' to '1'. Save the changes to the configuration file. | The transmit privilege in the aviationForecasterConfig.xml file is saved. | |
| 15. | On the terminal, select 'File' -> 'Close'. | The terminal closes. | |
| 16. | Restart the AvnFPS Menu by repeating step 1 above. | The AvnFPS Menu window appears. | |
| 17. | Select the user 'Test2'. With 'local' highlighted on the lower list, MB1 click the 'TAFs' button. | The AvnFPS Monitor window opens. | |
| 18. | Verify that the following buttons are enabled: TAF Editor, Climate, Plot, and Backup. Verify that the following items are displayed in green color: XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button. | The listed buttons are enabled. The XMIT-px2f, DATA-px2f, INGEST-px2f and Queue button are displayed green. | |
| 19. | Select the TAF Editor button to edit the TAF. | The AvnFPS TAF Editor window displays without loading forecast (blank screen). | |
| 20. | Verify that the Editor tab near the top of the TAF Editor is selected. Verify that the following appear in the top row of buttons, in the following order: 'Load', 'Syntax', 'QC', 'Send', 'Save', and 'Restore'. Verify the TAF Editor's menu bar contains the 'File', 'Options', 'Edit', and 'Help' pull-down menus. | The top row of buttons is in the stated order | |
| 21. | Select the 'Load' button to load the TAF forecast. | The AvnFPS Loader window displays along with the different products and sites. Verify the Forecast Type 'Routine' radio button is selected. | |

| | | | |
|-----|--|---|--|
| 22. | <p>From the AvnFPS Loader window, select any combination of products and sites. Then select 'latest' from the 'Initialize from:' drop-down menu and MB1 click the 'OK' button.</p> <p><i>Note:</i> If you want to select more than one products or sites, either MB1 click and drag the cursor (this works for consecutive items), MB1 click at the items while pressing down the Ctrl key, or MB1 click and drag the cursor while pressing down the Shift key. Edit the TAF(s).</p> | <p>The AvnFPS Loader window closes.</p> <p>The selected product and site data displays and the associated site id displays on the first tab.</p> <p>The TAF(s) is/are editable.</p> | |
| 23. | <p>In the 'Tools' text field, use the pull-down menu to select the 'AdjustTimes' tool. Then MB1 click the 'Apply' button to update the TAF start times.</p> | <p>One or more group valid times changed to reflect current hour.</p> | |
| 24. | <p>In the 'Tools' text field, use the pulldown menu to select the 'UseMetarForPrevailing' tool. Then MB1 click the 'Apply' button to update the TAFs.</p> | <p>One or more TAFs changed to reflect the current METAR.</p> | |
| 25. | <p>Select the 'Syntax' button to perform the Syntax Quality Control for TAF. If an error is found, continue to step #26. Otherwise continue to step #27.</p> | <p>The system attempts to decode all forecasts and check their syntax.</p> <p>If any errors are found, the whole relevant phrase is highlighted in color according to the type of errors.</p> | |
| 26. | <p>To view an explanatory message, MB1 the message display button at the very bottom right corner of the 'AvnFPS TAF Editor' dialog. Verify an explanatory message displays.</p> | <p>An explanatory message displays in the message log.</p> | |
| 27. | <p>To check the Quality Control (QC) of individual TAFs, MB3 click the 'QC' button.</p> | <p>The AvnFPS QC pop-up window displays.</p> | |
| 28. | <p>To perform a current weather check, select the Current Wx check box. If Error found, continue to step #29, else continue to step #30.</p> | <p>The system performs a quick check for changing conditions while forecasts are prepared or when a routine issue forecast is prepared well in advance of the transmission window. If there are no invalid entries found during the checking process then the "Wx QC - OK" message displays on the status bar at the bottom of the screen. If current observation and the weather in the first line of the forecast do not match, an explanatory message displays in the message log.</p> | |

| | | | |
|-----|---|--|--|
| 29. | To view a message of the highlighted text, MB1 while pointing at the offending text. Note: If you have an error flagged, but are certain that the forecast is correct and either the software or directive is wrong, MB1 'Clear Errors' (located under the 'File' menu) before MB1 clicking 'Send'. | The balloon message shows output of the current weather check. | |
| 30. | Note: The forecast must successfully pass QC in order to be sent. Select the 'Send' button. | The AvnFPS Send dialog window displays and verifies the Transmit time. | |
| 31. | Select a forecaster from the list and set the 'Transmit at' time. Then MB1 click the 'OK' button. | The AvnFPS Send dialog closes. The forecast is transmitted to the Queue in the pending section. Record the transmit time. _____ | |
| 32. | To view the transmission log file, select 'Open Terminal window' and type in the following: <code>cd /awips/adapt/avnfps/3.4/xmit/pending</code> | Verify that the file is in the pending directory. | |
| 33. | To view the forecast that was transmitted, MB1 click the 'Queue' button on the AvnFPS Monitor GUI. | The AvnFPS Transmission Queue dialog displays with the following buttons are enabled: Close, Refresh, View, Remove, Retransmit, and Help. | |
| 34. | Under the Directory section, select the 'Pending' pop-up button. | The forecast entry transmitted from Step 30 displays on the list of the products waiting for a specific time before they are transmitted. | |
| 35. | Note: The transmission server checks the queue every 15 seconds. When the transmission time recorded in step 31 is reached, the forecast is sent to the NWS gateway. It may take awhile for the product from the pending directory to appear in the sent directory. To verify the forecast entry that was transmitted from Step 31 was sent successfully, select the 'Send' pop-up button under the Directory section. | Verify that the transmitted forecast entry displays on the list of the products that were successfully sent. | |
| 36. | To view the transmission log file, select 'Open Terminal window' and type in the following: <code>cd /awips/adapt/avnfps/3.4/xmit/sent</code> | Verify that the file is in sent directory. | |
| 37. | MB1 click the 'Close' button from the AvnFPS Transmission Queue dialog. | The AvnFPS Transmission Queue dialog closes. | |

| | | | |
|-----|---|---|--|
| 38. | In the AvnFPS TAF Editor window, MB1 click the 'Save' button to save the current TAF. | The current TAF bulletin is saved into a temporary text database product, 'CCCWRKTAF', where CCC is your node id (provided the Text Workstation has been started from the 'CAVE' -> 'New' menu prior to MB1 clicking the 'Save' button to save the current TAF). | |
| 39. | MB1 click the 'Clear' button. | The current TAF bulletin is removed. | |
| 40. | Select the 'Restore' button to restore the previously saved current TAF bulletin. | The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' -> 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database). | |
| 41. | MB1 click the 'Clear' button. | The restored current TAF bulletin is removed. | |
| 42. | Select 'Restore From' under the 'File' menu. | The saved current TAF bulletin is restored and displayed on the screen (provided the Text Workstation is started from the 'CAVE' -> 'New' menu prior to clicking the 'Restore' button to restore the previously saved current TAF bulletin from the text database). | |
| 43. | Select a filename. | The pop-up window displays along with the filename. | |
| 44. | MB1 click the 'OK' button. | The saved current TAF is restored and displays on the screen. | |
| 45. | Close all opened windows and exit the AvnFPS application. | All windows close. | |
| 46. | End of test. | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------------|---|--------------|
| SYSR2073.40 | AvnFPS TAF Monitor Window's File pulldown's Quit selection shall provide the capability to close of AvnFPS TAF Monitor Window. | 12 |
| SYSR2073.48 | The TAF Editor shall provide forecaster-specific functionality including syntax checking, climate and current weather consistency checks. | 25-29 |
| SYSR2073.49 | The TAF Editor shall allow the user the capability to invoke the editor in either of two distinct modes: edit mode and view mode. | 10-11 |
| SYSR2073.51 | The TAF Editor shall allow the user the capability to apply predefined operations to the text in the editor. | 21-22 |
| SYSR2073.52 | The TAF Editor shall provide the predefined Load capability, which shall invoke the forecast selection dialog. | 21 |
| SYSR2073.53 | The Forecast Selection Dialog shall provide the user the capability to load a text product based on the parameters of: product identifier, site, initialization option, and forecast type. | 22 |
| SYSR2073.54 | The TAF Editor shall provide the predefined Syntax Quality Check capability, which shall follow the guidance specified by NWSI 10-813. | 25 |
| SYSR2073.55 | The TAF Editor shall provide the predefined Weather Check capability, which shall provide an indication of whether the current observation and the weather in the first line of the forecast are consistent. | 28 |
| SYSR2073.56 | If inconsistent, Weather Check shall highlight the first line of the forecast. | 28 |
| SYSR2073.57 | The TAF Editor shall provide the predefined Climate Quality Check capability, which shall follow the prescribed algorithm cited in Appendix C of Aviation Forecast Preparation System: System and User Guide, V3.5, 15 June 2007. | 27 |
| SYSR2073.60 | The TAF Editor shall provide the predefined Save capability to save the current TAF bulletin as a temporary file. | 38, 42-44 |
| SYSR2073.61 | The TAF Editor shall provide the predefined Restore capability to restore a TAF bulletin previously stored as a temporary file. | 40 |
| SYSR2073.62 | The TAF Editor shall provide the predefined Send capability to send a TAF bulletin. | 30-31 |
| SYSR2073.64 | The TAF Editor shall provide the predefined Clear capability to clear the current TAF bulletin from the text editor. | 39 |
| SYSR2073.65 | The TAF Editor shall allow the user the capability to apply user-defined operations to the text in the editor. | 22-24 |
| SYSR2073.70 | The TAF Editor's Menu Bar shall provide the user three distinct pulldown menus: File, Options, and Edit. | 20 |
| SYSR2073.77 | The TAF Editor's File pulldown's Close selection shall shut down the TAF Editor. | 12 |
| SYSR2073.157 | The aviation plug-in shall provide the operator the capability to configure the names of the forecasters. | 2-7 |
| SYSR2937 | The AWIPS System shall create the TAF product as produced by the Aviation Services AVNFPS Application. | ALL |

Test Case HydroGen
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0002

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 8 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: OHD HydroGen-DCS3397-OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Rational RequisitePro.

DRAFT

3.0 TEST CASE DESCRIPTION

This test case demonstrates the creation of the XML file and a hydrograph for a point using HydroGen.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|---|--|---|-----------|
| Note: This test case will need to be revised as the HydroGen application is created (e.g., entering the correct directory paths, optional use of pgAdmin III). | | | |
| 1. | Open a terminal window. | A terminal window opens. | |
| 2. | Setup environment variables by executing the following commands: export db_name=<database> [Enter] (e.g., hd_ob81xxx) export PGHOST=<database host> [Enter] (e.g., dx1) export PGUSER=pguser [Enter] | The environment variables are set to those specifics input. | |
| 3. | Identify candidate test stations and SHEF codes for generating a hydrograph by executing the following query: psql -d <database> -c "select distinct (lid) from fcstheight where pe='HG' and ts='FF' and lid in (select lid from rating group by 1 having count(*) > 0);" | A list of stations will be given. | |
| 4. | Perform the query below: Psql -d <database> -c "select * from HgStation;" Note: Select one station that exists in both the list from Step 2 and the output from the query above. | Note the lid and pe for the selected station. For the rest, the lid will be referred to as <lid> and pe as <pe>. If you are able to find a station, Skip to Step 6. If you are unable to find a station that exists in both lists, then pick a location id from the list generated in Step 2, and not its lid. | |
| 5. | Identify one type source for the selected station in the height table by performing this query: Psql -d <database> -c "select distinct (ts) from Height where lid='<lid>';" | Query generated. | |
| 6. | Insert a record for the selected location into the HgStation table: psql -d <database> -c "insert into HgStation value ('<lid>', 'HG', '<obs ts>', 'FE');" | A record with the specified value is inserted into the HgStation table. | |
| 7. | For the station, insert an observation that is below the rating curve by executing the following query: | Query is generated, from the output list of observation, select the observation for which the obstime column is the most recent. For this | |

| Step # | Action | Result | Pass/Fail |
|--|---|--|-----------|
| Note: This test case will need to be revised as the HydroGen application is created (e.g., entering the correct directory paths, optional use of pgAdmin III). | | | |
| | psql -d <database> -c "select * from height where lid = '<lid>' and pe='HG' and ts='<obs ts>';" | observation note its value as <old stage> and its obstime as <obstime>. | |
| 8. | Perform the query below: psql -d <database> -c "select * from rating where lid='<lid>';" | Query is generated, based on the output list of rating curve points, choose a stage below the smallest stage value. This stage will be referred to as <new stage>. | |
| 9. | Put the stage chosen in Step 7 into the observation chosen in Step 6 by perform the following query: psql -d <database> -c "update height set value=<new stage> where lid='<lid>' and ts='<obs ts>' and obstime='<obstime>';" | The observation chosen in Step 6 will change such that its value is that chosen in Step 7. Perform the query in next step (step 9) to verify. | |
| 10. | Psql -d <database> -c Select hsa, rfc, rb From location Where lid='<lid>;' | Note the returned values for the columns as <hsa>, <rfc>, and <rb>, respectively. They are used in the next step. | |
| 11. | Create necessary 'FE' type source data by running the following command: <DIRECTORY> [Enter] | A window with the title of "Filter IDs" displays. | |
| 12. | From the HSAs list in the window, select <hsa>. From the RFCs list, select <rfc>. From the RBs list, select <rb> and click the "Done" button. | The window closes and output is sent to stdout. The first line of the output starts with, "executing: <DIRECTORY>. The execution finishes after a few seconds. | |
| 13. | Edit the data in the test database to be for a duration other than instantaneous by executing the following queries: psql -d <database> -c "update height set dur = 1006 where lid = '<lid>', and pe = '<pe>';" psql -d <database> -c "update fcstheight set dur = 1006 where lid = '<lid>' and pe = '<pe>' and ts = 'FE';" | Data in the database for the two tables are edited so that the dur column is equal to '1006'. | |
| 14. | Create the hg.cfg file to generate hydrographs for the selected forecast point: | The file hg.cfg is created. | |

| Step # | Action | Result | Pass/Fail |
|---|---|--|-----------|
| <p>Note: This test case will need to be revised as the HydroGen application is created (e.g., entering the correct directory paths, optional use of pgAdmin III).</p> | | | |
| | <p>cd <DIRECTORY> [Enter] cp hg.cfg.baseline hg.cfg [Enter]</p> | | |
| 15. | <p>Edit the hg.cfg file as follows:</p> <p>Replace "xxx" with "<wfo>" after the equal sign in the lines setting the values for wfoXMLlist, wfoHGlist, wfoHistoryList, and wfo. Be sure to set it to be all caps for the wfo line.</p> <p>Set the value for DBname to be equal to <database></p> <p>Comment out the lines setting rb, ldad, and webserver, by inserting a '#' at the beginning of the lines.</p> <p>Insert the following two lines at the end of the file: Fdo = "<space bar>TEST DISCLAIMER<space bar>" [Enter] Title = "TEST TITLE" [Enter]</p> | <p>The hg.cfg file updates.</p> | |
| 16. | <p>Execute HydroGen to generate an XML file and a hydrograph for the chosen forecast point:</p> <p>cd /awips/hydroapps/HydroGen/bin [Enter] run_hg_genXML</p> | <p>HydroGen executes. After completion, files are placed in each of these two directories: <DIRECTORY> <DIRECTORY></p> | |
| 17. | <p>In the images directory, open up the file that has a name that includes the station's lid. Verify the following:</p> <ul style="list-style-type: none"> • It should be a hydrograph with a NOAA water mark in the background. • In the graphic, a box in the upper left corner of the plot area should contain within it the phrase "TEST DISCLAIMER" in green. • In the graphic, the title, located at the top of the graphic, should say "TEST TITLE". • If the graphic is produced, this requirement is verified, since the duration for the data was changed from 0 to 1006. | <p>Verified.</p> | |
| 18. | <p>In the xml directory, open up the file that has a name that includes the station's lid and look at the</p> | <p>Verified.</p> | |

| Step # | Action | Result | Pass/Fail |
|--|--|--|-----------|
| Note: This test case will need to be revised as the HydroGen application is created (e.g., entering the correct directory paths, optional use of pgAdmin III). | | | |
| | entry for the changed observation. The easiest way to find the entry is to search for <new stage>. The flow value corresponding to the <new stage> value should be -999. | | |
| 19. | <p>Undo the changes made in Step 7 and 13 by executing the following queries:</p> <pre>psql -d <database> -c "update height set dur = 0 where lid = '<lid>', and pe = '<pe>';" psql -d <database> -c "update fcstheight set dur = 0 where lid = '<lid>' and pe = '<pe>' and ts = 'FE';" "psql -d <database> -c update the height set value=<old stage> where lid='<lid>' and ts='<obs ts>' and obstime='<obstime>';"</pre> | The original duration code and observed value are recovered. | |
| 20. | Exit the terminal | Terminal exits. | |
| End of Hydroview Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |

DRAFT

Test Case Text Products 2.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0003

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 17364
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | | <i>Page</i> |
|-----|---|-------------|
| 1.0 | SCOPE | 1 |
| 2.0 | APPLICABLE DOCUMENTS | 2 |
| | 2.1 Source Documents | 2 |
| | 2.2 Reference Documents | 2 |
| 3.0 | TEST CASE DESCRIPTION..... | 3 |
| | 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| | 3.2 Recommended Hardware..... | 3 |
| | 3.3 Test Inputs..... | 3 |
| | 3.4 Test Outputs..... | 3 |
| | 3.4.1 GFE GUIs Tested..... | 3 |
| 4.0 | TEST SCENARIO | 5 |
| 5.0 | REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 8 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- Text Products 1.0

2.2 Reference Documents

- Legacy NWS GFE Test Cases: Acceptance Test Case ID Number: ac010; tp001-tp031; ui029-ue031; and ui45.
- Legacy NWS GFE Test Cases for Test Areas AC – VP.
- Section 3.1.3 of the AWIPS D-2D User's Manual Build 8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capability of the Text Products functionality contained in GFE. Products include the Area Forecast Discussion (AFD); Area Forecast Matrices (AFM); Coded Cities Forecast (CCF); Fire Weather Forecast (FWF); Fire Weather Forecast Tabular (FWFTabular); Fire Weather Matrices (FWM); Point Forecast Matrices (PFM); Tabular State Forecast (SFT); Special Weather Statement (SPS); Hazardous Weather Outlook (Hazard_HWO); Non-Precipitation (Hazard_NPW); FireWx Watch/Warning (Hazard_RFW); Convective Watch (Hazard_WCN); and Winter Wx Product (Hazard_WSW).

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- The GFE Perspective is displayed.
- Data has been ingested.
- Several weather elements are loaded.
- There are multiple grids available for the weather elements (at minimum T, Td, Wind, Wx, and Hazards weather elements).
- Grids are populated with model data and all interpolation processes have been done. In addition, the forecast has been saved.
- The edit areas for CCF, FWM PFM and SFT text products have been created.
- A Convective Watch (e.g., Severe Thunderstorm or Tornado Watch) has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The Text Products will be returned and the results outlined in section 4.0 are met.

3.4.1 GFE GUIs Tested

- Publish To Official
- Process Monitor

- Formatter Launcher
- Local Formatter
- Define Text Products

DRAFT

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------------------|--|---|-----------|
| Product Generation | | | |
| 1. | Bring up the Process Monitor dialog by selecting 'Products' -> 'Process Monitor'. | The Process Monitor dialog opens. | |
| 2. | Bring up the Formatter Launcher dialog by selecting 'Products' -> 'Formatter Launcher'. Select each of the following products in the Products list: <ul style="list-style-type: none"> - Area Forecast Discussion (AFD) - Coded Cities Forecast (CCF) - Hydrologic Outlook (ESF) - Fire Weather Forecast (FWF) - Fire Weather Forecast Tabular (FWFTabular) - Fire Weather Matrices (FWM) - Spot Forecast (FWS) - NowCast (NOW) - Point Forecast Matrices (PFM) - Public Information Statement (PNS) - Fire Danger Statement (RFD) - Tabular State Forecast (SFT) - Special Weather Statement (SPS) - Zone Forecast Product (ZFP) - Flood Watch (Hazard_FFA) - Hazardous Weather Outlook (Hazard_HWO) - Non-Precipitation (Hazard_NPW) - FireWx Watch/Warning (Hazard_RFW) - Convective Watch (Hazard_WCN) - Winter Wx Product (Hazard_WSW) | As each product is chosen, a new tab appears in the Formatter Launcher dialog. | |
| 3. | Cycle through each tab in the Formatter Launcher dialog, set a zone selection for those products that require one, MB1 click the 'Run Formatter'  icon, then select default entries from the individual dialogs for each product. | Each product is run through the Formatter Launcher. After each formatter has finished, the output text displays in the text window. | |
| 4. | Note in the Process Monitor Dialog that all of the items are queued to run, and one is running. | | |
| 5. | Look at each product and verify that it seems reasonable. Look at the log using the  icon. Scan the log for any errors. If a product fails, the output text will not be displayed; rather the log window will be displayed with the error. After each product has been verified, click the red 'X' to dismiss that tab. | Verified. The tab closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 6. | Repeat steps 3 – 5 for the Site Specific Forecasts (SPOT), FWS product. | The product is run through the Formatter Launcher. After each formatter has finished, the output text displays in the text window. | |
| 7. | Repeat steps 3 – 5 for the Area Forecast Matrices, AFM product. | The product is run through the Formatter Launcher. After each formatter has finished, the output text displays in the text window. | |
| 8. | After all of the products have been run without errors, complete steps 9 – 10. Then repeat steps 1 – 2, except change the issuance time and other options on each product generation Values dialog that is presented. | As expected. | |
| 9. | Publish all data to the Official database selecting 'Products' -> 'Publish To Official'. From the Publish To Official dialog, select 'Set Selected' and then select 'Publish'. | The 'Publish To Official' dialog appears. The selected grids are published. The 'Publish To Official' dialog closes. | |
| 10. | Initialize the required edit areas for this test by opening up a terminal window, changing your directory to the GFESuite "bin" directory, and running this command: run/setupTextEA | | |
| 11. | Test the Baseline and Region versions of the formatters: From the Local Formatter dialog, MB1 click on 'Products' -> 'Baseline'. Run each Baseline product to completion and verify that it produces reasonable output. From the Local Formatter dialog, MB1 click on 'Products' -> 'Region'. Run each Region product to completion and verify that it produces reasonable output. | As expected. | |
| 12. | Create a new table product by selecting 'GFE' -> 'Define Text Products'. This brings up the Define Text Products dialog. Over the left column (Text Products), MB3 popup and select 'New...'. Enter ac010 as the name of the product, and ensure that the type is 'table'. MB1 click 'OK'. | A table template is displayed in the python window. | |
| 13. | Modify the edit areas. From the Python editor window, MB1 click on 'File' -> 'Save', then 'File' -> 'Exit'. Close the Define Text Products dialog after verifying that 'ac010' appears in the dialog window. | Verified. | |
| 14. | From the Formatter Launcher dialog's Product menu, select only the 'ac010' entry. Then run the product. | The product is generated and the output appears in a new Python window. | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|---|-----------|
| 15. | Delete the 'ac010' table product by selecting 'GFE' -> 'Define Text Products'. This brings up the Define Text Products dialog. Over the left column 'ac010' entry, MB3 popup and select 'Delete...'. A confirmation dialog is displayed. Press 'OK'. | The entry is deleted after the confirmation message is answered. | |
| 16. | Close the External Programs (e.g., Process Monitor) dialog. Close the Formatter Launcher dialog. | The External Programs/Process Monitor and Formatter Launcher dialogs close. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|----------|--|--------------|
| SYSR2069 | The AWIPS system shall implement the GFE Formatter Launcher. | |
| SYSR2070 | The AWIPS system shall implement the GFE Formatter Data Interface. | |
| SYSR2997 | The AWIPS System shall create the FWS - Site Specific Forecasts (SPOT) product as produced by the Public and Fire Weather Services GFE Application. | |
| SYSR2998 | The AWIPS System shall create the NOW - Short Term Forecast product as produced by the Public and Fire Weather Services GFE Application. | |
| SYSR3004 | The AWIPS System shall create the AFM - Area Forecast Matrices product as produced by the Public and Fire Weather Services GFE Application. | |
| SYSR3049 | The AWIPS System shall create the RFD – Rangeland Fire Danger product as produced by the Public and Fire Weather Services Text Workstation Editor Application. | |

Test Case Derived Parameters-Gridded 3.0

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)

Operations & Maintenance

AWP.TE.SWCTR/TO10-0004

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Revision History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 11 |
| 6.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 12 |

1.0 SCOPE

See the TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- Derived Parameters-Gridded

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The AWIPS D-2D User's Manual Build 8.1.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the display of derived parameters from gridded data developed as part of the TO10 tasking. Display of the parameters infers database storage completed. In addition, changes to the baselined volume browser implemented during TO10 will be tested.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- An internet connection is available.
- Live gridded data flow. Canned data can be substituted if the live data flow does not contain the data required to test specific implemented derived parameters.
- Localization previously set.
- A random sample of derived parameters will be demonstrated.
- TO10 testing will begin with step 45 of these procedures. Regression testing of steps 1-44 will occur prior to DT (during PDT). Results of these procedures will be included in the Final TO10 test report.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The images and data will be displayed in CAVE.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|-------------------------------|---|--|-----------|
| 1. | From the test workstation open CAVE. | CAVE successfully launches. The 5-D panel (4 smaller panels on the left and one larger main panel) displays. | |
| 2. | Zoom so that a CONUS-sized area displays centered on approximately Kansas City. | The main panel displays an area centered on the CONUS that includes some of Mexico and Canada. | |
| 3. | Open the Volume Browser by selecting 'Volume', 'Browser...'. . | Volume Browser opens. The user is able to make selections from Sources, Fields, and Planes. | |
| Thickness (dZ) | | | |
| 4. | Ensure the browser is in Plan view. Under Sources select 'Grid' and 'GFS 40'. For Fields select 'Hgt...Pres' and 'Thickness'. In Planes select 'Pres', 'Misc Layers', '1000-500mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter 1000-500mb thickness is displayed in the main CAVE window. | |
| 5. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 6. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Relative Humidity (RH) | | | |
| 7. | In the Volume Browser, under Sources, select 'Grid' and 'NAM 40'. For Fields select 'Moist' and 'RH'. In Planes select 'Pres', '500mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter relative humidity is displayed in the main CAVE window. | |
| 8. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 9. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Wind Speed (wSp) | | | |
| 10. | In the Volume Browser, under Sources, select 'Grid' and 'GFS 90'. For Fields select 'Wind' and 'Wind Isotachs'. In Planes select 'Pres', '250 mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter 250mb wind isotachs is displayed in the main CAVE window. | |
| 11. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |

| Step | Action | Result | Pass/Fail |
|-----------------------------------|--|---|-----------|
| 12. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Dewpoint Dep (DpD) | | | |
| 13. | In the Volume Browser, under Sources, select 'Grid' and 'NAM40'. For Fields select 'Moist' and 'Dewpoint Dep'. In Planes select 'Pres', '850mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter dewpoint dep is displayed in the main CAVE window. | |
| 14. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 15. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Dewpoint Temperature (DpT) | | | |
| 16. | In the Volume Browser, under Sources, select 'Grid' and 'NAM12'. For Fields select 'Moist' and 'Dewpoint'. In Planes select 'Pres', '700mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter dewpoint is displayed in the main CAVE window. | |
| 17. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 18. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Specific Humidity (SHx) | | | |
| 19. | In the Volume Browser, under Sources, select 'Grid' and 'RUC80'. For Fields select 'Moist' and 'Specific Humidity'. In Planes select 'Pres', '1000mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter specific humidity is displayed in the main CAVE window. | |
| 20. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 21. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|-----------|
| Equiv Potential Temperature (EPT) | | | |
| 22. | In the Volume Browser, under Sources, select 'Grid' and 'NAM40'. For Fields select 'Moist' and 'ThetaE'. In Planes select 'Pres', '925mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter equiv. potential temperature is displayed in the main CAVE window. | |
| 23. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 24. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Potential Temperature (PoT) | | | |
| 25. | In the Volume Browser, under Sources, select 'Grid' and 'GFS40'. For Fields select 'Temp' and 'Potential Temp'. In Planes select 'Pres', '925mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter potential temperature is displayed in the main CAVE window. | |
| 26. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 27. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Mixing Ratio (mixRat) | | | |
| 28. | In the Volume Browser, under Sources, select 'Grid' and 'RUC40'. For Fields select 'Moist' and 'Mixing Ratio'. In Planes select 'Pres', '1000mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter mixing ratio is displayed in the main CAVE window. | |
| 29. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 30. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Wet Bulb Temperature (TW) | | | |
| 31. | In the Volume Browser, under Sources, select 'Grid' and 'GFS40'. For Fields select 'Temp' and 'Wet Bulb Temp'. In Planes select 'Pres', '925mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter wet bulb temperature is displayed in the main CAVE window. | |

| Step | Action | Result | Pass/Fail |
|---------------------|--|--|-----------|
| 32. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 33. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Streamline Analysis | | | |
| 34. | In the Volume Browser, under Sources, select 'Grid' and 'GFS40'. For Fields select 'Wind Isotachs'. In Planes select 'Pres', '250'. Select 'Load'. | Isotachs for 250mb display. | |
| 35. | RMB click and hold over the wind speed legend. Select "Load as Streamline". Turn off (Unload) the isotach display. | Streamlines for 250mb display. The isotach display is removed from the display. | |
| 36. | RMB click and hold over the Streamline legend. Select "Load as Image". | Image of isotach speeds for 250mb displays under the streamlines. The streamlines should roughly follow the main band of jet stream winds. | |
| 37. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 38. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| 39. | Repeat steps 34-38 using the NAM40 grid and 700mb for the pressure level. | Image of isotach speeds for 700mb displays under the streamlines. The streamlines should roughly follow the main band of jet stream winds. | |
| 40. | From the menu bar change the density of the streamlines. | The number of streamlines either decreases or increases depending on the density chosen. | |
| 41. | Repeat steps 34 and 35 (don't display as an image) using the NAM12 grid and 1000mb. | Streamlines for 1000mb display. | |
| 42. | Zoom over a feature such as a "L" or "H" pressure center. | Streamlines increase in density and detail. | |
| 43. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 44. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| End of TO9 Test | | | |

| Step | Action | Result | Pass/Fail |
|---|--|---|-----------|
| Begin TO10 Test | | | |
| The following steps will request data via the Baseline Volume Browser | | | |
| Potential Vorticity | | | |
| 45. | In the Volume Browser, under Sources, select 'Grid' -> 'GFS40'. For Fields select 'Derived' -> 'Pot Vorticity'. In Planes select 'Pres' -> '500mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter Potential Vorticity is displayed in the main CAVE window. | |
| 46. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 47. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Relative Vorticity | | | |
| 48. | In the Volume Browser, under Sources, select 'Grid' -> 'NAM12'. For Fields select 'Derived' -> 'Rel Vorticity'. In Planes select 'Misc' -> 'Surface'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter Relative Vorticity is displayed in the main CAVE window. | |
| 49. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 50. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| 3-Hour Precipitation Accumulation | | | |
| 51. | In the Volume Browser, under Sources, select 'Grid' -> 'RUC80'. For Fields select 'Sfc/2D' -> '3 Hr Precip Accum'. In Planes select 'Misc' -> 'Surface'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter 3 Hr Precipitation Accumulation is displayed in the main CAVE window. | |
| 52. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 53. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |

| Step | Action | Result | Pass/Fail |
|--|---|---|-----------|
| Storm Relative Flow Right Mover | | | |
| 54. | In the Volume Browser, under Sources, select 'Grid' -> 'NAM80'. For Fields select 'Other' -> 'Storm Rel Flow RM'. In Planes select 'Misc' -> 'Surface'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter Storm Relative Flow RM is displayed in the main CAVE window. | |
| 55. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 56. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Moisture Flux & Moisture Flux Magnitude | | | |
| 57. | In the Volume Browser, under Sources, select 'Grid' -> 'GFS90'. For Fields select 'Basic' -> 'Moisture Flux'. Also select 'Basic' -> 'Moisture Flux Mag'. In Planes select 'Pres', '850mb'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameters Moisture Flux and Moisture Flux Magnitude are displayed in the main CAVE window. | |
| 58. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 59. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Shear Magnitude Cross Section | | | |
| 60. | Set the display type to Cross Section. | The Volume Browser menus modify to display menus and menu items associated with Cross Section displays. | |
| 61. | In the Volume Browser, under Sources, select 'Grid' -> 'GFS40'. For Fields select 'Other' -> 'Shear Mag'. In Planes select 'Specified' -> 'Line A'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter Shear Magnitude is displayed on a Cross Section chart in the main CAVE window. | |
| 62. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 63. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Computed CAPE Time Height | | | |
| 64. | Set the display type to Time Height. | The Volume Browser menus modify to display menus and menu items associated with Time Height displays. | |

| Step | Action | Result | Pass/Fail |
|--|--|---|-----------|
| 65. | In the Volume Browser, under Sources, select 'Grid' -> 'GFS40'. For Fields select 'Other' -> 'Computed CAPE'. In Planes select 'Points' -> 'TsectA'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter Computed CAPE is displayed on a Time Height chart in the main CAVE window. | |
| 66. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 67. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| ThetaE Lapse Rate Var vs Hgt | | | |
| 68. | Set the display type to Var vs Hgt. | The Volume Browser menus modify to display menus and menu items associated with Var vs Hgt displays. | |
| 69. | In the Volume Browser, under Sources, select 'Grid' -> 'GFS40'. For Fields select 'Basic' -> 'ThetaE Lapse Rate'. In Planes select 'Points' -> 'VarHgt A'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The derived parameter ThetaE Lapse Rate for Point A is displayed on a Var vs Hgt chart in the main CAVE window. | |
| 70. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 71. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Temperature (Radar Elevation) Time Series | | | |
| 72. | Set the display type to Time Series. | The Volume Browser menus modify to display menus and menu items associated with Time Series displays. | |
| 73. | In the Volume Browser, under Sources, select 'Grid' -> 'Radar'. For Fields select 'Basic' -> 'Temperature'. In Planes select 'Tilts' -> '0.5 deg'. Select 'Load'. Note: If there are multiple entries under the Product Selection List, select a single entry and then 'Load'. | The temperature for the 0.5 degree elevation is displayed on a Time Series chart in the main CAVE window. | |
| 74. | Select 'Clear' from the menu bar. | The prior display is cleared from the main CAVE window. | |
| 75. | In the Volume Browser select 'Edit' -> 'Clear all'. | The prior Volume Browser selections are cleared. | |
| End of TO10 Test | | | |

5.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|----------|---|--------------|
| SYSR2095 | The AWIPS system shall implement a Meteo Library Extension for access by uEngine Tasks. | ALL |
| SYSR2096 | The AWIPS system shall implement Derived Parameters for grid and point data. | ALL |
| SYSR1584 | The user shall be able to display streamlines for wind data. | 34-44 |

6.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |
| SYSR | | |

DRAFT

Test Case WarnGen_3.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0005

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|---|
| Draft | 21 Nov. 2008 | ALL | Initial Draft (Note: Builds on the TO8 and TO9 WarnGen test cases.) |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 TO8 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 126 |
| 6.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 128 |
| 7.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 129 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO8 Test Case WarnGen 1.0
- TO9 Test Case WarnGen 2.0

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Section 5 of the AWIPS D-2D User's Manual Build 8.1.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the extensions and WarnGen templates (including life cycle controls) for a Convective Flash Flood Warning, Extreme Wind Warning, Extreme Wind Warning SVS (FOLLOWUP), Flash Flood with Svr Tstm, Flash Flood Statement, non-convective FFW (Dam Break), non-convective Flash Flood Statement, Areal Flood Warning, Areal Flood Warning FOLLOWUP, Areal Flood Advisory, and Areal Flood Advisory FOLLOWUP.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- The Text Workstation has been started.
- The clock is set to local time.
- Localization is set to OAX.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The data will be displayed using CAVE capabilities.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|---|--|--|-----------|
| Duration Configuration | | | |
| 1. | Mouse Button (MB) 1 click 'CAVE' -> 'New' -> 'Text Workstation' | The Text Workstation and Text 1 windows open. (Note: The Text 1 window may be closed.) | |
| 2. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen GUI appears. | |
| 3. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Areal Flood Advisory' from the dropdown menu. | The 'Areal Flood Advisory' template is selected. | |
| 4. | Verify a '20' minute option is not available under the 'Duration' dropdown menu. | Verified. | |
| 5. | Open a Konsole and navigate to the 'fla_default.cfg' file (cave/etc/warnngen). Then edit the file (e.g., vi) by adding a '20' minute duration period. Save the file (e.g., :wq). | The 'fla_default.cfg' file is modified and the changes are saved. | |
| 6. | In the WarnGen GUI, select another template from the dropdown menu (e.g., Areal Flood Warning) and toggle back to the Areal Flood Advisory option. This refreshes the WarnGen GUI window. | The WarnGen template is toggled back to the Areal Flood Advisory. | |
| 7. | Expand the 'Duration' dropdown menu and verify a '20' appears as an option. | Verified. | |
| 8. | In the D2D display, note the default storm speed (kts) and direction (degrees). | Noted. | |
| 9. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Storm Track Direction and Speed Configuration | | | |
| 10. | In the Konsole, navigate to the severethunderstorm_OAX.cfg (cave/etc/warnngen). Then edit the file (e.g., vi) by changing the defaultSpeedKt and defaultDirection values. Save the file (e.g., :wq). | The 'severethunderstorm_OAX.cfg' file is modified and the changes are saved. | |
| 11. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen GUI appears. | |

| Step | Action | Result | Pass/Fail |
|----------------------|---|--|-----------|
| 12. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location. Compare the vector orientation and speed with that noted in step 8. | A vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. The default settings modified in step 9 are reflected in the initial vector's storm speed and direction. An initial warning area hatched box appears. | DR #813 |
| 13. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| 14. | In the Konsole, navigate to the severethunderstorm_OAX.cfg (cave/etc/warnngen). Then edit the file (e.g., vi) by reverting the changes back to the original defaultSpeedKt and defaultDirection values (20kts and 225 degrees respectively). Save the file (e.g., :wq). | The 'severethunderstorm_OAX.cfg' file is modified and the changes are saved. | |
| 15. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen GUI appears. | |
| 16. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location. | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 17. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| 18. | Close the Konsole. | The WarnGen GUI closes. | |
| 19. | Clear anything displayed in the main pane. | The main pane displays a blank map. | |
| Initial Setup | | | |
| 20. | Change the scale from the tool bar drop down menu to 'WFO'. | The WFO scale displays in the main pane, focusing on the OAX CWA. | |
| 21. | From the 'Maps' dropdown menu, select 'County Names'. | The county names appear in the associated county. | |
| 22. | MB3 click and hold on the County Names product ID in the product legend and select 'Change Color'. Select the color red and MB1 click 'OK'. | The County Names change to red. | |
| 23. | From the 'Maps' dropdown menu, select 'CWAs'. | The CWAs appear in the main pane. | |
| 24. | MB3 click and hold on the CWA product ID in the product legend and select 'Change Color'. Select the color yellow and MB1 click 'OK'. | The CWA borders change to yellow. | |

| Step | Action | Result | Pass/Fail |
|--|---|---|-----------|
| 25. | From the 'Maps' dropdown menu, select 'Cities'. | The Cities appear in the main pane. | |
| 26. | MB1 click the Density dropdown menu on the tool bar and select '0.5'. | The number of cities displayed in the main pane is reduced. | |
| 27. | MB1 click 'koax' -> 'koax 4 Bit Products' -> 'koax 4bit Reflectivity' -> '0.5 Refl'. | The 'koax 0.5 Reflectivity (Z)' product displays in the main pane. | |
| Tornado Warning | | | |
| <i>Issuing initial Tornado Warning</i> | | | |
| 28. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen GUI appears. | |
| 29. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 30. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |
| 31. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector rotates accordingly. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |
| 32. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 33. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |
| 34. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 35. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 36. | MB1 click on 'Tornado' in the 'Product type' section. | The selection is made as indicated by the radio button. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Tornado Warnings. | |
| 37. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 38. | MB1 within the Optional bullets section, select items such that the following Tornado Template Parameters are highlighted: BASIS FOR WARNING: Confirmed large tornado CALLS TO ACTION: Severe Tornado CALLS TO ACTION: If caught outside CALLS TO ACTION: Don't outrun in car Then click MB1 on the 'Create Text' button. | The Tornado Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 39. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: TOR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 40. | Verify the Tornado Warning text contains the Tornado Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Tornado Warning statement. | |
| 41. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 42. | Verify the Tornado Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Tornado Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 43. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.TO.W.0001.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 44. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 45. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 46. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 47. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 48. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 49. | Note the VTEC code (the 'TO.W.xxxx' portion in particular). | TO.W._____ | |
| 50. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 51. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 52. | MB1 click the WarnGen button in the toolbar and select the 'Tornado' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |

| Step | Action | Result | Pass/Fail |
|---|--|--|--------------------|
| 53. | Create another Tornado Warning by repeating steps 11-30, but choosing different options within the 'WarnGen: Operational' window. | The new Tornado Warning displays in the text window. | |
| 54. | Verify the VTEC code in the warning is different from the first Tornado Warning (e.g., TO.W.0001 becomes TO.W.0002). | The VTEC code from the first warning was persisted. The second Tornado Warning contains updated VTEC coding. | |
| 55. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 56. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 57. | MB1 click the WarnGen button in the toolbar and select the 'Tornado' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). Verify two lines similar to the following appear: COR.KOAX.TO.W.xxxx(NEW) NEW.KOAX.TO.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |
| <i>Correcting a Tornado Warning (COR)</i> | | | |
| 58. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. | |
| 59. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 60. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: TOR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 61. | Verify the Tornado Warning text contains the Tornado Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Tornado Warning statement. | |
| 62. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 63. | Verify the Tornado Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Tornado Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 64. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.TO.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 65. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 66. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 67. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 68. | In the text window, replace the '！**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 69. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 70. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 71. | MB1 click the WarnGen button in the toolbar, select the Tornado radio button, and verify a line similar to the following appears: 'COR.KOAX.TO.W.xxxx(NEW)' | Verified. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| 72. | Close the Text Warngen: OMATOROAX window. | The Text Warngen: OMATOROAX window closes. | |
| <i>Continuing a Tornado Warning (CON) by Issuing a Follow-Up for a Tornado Warning (SVS)</i> | | | |
| 73. | In the WarnGen GUI, MB1 click on the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 74. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 75. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 76. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 77. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 78. | Verify the Tornado Warning text contains the Tornado Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Tornado Warning statement. | |
| 79. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 80. | Verify the Tornado Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Tornado Warning statement. The cities near the warning vector are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 81. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.TO.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 82. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 83. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 84. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 85. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 86. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 87. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 88. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 89. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.TO.W.xxxx(CON) | Verified. | |
| <i>Continuing/Canceling a Tornado Warning (CON/CAN)</i> | | | |
| 90. | In the WarnGen GUI, MB1 click on the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 91. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 92. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 93. | Modify the warning polygon to remove at least one county from the original warning polygon. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 94. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 95. | Verify the Tornado Warning text contains the Tornado Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Tornado Warning statement. | |
| 96. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 97. | Verify the Tornado Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Tornado Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 98. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format: /O.CAN.KOAX.TO.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /O.CON.KOAX.TO.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 99. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 100. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 101. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| 102. | In the text window, replace the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 103. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 104. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 105. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 106. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.TO.W.xxxx(CON)' 'COR.KOAX.TO.W.xxxx(CAN)' | Verified. | |
| <i>Reissuing a Tornado Warning (NEW)</i> | | | |
| 107. | In the WarnGen GUI, MB1 click on the 'Tornado' radio button. | 'Update List' appears in the dropdown menu. | |
| 108. | From the 'Update List' dropdown, select the 'NEW' product. | The storm vector and polygon appear. The polygon is editable. | |
| 109. | Modify the polygon, duration and for the warning text product. Then MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 110. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: TOR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 111. | Verify the Tornado Warning text contains the Tornado Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Tornado Warning statement. | |
| 112. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 113. | Verify the Tornado Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Tornado Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 114. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.TO.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 115. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 116. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 117. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 118. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 119. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 120. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 121. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|--------------------|
| 122. | MB1 click the WarnGen button in the toolbar, select the Tornado radio button, and verify two lines similar to the following appear: 'COR.KOAX.TO.W.xxxx(NEW)' 'NEW.KOAX.TO.W.xxxx' | Verified. | |
| <i>Canceling a Tornado Warning (CAN)</i> | | | |
| 123. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 124. | MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 125. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 126. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 127. | Verify the Tornado Warning text contains the counties encompassed by the polygon. | The counties are listed in the Tornado Warning statement. | DR #869 |
| 128. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.TO.W.xxxx.000000T0000Z- YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 129. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |

| Step | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 130. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 131. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 132. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 133. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 134. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 135. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 136. | MB1 click the WarnGen button in the toolbar, select the Tornado radio button, and verify a line similar to the following appears: 'COR.KOAX.TO.W.xxxx(CAN)' | Verified. | |
| 137. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Expiring a Tornado Warning (EXP) | | | |
| 138. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 139. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A first guess vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 140. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 141. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector is redrawn. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |
| 142. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 143. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |
| 144. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. | |
| 145. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. | |
| 146. | MB1 click on 'Tornado' in the 'Product type' section. | The selection is made as indicated by the radio buttons. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Tornado Warnings. | |
| 147. | Select the 'Duration:' to 10 min. | The duration is set to 10 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 148. | Using Control and MB1 within the Optional bullets section, select or deselect items such that the following Tornado Template Parameters are highlighted: BASIS FOR WARNING: Confirmed large tornado CALLS TO ACTION: Severe Tornado CALLS TO ACTION: If caught outside Then click MB1 on the 'Create Text' button. | The Tornado Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 149. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: TOR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 150. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 151. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 152. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 153. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button and verify the created warning is able to be expired (EXP). | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 154. | Select the EXP product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 155. | MB1 click the 'Create Text' button. | The Tornado Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 156. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Tornado Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 157. | Verify the Tornado Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 158. | Verify the Tornado Warning text contains the counties encompassed by the polygon. | The counties are listed in the Tornado Warning statement. | DR #869 |
| 159. | Verify the Tornado Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.TO.W.xxxx.000000T0000Z- YYMMDDTHHmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 160. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 161. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 162. | Verify the text warning contains a presence of closing \$\$. | The Tornado Warning text contains a presence of closing \$\$. | |
| 163. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Tornado Warning is saved. The text window displays the saved warning. | |
| 164. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |

| Step | Action | Result | Pass/Fail |
|--|---|---|-----------|
| 165. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 166. | Close the Text WarnGen: OMATOROAX window. | The Text WarnGen: OMATOROAX window closes. | |
| 167. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) line similar to the following appears: 'COR.KOAX.TO.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the FOLLOWUP dropdown menu. | |
| 168. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Severe Thunderstorm Warning | | | |
| <i>Issuing a Severe Thunderstorm Warning</i> | | | |
| 169. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 170. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 171. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |
| 172. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector rotates accordingly. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |
| 173. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 174. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|-----------|
| 175. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 176. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 177. | MB1 click on 'Severe Thunderstorm' in the 'Product type' section if not selected by default. | The selection is made as indicated by the radio button. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Severe Thunderstorm Warnings. | |
| 178. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 179. | MB1 within the Optional bullets section, select items such that the following Severe Thunderstorm Template Parameters are highlighted: BASIS FOR WARNING: Doppler radar indicated THREAT: 60mph wind THREAT: Penny size hail CALLS TO ACTION: Svr t-storms can produce tornadoes... Then click MB1 on the 'Create Text' button. | The Tornado Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 180. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 181. | Verify the Severe Thunderstorm Warning text contains the Severe Thunderstorm Template Parameters selected. | The BASIS FOR WARNING, THREAT and CALLS TO ACTION exist in the Severe Thunderstorm Warning statement. | |
| 182. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 183. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Severe Thunderstorm Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 184. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.SV.W.0001.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 185. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 186. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 187. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 188. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 189. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMATOROAX' window (not in edit mode). | |
| 190. | Note the VTEC code (the 'SV.W.xxxx' portion in particular). | SV.W._____ | |
| 191. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 192. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 193. | MB1 click the WarnGen button in the toolbar and select the 'Severe Thunderstorm' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |
| 194. | Create another Severe Thunderstorm Warning by repeating steps 152-171, but choosing different options within the 'WarnGen: Operational' window. | The new Severe Thunderstorm Warning displays in the text window. | |
| 195. | Verify the VTEC code in the warning is different from the first Severe Thunderstorm Warning (e.g., SV.W.0001 becomes SV.W.0002). | The VTEC code from the first warning was persisted. The second Severe Thunderstorm Warning contains updated VTEC coding. | |
| 196. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 197. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 198. | MB1 click the WarnGen button in the toolbar and select the 'Severe Thunderstorm' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). Verify two lines similar to the following appear: COR.KOAX.SV.W.xxxx(NEW) NEW.KOAX.SV.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |

| Step | Action | Result | Pass/Fail |
|---|---|--|--------------------|
| <i>Correcting a Severe Thunderstorm Warning (COR)</i> | | | |
| 199. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. | |
| 200. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 201. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 202. | Verify the Severe Thunderstorm Warning text contains the Severe Thunderstorm Template Parameters selected. | The BASIS FOR WARNING, THREAT and CALLS TO ACTION exist in the Severe Thunderstorm Warning statement. | |
| 203. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 204. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Severe Thunderstorm Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 205. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.SV.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 206. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 207. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 208. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 209. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 210. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 211. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 212. | MB1 click the WarnGen button in the toolbar, select the Severe Thunderstorm radio button, and verify a line similar to the following appears: 'COR.KOAX.SV.W.xxxx(NEW)' | Verified. | |
| 213. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| <i>Continuing a Severe Thunderstorm Warning (CON) by Issuing a Follow-Up for a Severe Thunderstorm Warning (SVS)</i> | | | |
| 214. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 215. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 216. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 217. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 218. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 219. | Verify the Severe Thunderstorm Warning text contains the Severe Thunderstorm Template Parameters selected. | The BASIS FOR WARNING, THREAT and CALLS TO ACTION exist in the Severe Thunderstorm Warning statement. | |
| 220. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 221. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Severe Thunderstorm Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 222. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.SV.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 223. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 224. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 225. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 226. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|---|--|--|--------------------|
| 227. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 228. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 229. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 230. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.SV.W.xxxx(CON) | Verified. | |
| <i>Continuing/Canceling a Severe Thunderstorm Warning (CON/CAN)</i> | | | |
| 231. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 232. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 233. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 234. | Modify the warning polygon to remove at least one county from the original warning polygon. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 235. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 236. | Verify the Severe Thunderstorm Warning text contains the Severe Thunderstorm Template Parameters selected. | The BASIS FOR WARNING, THREAT and CALLS TO ACTION exist in the Severe Thunderstorm Warning statement. | |
| 237. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 238. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Severe Thunderstorm Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 239. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format: /O.CAN.KOAX.SV.W.xxxx.YYMMDDTHHmmZ- YYMMDDTHHmmZ/ /O.CON.KOAX.SV.W.xxxx.YYMMDDTHHmmZ- YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 240. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 241. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 242. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 243. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 244. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 245. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| 246. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 247. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button and MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.SV.W.xxxx(CON)' 'COR.KOAX.SV.W.xxxx(CAN)' | Verified. | |
| <i>Reissuing a Severe Thunderstorm Warning (NEW)</i> | | | |
| 248. | In the WarnGen GUI, MB1 click on the 'Severe Thunderstorm' radio button. | 'Update List' appears in the dropdown menu. | |
| 249. | From the 'Update List' dropdown, select the 'NEW' product. | The storm vector and polygon appear. The polygon is editable. | |
| 250. | Modify the polygon, duration and for the warning text product. Then MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 251. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 252. | Verify the Severe Thunderstorm Warning text contains the Severe Thunderstorm Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Severe Thunderstorm Warning statement. | |
| 253. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 254. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Severe Thunderstorm Warning statement. The cities near the warning vector are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 255. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.SV.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 256. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 257. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 258. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 259. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 260. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 261. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 262. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 263. | MB1 click the WarnGen button in the toolbar, select the Severe Thunderstorm radio button, and verify two lines similar to the following appear: 'COR.KOAX.SV.W.xxxx(NEW)' 'NEW.KOAX.SV.W.xxxx' | Verified. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|--------------------|
| <i>Canceling a Severe Thunderstorm Warning (CAN)</i> | | | |
| 264. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 265. | MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 266. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 267. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 268. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. | The counties are listed in the Severe Thunderstorm Warning statement. | DR #869 |
| 269. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.SV.W.xxxx.000000T0000Z-YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 270. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 271. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |

| Step | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 272. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 273. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 274. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 275. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 276. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 277. | MB1 click the WarnGen button in the toolbar, select the Severe Thunderstorm radio button, and verify a line similar to the following appears: 'COR.KOAX.SV.W.xxxx(CAN)' | Verified. | |
| 278. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| <i>Expiring a Severe Thunderstorm Warning (EXP)</i> | | | |
| 279. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 280. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A first guess vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 281. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |
| 282. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector is redrawn. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 283. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 284. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |
| 285. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. | |
| 286. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. | |
| 287. | MB1 click on 'Severe Thunderstorm' in the 'Product type' section. | The selection is made as indicated by the radio button. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Severe Thunderstorm Warnings. | |
| 288. | Select the 'Duration:' to 10 min. | The duration is set to 10 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 289. | Using Control and MB1 within the Optional bullets section, select or deselect items such that the following Severe Thunderstorm Template Parameters are highlighted: BASIS FOR WARNING: Confirmed large Severe Thunderstorm CALLS TO ACTION: Severe Thunderstorm CALLS TO ACTION: If caught outside Then click MB1 on the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 290. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVR Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 291. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 292. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |
| 293. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 294. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button and verify the created warning is able to be expired (EXP). | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 295. | Select the EXP product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 296. | MB1 click the 'Create Text' button. | The Severe Thunderstorm Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 297. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Severe Thunderstorm Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 298. | Verify the Severe Thunderstorm Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 299. | Verify the Severe Thunderstorm Warning text contains the counties encompassed by the polygon. | The counties are listed in the Severe Thunderstorm Warning statement. | DR #869 |
| 300. | Verify the Severe Thunderstorm Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.SV.W.xxxx.000000T0000Z- YYMMDDTHHmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 301. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 302. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 303. | Verify the text warning contains a presence of closing \$\$. | The Severe Thunderstorm Warning text contains a presence of closing \$\$. | |
| 304. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Severe Thunderstorm Warning is saved. The text window displays the saved warning. | |
| 305. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMASVROAX' window (not in edit mode). | |

| Step | Action | Result | Pass/Fail |
|--------------------------------------|--|--|-----------|
| 306. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 307. | Close the Text WarnGen: OMASVROAX window. | The Text WarnGen: OMASVROAX window closes. | |
| 308. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Severe Weather Statement' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) that appears as follows: 'COR.KOAX.SV.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the FOLLOWUP dropdown menu. | |
| 309. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Flash Flood Warning | | | |
| <i>Issuing a Flash Flood Warning</i> | | | |
| 310. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 311. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 312. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 313. | MB1 click on 'Flash Flood' in the 'Product type' section. | The selection is made as indicated by the radio button. The REPORTED BY and CALLS TO ACTION sections update to display items applicable for Flash Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 314. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 315. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 316. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 317. | MB1 within the Optional bullets section, select items such that the following Flash Flood Template Parameters are highlighted: REPORTED BY: Doppler radar indicated CALLS TO ACTION: Urban flooding... CALLS TO ACTION: Nighttime flooding... CALLS TO ACTION: Camper safety... Then click MB1 on the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 318. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 319. | Verify the Flash Flood Warning text contains the Flash Flood Template Parameters selected. | The REPORTED BY and CALLS TO ACTION exist in the Flash Flood Warning statement. | |
| 320. | Verify the Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 321. | Verify the Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 322. | Verify the Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FF.W.0001.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 323. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 324. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Warning text contains a presence of closing \$\$. | |
| 325. | In the text window, replace the '!**REPORT**!' line with a word or phrase. Replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Warning is saved. The text window displays the saved warning. | |
| 326. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 327. | Note the VTEC code (the 'FF.W.xxxx' portion in particular). | FF.W._____ | |
| 328. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 329. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 330. | MB1 click the WarnGen button in the toolbar and select the 'Flash Flood' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: NEW.KOAX.FF.W.xxxx EXT.KOAX.FF.W.xxxx COR.KOAX.FF.W.xxxx(NEW) | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| 331. | Create another Flash Flood Warning by repeating steps 293-308, but choosing different options within the 'WarnGen: Operational' window. | The new Flash Flood Warning displays in the text window. | |
| 332. | Verify the VTEC code in the warning is different from the first Flash Flood Warning (e.g., FF.W.0001 becomes FF.W.0002). | The VTEC code from the first warning was persisted. The second Flash Flood Warning contains updated VTEC coding. | |
| 333. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 334. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| 335. | MB1 click the WarnGen button in the toolbar and select the 'Flash Flood' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: COR.KOAX.FF.W.xxxx(NEW) NEW.KOAX.FF.W.xxxx EXT.KOAX.FF.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| <i>Correcting a Flash Flood Warning (COR)</i> | | | |
| 336. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 337. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 338. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 339. | Verify the Flash Flood Warning text contains the Flash Flood Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Flash Flood Warning statement. | |
| 340. | Verify the Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 341. | Verify the Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 342. | Verify the Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.FF.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 343. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 344. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Warning text contains a presence of closing \$\$. | |
| 345. | In the text window, replace the '!**REPORT**!' line with a word or phrase. Replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 346. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 347. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 348. | MB1 click the WarnGen button in the toolbar, select the Flash Flood radio button, and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(NEW)' | Verified. | |
| 349. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| <i>Continuing a Flash Flood Warning (CON) by Issuing a Follow-Up for a Flash Flood Warning (FFS)</i> | | | |
| 350. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 351. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 352. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 353. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select the following warning bulletins: SVR THREAT: Trained spotters reported THREAT: 70 mph wind CALLS TO ACTION: Turn around...dont drown Then MB1 click the 'Create Text' button. | The Flash Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 354. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 355. | Verify the Flash Flood Statement text contains the Flash Flood Template Parameters selected. | The SVR THREAT, THREAT and CALLS TO ACTION exist in the Flash Flood Statement text. | |
| 356. | Verify the Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 357. | Verify the Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Flash Flood Statement text. | DR #869 |
| 358. | Verify the Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.FF.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 359. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 360. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 361. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Statement text contains a presence of closing \$\$. | |
| 362. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Statement is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| 363. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 364. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 365. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 366. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button, Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(CON) | Verified. | |
| Extending a Flash Flood Warning (EXT) | | | |
| 367. | In the WarnGen GUI, MB1 click the 'Flash Flood' radio button. Then MB1 click the 'Correct/Extend /Reissue' dropdown menu and select the 'EXT' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 368. | Modify the polygon, the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 369. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 370. | Verify the Flash Flood Warning text contains the Flash Flood Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Flash Flood Warning statement. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 371. | Verify the Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 372. | Verify the Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 373. | Verify the Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXT.KOAX.FF.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 374. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 375. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Warning text contains a presence of closing \$\$. | |
| 376. | In the text window, replace the '!**REPORT**!' line with a word or phrase. Replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Warning is saved. The text window displays the saved warning. | |
| 377. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 378. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 379. | MB1 click the WarnGen button in the toolbar, select the Flash Flood radio button, MB1 click the 'Correct/Extend/Reissue' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(EXT)' | Verified. | |
| 380. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|--------------------|
| <i>Continuing/Canceling a Flash Flood Warning (CON/CAN)</i> | | | |
| 381. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 382. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 383. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 384. | Modify the warning polygon to remove at least one county from the original warning polygon. Select the following warning bulletins: SVR THREAT: Doppler radar indicated THREAT: 70 mph wind THREAT: Penny size hail CALLS TO ACTION: Nighttime flooding... Then MB1 click the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 385. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 386. | Verify the Flash Flood Warning text contains the Flash Flood Template Parameters selected. | The SVR THREAT, THREAT and CALLS TO ACTION exist in the Flash Flood Warning statement. | |
| 387. | Verify the Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 388. | Verify the Flash Flood Warning text contains the counties encompassed by the polygon. | The counties are listed in the Flash Flood Warning statement. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 389. | <p>Verify the Flash Flood Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format:</p> <p>/O.CAN.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z.000000T0000Z.00/ /O.CON.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.ER.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC).</p> | The VTEC code exists and is accurate. | |
| 390. | <p>Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...).</p> | The Lat/Lon information exists in the text product. | |
| 391. | <p>Verify the text warning contains a presence of closing \$\$.</p> | The Flash Flood Warning text contains a presence of closing \$\$. | |
| 392. | <p>In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button.</p> | <p>The Flash Flood Warning is saved. The text window displays the saved warning.</p> | |
| 393. | <p>MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'.</p> | <p>A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode).</p> | |
| 394. | <p>Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.)</p> | The warning is ingested. | |
| 395. | <p>Close the Text WarnGen: OMAFFSOAX window.</p> | The Text WarnGen: OMAFFSOAX window closes. | |
| 396. | <p>MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.FF.W.xxxx(CON)' 'COR.KOAX.FF.W.xxxx(CAN)'</p> | Verified. | |

| Step | Action | Result | Pass/Fail |
|--|---|---|--------------------|
| <i>Reissuing a Flash Flood Warning (NEW)</i> | | | |
| 397. | In the WarnGen GUI, MB1 click on the 'Flash Flood' radio button. | 'Extend/Reissue' appears in the dropdown menu. | |
| 398. | From the 'Extend/Reissue' dropdown, select the 'NEW' product. | The polygon appears. The polygon is editable. | |
| 399. | Modify the polygon, duration and bulletins for the warning text product. Then MB1 click the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 400. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 401. | Verify the Flash Flood Warning text contains the Flash Flood Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Flash Flood Warning statement. | |
| 402. | Verify the Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 403. | Verify the Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 404. | Verify the Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 405. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 406. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 407. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Warning is saved. The text window displays the saved warning. | |
| 408. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 409. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 410. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| 411. | MB1 click the WarnGen button in the toolbar, select the Flash Flood radio button, and verify three lines similar to the following appear: 'COR.KOAX.FF.W.xxxx(NEW)' 'NEW.KOAX.FF.W.xxxx' 'EXT.KOAX.FF.W.xxxx' | Verified. | |
| <i>Canceling a Flash Flood Warning (CAN)</i> | | | |
| 412. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 413. | MB1 click the 'Create Text' button. | The Flash Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 414. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 415. | Verify the Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 416. | Verify the Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Flash Flood Statement text. | DR #869 |
| 417. | Verify the Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.FF.W.xxxx.000000T0000Z- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 418. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 419. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Statement text contains a presence of closing \$\$. | |
| 420. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Statement is saved. The text window displays the saved warning. | |
| 421. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 422. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |

| Step | Action | Result | Pass/Fail |
|--------------------------------------|--|--|-----------|
| 423. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 424. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(CAN)' | Verified. | |
| 425. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Expiring a Flash Flood Warning (EXP) | | | |
| 426. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 427. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 428. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 429. | MB1 click on 'Flash Flood' in the 'Product type' section. | The selection is made as indicated by the radio button. The REPORTED BY and CALLS TO ACTION sections update to display items applicable for Flash Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 430. | Select the 'Duration:' to 15 min. | The duration is set to 15 min. The ending time of the warning updates with the change in duration. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 431. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 432. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 433. | MB1 within the Optional bullets section, select items such that the following Flash Flood Template Parameters are highlighted: REPORTED BY: Doppler radar indicated CALLS TO ACTION: Urban flooding... CALLS TO ACTION: Nighttime flooding... CALLS TO ACTION: Camper safety... Then click MB1 on the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 434. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 435. | In the text window, replace the '!**REPORT**!' line with a word or phrase. Replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 436. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 437. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 438. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| 439. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu to verify the created warning is able to expired (EXP). EXP.KOAX.FF.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 440. | Select the EXP product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 441. | MB1 click the 'Create Text' button. | The Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 442. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | |
| 443. | Verify the Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | |
| 444. | Verify the Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Flash Flood Statement text. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 445. | Verify the Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.FF.W.xxxx.000000T0000Z- YYMMDDTHHmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 446. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 447. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | |
| 448. | Verify the text warning contains a presence of closing \$\$. | The Flash Flood Statement text contains a presence of closing \$\$. | |
| 449. | In the text window, replace the '!**REPORT**!' line with a word or phrase. Replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Flash Flood Statement is saved. The text window displays the saved warning. | |
| 450. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 451. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 452. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 453. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Flash Flood Statement' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) similar to the following appears: 'COR.KOAX.FF.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the Update List dropdown menu. | |
| 454. | Close the WarnGen GUI. | The WarnGen GUI closes. | |

| Step | Action | Result | Pass/Fail |
|--|---|---|-----------|
| Extreme Wind Warning | | | |
| <i>Issuing an Extreme Wind Warning</i> | | | |
| 455. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 456. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 457. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |
| 458. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector rotates accordingly. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |
| 459. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 460. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |
| 461. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 462. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 463. | MB1 click on 'Other' in the 'Product type' section. Then select 'Extreme Wind Warning' from the dropdown menu below the 'Other' radio button. | The selection is made as indicated by the radio button. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Extreme Wind Warnings. | |
| 464. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 465. | MB1 within the Optional bullets section, select items such that the following Extreme Wind Warning Template Parameters are highlighted: BASIS FOR WARNING: Doppler radar indicated CALLS TO ACTION: CTA – Take cover now Then click MB1 on the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 466. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: EWW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 467. | Verify the Extreme Wind Warning text contains the Extreme Wind Warning Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Extreme Wind Warning statement. | |
| 468. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 469. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Extreme Wind Warning statement. The cities near the warning vector are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 470. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.EW.W.0001.YYMMDDTHHmZ- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 471. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 472. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 473. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 474. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 475. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 476. | Note the VTEC code (the 'EW.W.xxxx' portion in particular). | EW.W. _____ | |
| 477. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 478. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 479. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |
| 480. | Create another Extreme Wind Warning by repeating steps 438-457, but choosing different options within the 'WarnGen: Operational' window. | The new Extreme Wind Warning displays in the text window. | |

| Step | Action | Result | Pass/Fail |
|---|--|---|--------------------|
| 481. | Verify the VTEC code in the warning is different from the first Extreme Wind Warning (e.g., EW.W.0001 becomes EW.W.0002). | The VTEC code from the first warning was persisted. The second Extreme Wind Warning contains updated VTEC coding. | |
| 482. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 483. | Close the Text Warngen: OMAEWWOAX window. | The Text Warngen: OMAEWWOAX window closes. | |
| 484. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR) or reissued (NEW). Verify two lines similar to the following appear: COR.KOAX.EW.W.xxxx(NEW) NEW.KOAX.EW.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be corrected (COR) or reissued (NEW). | |
| <i>Correcting an Extreme Wind Warning (COR)</i> | | | |
| 485. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. | |
| 486. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 487. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: EWW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 488. | Verify the Extreme Wind Warning text contains the Extreme Wind Warning Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Extreme Wind Warning statement. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 489. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 490. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Extreme Wind Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 491. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.EW.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 492. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 493. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 494. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 495. | In the text window, replace the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 496. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 497. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 498. | MB1 click the WarnGen button in the toolbar, select the Other radio button, and verify a line similar to the following appears: 'COR.KOAX.EW.W.xxxx(NEW)' | Verified. | |
| 499. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|--|---|--------------------|
| <i>Continuing an Extreme Wind Warning (CON) by Issuing a Follow-Up for an Extreme Wind Warning (SVS)</i> | | | |
| 500. | In the WarnGen GUI, MB1 click on the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 501. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 502. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 503. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 504. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 505. | Verify the Extreme Wind Warning text contains the Extreme Wind Warning Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Extreme Wind Warning statement. | |
| 506. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 507. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Extreme Wind Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 508. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.EW.W.xxxx.YMMDDTHHmZ- YMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 509. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 510. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 511. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 512. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 513. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 514. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 515. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 516. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button and select 'Extreme Wind Warning'. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.EW.W.xxxx(CON) | Verified. | |
| <i>Continuing/Canceling an Extreme Wind Warning (CON/CAN)</i> | | | |
| 517. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Then MB1 click 'Extreme Wind Warning'. | 'FOLLOWUP' appears in the dropdown menu. | |
| 518. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 519. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 520. | Modify the warning polygon to remove at least one county from the original warning polygon. Select additional warning bulletins. Then MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 521. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 522. | Verify the Extreme Wind Warning text contains the Extreme Wind Warning Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Extreme Wind Warning statement. | |
| 523. | Verify the Extreme Wind Warning statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 524. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Extreme Wind Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 525. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format: /O.CAN.KOAX.EW.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /O.CON.KOAX.EW.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 526. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 527. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 528. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 529. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|--------------------|
| 530. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 531. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 532. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 533. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button and select 'Extreme Wind Warning'. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.EW.W.xxxx(CON)' 'COR.KOAX.EW.W.xxxx(CAN)' | Verified. | |
| Reissuing an Extreme Wind Warning (NEW) | | | |
| 534. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Then MB1 click 'Extreme Wind Warning'. | 'Update List' appears in the dropdown menu. | |
| 535. | From the 'Update List' dropdown, select the 'NEW' product. | The storm vector and polygon appear. The polygon is editable. | |
| 536. | Modify the polygon, duration and for the warning text product. Then MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 537. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: EWW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 538. | Verify the Extreme Wind Warning text contains the Extreme Wind Warning Template Parameters selected. | The BASIS FOR WARNING and CALLS TO ACTION exist in the Extreme Wind Warning statement. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 539. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 540. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. Verify cities near the warning vector are included in the pathcast. | The counties are listed in the Extreme Wind Warning statement. The cities near the warning vector are included in the warning. | DR #869 |
| 541. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.EW.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 542. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 543. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 544. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 545. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 546. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 547. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 548. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 549. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and verify two lines similar to the following appear: 'COR.KOAX.EW.W.xxxx(NEW)' 'NEW.KOAX.EW.W.xxxx' | Verified. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| <i>Canceling an Extreme Wind Warning (CAN)</i> | | | |
| 550. | In the WarnGen GUI, MB1 click the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 551. | MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 552. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 553. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 554. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. | The counties are listed in the Extreme Wind Warning statement. | DR #869 |
| 555. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.EW.W.xxxx.000000T0000Z-YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 556. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 557. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 558. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 559. | In the text window, replace the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 560. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 561. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 562. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 563. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and verify a line similar to the following appears: 'COR.KOAX.EW.W.xxxx(CAN)' | Verified. | |
| 564. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| <i>Expiring an Extreme Wind Warning (EXP)</i> | | | |
| 565. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 566. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A first guess vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 567. | Press the right arrow key on the keyboard once. | The oldest radar image in the loop displays. The point is relabeled 'Drag me to Storm' and appears at the starting point of the vector. | |
| 568. | MB1 click and hold the 'Drag me to Storm' point and drag it to another location. | The vector is redrawn. The spacing between the tick marks adjusts accordingly. The hatched warning box remains at its current position. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 569. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 570. | Click MB1 on the 'Track' button under the 'Redraw Box on Screen from:' section. | The hatched box is redrawn on the vector. | |
| 571. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. | |
| 572. | MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. | |
| 573. | MB1 click on 'Other' in the 'Product type' section. | The selection is made as indicated by the radio buttons. The BASIS FOR WARNINGS and CALLS TO ACTION sections update to display items applicable for Extreme Wind Warnings. | |
| 574. | Select the 'Duration:' to 10 min. | The duration is set to 10 min. The ending time of the warning updates with the change in duration. The vector contracts and the time at the arrowhead modifies. | DR #813 |
| 575. | Using Control and MB1 within the Optional bullets section, select or deselect items such that the following Extreme Wind Warning Template Parameters are highlighted: BASIS FOR WARNING: Confirmed large tornado CALLS TO ACTION: Severe Tornado CALLS TO ACTION: If caught outside Then click MB1 on the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 576. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: EWW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 577. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 578. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |
| 579. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 580. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button, and verify the created warning is able to be expired (EXP). | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 581. | Select the EXP product. | The storm vector and polygon appear. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 582. | MB1 click the 'Create Text' button. | The Extreme Wind Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 583. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: SVS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Extreme Wind Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 584. | Verify the Extreme Wind Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 585. | Verify the Extreme Wind Warning text contains the counties encompassed by the polygon. | The counties are listed in the Extreme Wind Warning statement. | DR #869 |
| 586. | Verify the Extreme Wind Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.EW.W.xxxx.000000T0000Z- YYMMDDTHHmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 587. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 588. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 589. | Verify the text warning contains a presence of closing \$\$. | The Extreme Wind Warning text contains a presence of closing \$\$. | |
| 590. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Extreme Wind Warning is saved. The text window displays the saved warning. | |
| 591. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAEWWOAX' window (not in edit mode). | |

| Step | Action | Result | Pass/Fail |
|---|--|--|-----------|
| 592. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 593. | Close the Text WarnGen: OMAEWWOAX window. | The Text WarnGen: OMAEWWOAX window closes. | |
| 594. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Verify in the Update List dropdown menu that an expired product (EXP) line similar to the following appears: 'COR.KOAX.EW.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the Update List dropdown menu. | |
| 595. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Non-Convective Flash Flood Warning | | | |
| <i>Issuing a Non-Convective Flash Flood Warning</i> | | | |
| 596. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 597. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 598. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 599. | MB1 click on 'Other' in the 'Product type' section. Select 'non-convective FFW' from the dropdown menu below the 'Other' radio button. | The selection is made as indicated by the radio button. The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION sections update to display items applicable for Non-Convective Flash Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 600. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 601. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 602. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 603. | MB1 within the Optional bullets section, select items such that the following Non-Convective Flash Flood Template Parameters are highlighted: PRIMARY CAUSE: levee failure DAM FAILURE REPORTED BY: law enforcement CALLS TO ACTION: Do not drive into water Then click MB1 on the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 604. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 605. | Verify the Non-Convective Flash Flood Warning text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Warning statement. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 606. | Verify the Non-Convective Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 607. | Verify the Non-Convective Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Non-Convective Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 608. | Verify the Non-Convective Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FF.W.0001.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 609. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 610. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Warning text contains a presence of closing \$. | |
| 611. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |
| 612. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 613. | Note the VTEC code (the 'FF.W.xxxx' portion in particular). | FF.W._____ | |
| 614. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 615. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 616. | MB1 click the WarnGen button in the toolbar and select the 'non-convective FFW' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: NEW.KOAX.FF.W.xxxx EXT.KOAX.FF.W.xxxx COR.KOAX.FF.W.xxxx(NEW) | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| 617. | Create another Non-Convective Flash Flood Warning by repeating steps 579-594, but choosing different options within the 'WarnGen: Operational' window. | The new Non-Convective Flash Flood Warning displays in the text window. | |
| 618. | Verify the VTEC code in the warning is different from the first Non-Convective Flash Flood Warning (e.g., FF.W.0001 becomes FF.W.0002). | The VTEC code from the first warning was persisted. The second Non-Convective Flash Flood Warning contains updated VTEC coding. | |
| 619. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 620. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| 621. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'non-convective FFW' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: COR.KOAX.FF.W.xxxx(NEW) NEW.KOAX.FF.W.xxxx EXT.KOAX.FF.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| <i>Correcting a Non-Convective Flash Flood Warning (COR)</i> | | | |
| 622. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 623. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 624. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 625. | Verify the Non-Convective Flash Flood Warning text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Warning statement. | |
| 626. | Verify the Non-Convective Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 627. | Verify the Non-Convective Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Non-Convective Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 628. | Verify the Non-Convective Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 629. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 630. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 631. | In the text window, replace the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |
| 632. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 633. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 634. | MB1 click the WarnGen button in the toolbar, select the Non-Convective Flash Flood radio button, and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(NEW)' | Verified. | |
| 635. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| <i>Continuing a Non-Convective Flash Flood Warning (CON) by Issuing a Follow-Up for a Non-Convective Flash Flood Warning (FFS)</i> | | | |
| 636. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 637. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 638. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 639. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select the following warning bulletins: PRIMARY CAUSE: DAM FAILURE REPORTED BY: CALLS TO ACTION: Turn around...dont drown Then MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 640. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 641. | Verify the Non-Convective Flash Flood Statement text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Statement text. | |
| 642. | Verify the Non-Convective Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 643. | Verify the Non-Convective Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Non-Convective Flash Flood Statement text. | DR #869 |
| 644. | Verify the Non-Convective Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.FF.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 645. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 646. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 647. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Statement text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 648. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Statement is saved. The text window displays the saved warning. | |
| 649. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 650. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 651. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 652. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button, Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(CON) | Verified. | |
| <i>Extending a Non-Convective Flash Flood Warning (EXT)</i> | | | |
| 653. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'non-convective FFW' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'Correct/Extend /Reissue' dropdown menu and select the 'EXT' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 654. | Modify the polygon, the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 655. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 656. | Verify the Non-Convective Flash Flood Warning text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Warning statement. | |
| 657. | Verify the Non-Convective Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 658. | Verify the Non-Convective Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Non-Convective Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 659. | Verify the Non-Convective Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXT.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 660. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 661. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 662. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |
| 663. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 664. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 665. | MB1 click the WarnGen button in the toolbar, select the Non-Convective Flash Flood radio button, MB1 click the 'Correct/Extend/Reissue' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(EXT)' | Verified. | |
| 666. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| <i>Continuing/Canceling a Non-Convective Flash Flood Warning (CON/CAN)</i> | | | |
| 667. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 668. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 669. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 670. | Modify the warning polygon to remove at least one county from the original warning polygon. Select the following warning bulletins: PRIMARY CAUSE: DAM FAILURE REPORTED BY: CALLS TO ACTION: Then MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 671. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 672. | Verify the Non-Convective Flash Flood Warning text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Warning statement. | |
| 673. | Verify the Non-Convective Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 674. | Verify the Non-Convective Flash Flood Warning text contains the counties encompassed by the polygon. | The counties are listed in the Non-Convective Flash Flood Warning statement. | DR #869 |
| 675. | Verify the Non-Convective Flash Flood Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format: /O.CAN.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ /O.CON.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 676. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 677. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Warning text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 678. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |
| 679. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 680. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 681. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 682. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.FF.W.xxxx(CON)' 'COR.KOAX.FF.W.xxxx(CAN)' | Verified. | |
| <i>Reissuing a Non-Convective Flash Flood Warning (NEW)</i> | | | |
| 683. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'non-convective FFW' from the dropdown menu below the 'Other' radio button. | 'Extend/Reissue' appears in the dropdown menu. | |
| 684. | From the 'Extend/Reissue' dropdown, select the 'NEW' product. | The polygon appears. The polygon is editable. | |
| 685. | Modify the polygon, duration and bulletins for the warning text product. Then MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|--------------------|
| 686. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 687. | Verify the Non-Convective Flash Flood Warning text contains the Non-Convective Flash Flood Template Parameters selected. | The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION exist in the Non-Convective Flash Flood Warning statement. | |
| 688. | Verify the Non-Convective Flash Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 689. | Verify the Non-Convective Flash Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Non-Convective Flash Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 690. | Verify the Non-Convective Flash Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FF.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 691. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 692. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Warning text contains a presence of closing \$\$. | |
| 693. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|--------------------|
| 694. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 695. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 696. | Close the Text WarnGen: OMAFFWOAX window. | The Text WarnGen: OMAFFWOAX window closes. | |
| 697. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'non-convective FFW' from the dropdown menu below the 'Other' radio button. Then verify three lines similar to the following appear: 'COR.KOAX.FF.W.xxxx(NEW)' 'NEW.KOAX.FF.W.xxxx' 'EXT.KOAX.FF.W.xxxx' | Verified. | |
| <i>Canceling a Non-Convective Flash Flood Warning (CAN)</i> | | | |
| 698. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 699. | MB1 click the 'Create Text' button | The Non-Convective Flash Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 700. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 701. | Verify the Non-Convective Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 702. | Verify the Non-Convective Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Non-Convective Flash Flood Statement text. | DR #869 |
| 703. | Verify the Non-Convective Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.FF.W.xxxx.000000T0000Z-YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 704. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 705. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Statement text contains a presence of closing \$\$. | |
| 706. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Statement is saved. The text window displays the saved warning. | |
| 707. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 708. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 709. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 710. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FF.W.xxxx(CAN)' | Verified. | |

| Step | Action | Result | Pass/Fail |
|--|---|---|-----------|
| 711. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| <i>Expiring a Non-Convective Flash Flood Warning (EXP)</i> | | | |
| 712. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 713. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 714. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 715. | MB1 click on 'non-convective FFS' in the 'Product type' section. | The selection is made as indicated by the radio button. The PRIMARY CAUSE, DAM FAILURE REPORTED BY and CALLS TO ACTION sections update to display items applicable for Non-Convective Flash Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 716. | Select the 'Duration:' to 15 min. | The duration is set to 15 min. The ending time of the warning updates with the change in duration. | DR #813 |
| 717. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 718. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 719. | MB1 within the Optional bullets section, select items such that the following Non-Convective Flash Flood Template Parameters are highlighted: PRIMARY CAUSE: DAM FAILURE REPORTED BY: CALLS TO ACTION: Urban flooding... Then click MB1 on the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 720. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 721. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Warning is saved. The text window displays the saved warning. | |
| 722. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFWOAX' window (not in edit mode). | |
| 723. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 724. | Close the Text Warngen: OMAFFWOAX window. | The Text Warngen: OMAFFWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|-----------|
| 725. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu to verify the created warning is able to expired (EXP). Verify the line similar to the following appears: EXP.KOAX.FF.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 726. | Select the EXP product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 727. | MB1 click the 'Create Text' button. | The Non-Convective Flash Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 728. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FFS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Non-Convective Flash Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | |
| 729. | Verify the Non-Convective Flash Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | |
| 730. | Verify the Non-Convective Flash Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Non-Convective Flash Flood Statement text. | |
| 731. | Verify the Non-Convective Flash Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.FF.W.xxxx.000000T0000Z- YYMMDDTHHmmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 732. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |

| Step | Action | Result | Pass/Fail |
|---------------------------------------|---|---|-----------|
| 733. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | |
| 734. | Verify the text warning contains a presence of closing \$\$. | The Non-Convective Flash Flood Statement text contains a presence of closing \$\$. | |
| 735. | In the text window, replace the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Non-Convective Flash Flood Statement is saved. The text window displays the saved warning. | |
| 736. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFFSOAX' window (not in edit mode). | |
| 737. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 738. | Close the Text WarnGen: OMAFFSOAX window. | The Text WarnGen: OMAFFSOAX window closes. | |
| 739. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'non-convective FFS' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) that appears as follows: 'COR.KOAX.FF.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the Update List dropdown menu. | |
| 740. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Areal Flood Warning | | | |
| <i>Issuing an Areal Flood Warning</i> | | | |
| 741. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 742. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 743. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 744. | MB1 click on 'Other' in the 'Product type' section. Select 'Areal Flood Warning' from the dropdown menu below the 'Other' radio button. | The selection is made as indicated by the radio button. The primary cause other than rain and CALLS TO ACTION sections update to display items applicable for Areal Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 745. | Select the 'Duration:' to 20 min. | The duration is set to 20 min. The ending time of the warning updates with the change in duration. | DR #813 |
| 746. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 747. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 748. | MB1 within the Optional bullets section, select items such that the following Areal Flood Template Parameters are highlighted: primary cause other than rain: Ice Jam CALLS TO ACTION: Do not drive into water Then click MB1 on the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 749. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 750. | Verify the Areal Flood Warning text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Warning statement. | |
| 751. | Verify the Areal Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 752. | Verify the Areal Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 753. | Verify the Areal Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FA.W.0001.YMMDDTHHmZ- YMMDDTHHmZ/ /00000.0.IC.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 754. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 755. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Warning text contains a presence of closing \$\$. | |
| 756. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Warning is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 757. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLWOAX' window (not in edit mode). | |
| 758. | Note the VTEC code (the 'FA.W.xxxx' portion in particular). | FA.W._____ | |
| 759. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 760. | Close the Text WarnGen: OMAFLWOAX window. | The Text WarnGen: OMAFLWOAX window closes. | |
| 761. | MB1 click the WarnGen button in the toolbar and select the 'Areal Flood Warning' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: NEW.KOAX.FA.W.xxxx EXT.KOAX.FA.W.xxxx COR.KOAX.FA.W.xxxx(NEW) | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| 762. | Create another Areal Flood Warning by repeating steps 724-739, but choosing different options within the 'WarnGen: Operational' window. | The new Areal Flood Warning displays in the text window. | |
| 763. | Verify the VTEC code in the warning is different from the first Areal Flood Warning (e.g., FA.W.0001 becomes FA.W.0002). | The VTEC code from the first warning was persisted. The second Areal Flood Warning contains updated VTEC coding. | |
| 764. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 765. | Close the Text WarnGen: OMAFLWOAX window. | The Text WarnGen: OMAFLWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|--------------------|
| 766. | <p>MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Warning' from the dropdown menu below the 'Other' radio button.</p> <p>Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear:</p> <p style="padding-left: 40px;">COR.KOAX.FA.W.xxxx(NEW) NEW.KOAX.FA.W.xxxx EXT.KOAX.FA.W.xxxx</p> | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| <i>Correcting an Areal Flood Warning (COR)</i> | | | |
| 767. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | <p>The polygon appears.</p> <p>The polygon is uneditable as indicated by the square vertex points.</p> | |
| 768. | <p>Change the duration and bulletins to be displayed in the warning text product.</p> <p>Then MB1 click the 'Create Text' button.</p> | <p>The Areal Flood Warning text appears in a 'Text Warngen' window.</p> <p>An 'AWIPS Header Block' window appears.</p> | |
| 769. | <p>In the AWIPS Header Block, verify the following selections are set:</p> <p style="padding-left: 40px;">TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLW Product Designator: OAX Addressee: 000</p> <p>Then MB1 click the 'Enter' button.</p> | <p>The Areal Flood Warning text remains displayed in the text window in edit mode.</p> <p>The AWIPS Header Block window closes.</p> | DR #868 DR #870 |
| 770. | Verify the Areal Flood Warning text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Warning statement. | |
| 771. | Verify the Areal Flood Warning text contains the current date and time attributes and the correct header information. | <p>The date and time attributes exist.</p> <p>The header information is correct.</p> | DR #782 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 772. | Verify the Areal Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 773. | Verify the Areal Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.FA.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 774. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 775. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Warning text contains a presence of closing \$\$. | |
| 776. | In the text window, replace the '!'**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Warning is saved. The text window displays the saved warning. | |
| 777. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLWOAX' window (not in edit mode). | |
| 778. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 779. | MB1 click the WarnGen button in the toolbar, select the Areal Flood radio button, and verify a line similar to the following appears: 'COR.KOAX.FA.W.xxxx(NEW)' | Verified. | |
| 780. | Close the Text WarnGen: OMAFLWOAX window. | The Text WarnGen: OMAFLWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|--------------------|
| <i>Continuing an Areal Flood Warning (CON) by Issuing a Follow-Up for an Areal Flood Warning (FLS)</i> | | | |
| 781. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 782. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 783. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 784. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select the following warning bulletins: primary cause other than rain: CALLS TO ACTION: Turn around...dont drown Then MB1 click the 'Create Text' button. | The Areal Flood Statement text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 785. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 786. | Verify the Areal Flood Statement text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Statement text. | |
| 787. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 788. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 789. | Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.FA.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 790. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 791. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 792. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |
| 793. | In the text window, replace the '!***WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 794. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 795. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 796. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 797. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button, Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: 'COR.KOAX.FA.W.xxxx(CON) | Verified. | |

| Step | Action | Result | Pass/Fail |
|---|--|---|--------------------|
| <i>Extending an Areal Flood Warning (EXT)</i> | | | |
| 798. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Areal Flood Warning' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'Correct/Extend /Reissue' dropdown menu and select the 'EXT' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 799. | Modify the polygon, the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 800. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 801. | Verify the Areal Flood Warning text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Warning statement. | |
| 802. | Verify the Areal Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 803. | Verify the Areal Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|--|---|-----------|
| 804. | <p>Verify the Areal Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format:</p> <p>/O.EXT.KOAX.FA.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC).</p> | The VTEC code exists and is accurate. | |
| 805. | <p>Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...).</p> | The Lat/Lon information exists in the text product. | |
| 806. | <p>Verify the text warning contains a presence of closing \$\$.</p> | The Areal Flood Warning text contains a presence of closing \$\$. | |
| 807. | <p>In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood-*!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials.</p> <p>MB1 click the 'Save' button. Then MB1 click the 'Send' button.</p> | <p>The Areal Flood Warning is saved. The text window displays the saved warning.</p> | |
| 808. | <p>MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'</p> | <p>A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLWOAX' window (not in edit mode).</p> | |
| 809. | <p>Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning).</p> <p>(Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.)</p> | The warning is ingested. | |
| 810. | <p>MB1 click the WarnGen button in the toolbar, select the Areal Flood radio button, MB1 click the 'Correct/Extend/Reissue' dropdown menu and verify a line similar to the following appears:</p> <p>'COR.KOAX.FA.W.xxxx(EXT)'</p> | Verified. | |
| 811. | <p>Close the Text WarnGen: OMAFLWOAX window.</p> | The Text WarnGen: OMAFLWOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| <i>Continuing/Canceling an Areal Flood Warning (CON/CAN)</i> | | | |
| 812. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 813. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 814. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 815. | Modify the warning polygon to remove at least one county from the original warning polygon. Select the following warning bulletins: primary cause other than rain: CALLS TO ACTION: Then MB1 click the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 816. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 817. | Verify the Areal Flood Warning text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Warning statement. | |
| 818. | Verify the Areal Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 819. | Verify the Areal Flood Warning text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Warning statement. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 820. | <p>Verify the Areal Flood Warning text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format:</p> <p>/O.CAN.KOAX.FA.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ /O.CON.KOAX.FA.W.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC).</p> | The VTEC code exists and is accurate. | |
| 821. | <p>Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...).</p> | The Lat/Lon information exists in the text product. | |
| 822. | <p>Verify the text warning contains a presence of closing \$\$.</p> | The Areal Flood Warning text contains a presence of closing \$\$. | |
| 823. | <p>In the text window, replace the '!**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials.</p> <p>MB1 click the 'Save' button. Then MB1 click the 'Send' button.</p> | <p>The Areal Flood Warning is saved. The text window displays the saved warning.</p> | |
| 824. | <p>MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'</p> | <p>A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode).</p> | |
| 825. | <p>Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.)</p> | The warning is ingested. | |
| 826. | <p>Close the Text WarnGen: OMAFLSOAX window.</p> | The Text WarnGen: OMAFLSOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|---|--|---|--------------------|
| 827. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: 'COR.KOAX.FA.W.xxxx(CON)' 'COR.KOAX.FA.W.xxxx(CAN)' | Verified. | |
| <i>Reissuing an Areal Flood Warning (NEW)</i> | | | |
| 828. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Warning' from the dropdown menu below the 'Other' radio button. | 'Extend/Reissue' appears in the dropdown menu. | |
| 829. | From the 'Extend/Reissue' dropdown, select the 'NEW' product. | The polygon appears. The polygon is editable. | |
| 830. | Modify the polygon, duration and bulletins for the warning text product. Then MB1 click the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 831. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 832. | Verify the Areal Flood Warning text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Warning statement. | |
| 833. | Verify the Areal Flood Warning text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 834. | Verify the Areal Flood Warning text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Warning statement. The cities in the warning polygon are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 835. | Verify the Areal Flood Warning text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FA.W.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 836. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 837. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Warning text contains a presence of closing \$\$. | |
| 838. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Warning is saved. The text window displays the saved warning. | |
| 839. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLWOAX' window (not in edit mode). | |
| 840. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 841. | Close the Text WarnGen: OMAFLWOAX window. | The Text WarnGen: OMAFLWOAX window closes. | |
| 842. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Warning' from the dropdown menu below the 'Other' radio button. Then verify three lines similar to the following appear: 'COR.KOAX.FA.W.xxxx(NEW)' 'NEW.KOAX.FA.W.xxxx' 'EXT.KOAX.FA.W.xxxx' | Verified. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|--------------------|
| <i>Canceling an Areal Flood Warning (CAN)</i> | | | |
| 843. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 844. | MB1 click the 'Create Text' button. | The Areal Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 845. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 846. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 847. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | DR #869 |
| 848. | Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.FA.W.xxxx.000000T0000Z-YYMMDDTHHmmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 849. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 850. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|---|-----------|
| 851. | In the text window, replace the '!'**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 852. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 853. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 854. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 855. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FA.W.xxxx(CAN)' | Verified. | |
| 856. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| <i>Expiring an Areal Flood Warning (EXP)</i> | | | |
| 857. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 858. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 859. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 860. | MB1 click on 'Areal Flood Statement' in the 'Product type' section. | The selection is made as indicated by the radio button. The primary cause other than rain and CALLS TO ACTION sections update to display items applicable for Areal Flood Warnings. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 861. | Select the 'Duration:' to 15 min. | The duration is set to 15 min. The ending time of the warning updates with the change in duration. | DR #813 |
| 862. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 863. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 864. | MB1 within the Optional bullets section, select items such that the following Areal Flood Template Parameters are highlighted: primary cause other than rain: CALLS TO ACTION: Urban flooding... Then click MB1 on the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|--|--------------------|
| 865. | In the AWIPS Header Block, verify the following selections are set: TTAaii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLW Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Warning text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 866. | In the text window, replace the '!**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Warning is saved. The text window displays the saved warning. | |
| 867. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLWOAX' window (not in edit mode). | |
| 868. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 869. | Close the Text WarnGen: OMAFLWOAX window. | The Text WarnGen: OMAFLWOAX window closes. | |
| 870. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu to verify the created warning is able to expired (EXP). Verify the line similar to the following appears: EXP.KOAX.FA.W.xxxx | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |

| Step | Action | Result | Pass/Fail |
|------|---|--|-----------|
| 871. | Select the EXP product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 872. | MB1 click the 'Create Text' button. | The Areal Flood Warning text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 873. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | |
| 874. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | |
| 875. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | |
| 876. | Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXP.KOAX.FA.W.xxxx.000000T0000Z- YYMMDDTHHmZ / Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 877. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 878. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | |
| 879. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|--|---|-----------|
| 880. | In the text window, replace the '!'**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 881. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 882. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 883. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 884. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) that appears as follows: 'COR.KOAX.FA.W.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the Update List dropdown menu. | |
| 885. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| Areal Flood Advisory | | | |
| <i>Issuing an Areal Flood Advisory</i> | | | |
| 886. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 887. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 888. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 889. | MB1 click on 'Other' in the 'Product type' section. Select 'Areal Flood Advisory' from the dropdown menu below the 'Other' radio button. | The selection is made as indicated by the radio button. The primary cause other than rain and CALLS TO ACTION sections update to display items applicable for Areal Flood Advisories. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 890. | Select the 'Duration:' to 3:00 hours. | The duration is set to 3:00 hours. The ending time of the warning updates with the change in duration. | DR #813 |
| 891. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |
| 892. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 893. | MB1 within the Optional bullets section, select items such that the following Areal Flood Template Parameters are highlighted: if not generic flood advisory: hydrologic Hydrologic conditions/causes if applicable: snow melt CALLS TO ACTION: Urban flooding Then click MB1 on the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|------------------------|
| 894. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 895. | Verify the Areal Flood Advisory text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Advisory statement. | |
| 896. | Verify the Areal Flood Advisory text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 897. | Verify the Areal Flood Advisory text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Advisory statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 898. | Verify the Areal Flood Advisory text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FA.Y.0001.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.IC.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 899. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 900. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Advisory text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 901. | In the text window, replace the '!'**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |
| 902. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 903. | Note the VTEC code (the 'FA.Y.xxxx' portion in particular). | FA.Y._____ | |
| 904. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 905. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 906. | MB1 click the WarnGen button in the toolbar and select the 'Areal Flood Advisory' radio button. Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear: NEW.KOAX.FA.Y.xxxx EXT.KOAX.FA.Y.xxxx COR.KOAX.FA.Y.xxxx(NEW) | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| 907. | Create another Areal Flood Advisory by repeating steps 869-884, but choosing different options within the 'WarnGen: Operational' window. | The new Areal Flood Advisory displays in the text window. | |
| 908. | Verify the VTEC code in the warning is different from the first Areal Flood Advisory (e.g., FA.Y.0001 becomes FA.Y.0002). | The VTEC code from the first warning was persisted. The second Areal Flood Advisory contains updated VTEC coding. | |
| 909. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |

| Step | Action | Result | Pass/Fail |
|---|--|--|--------------------|
| 910. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 911. | <p>MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Advisory' from the dropdown menu below the 'Other' radio button.</p> <p>Then MB1 click the 'Correct/Reissue' dropdown menu to verify the created warning is able to be corrected (COR), extended (EXT) or reissued (NEW). Verify three lines similar to the following appear:</p> <p style="padding-left: 40px;">COR.KOAX.FA.Y.xxxx(NEW)</p> <p style="padding-left: 40px;">NEW.KOAX.FA.Y.xxxx</p> <p style="padding-left: 40px;">EXT.KOAX.FA.Y.xxxx</p> | The warning is ingested as verified by observing that the ingested warning can be corrected (COR), extended (EXT) or reissued (NEW). | |
| <i>Correcting an Areal Flood Advisory (COR)</i> | | | |
| 912. | In the WarnGen GUI, from the 'Correct/Reissue' dropdown, select the 'COR' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 913. | Change the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 914. | <p>In the AWIPS Header Block, verify the following selections are set:</p> <p style="padding-left: 40px;">TTAAii: SAUS43</p> <p style="padding-left: 40px;">CCCC: KOAX</p> <p style="padding-left: 40px;">BBB: NOR</p> <p style="padding-left: 40px;">BBB Version: A (grayed out)</p> <p style="padding-left: 40px;">WSFO ID: OMA</p> <p style="padding-left: 40px;">Product Category: FLS</p> <p style="padding-left: 40px;">Product Designator: OAX</p> <p style="padding-left: 40px;">Addressee: 000</p> <p>Then MB1 click the 'Enter' button.</p> | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 915. | Verify the Areal Flood Advisory text contains the Areal Flood Template Parameters selected. | The primary cause other than rain and CALLS TO ACTION exist in the Areal Flood Advisory statement. | |
| 916. | Verify the Areal Flood Advisory text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 917. | <p>Verify the Areal Flood Advisory text contains the counties encompassed by the polygon.</p> <p>Verify cities in the warning polygon are included in the pathcast.</p> | The counties are listed in the Areal Flood Advisory statement. The cities in the warning polygon are included in the warning. | DR #869 |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 918. | Verify the Areal Flood Advisory text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.COR.KOAX.FA.Y.xxxx.YYMMDDTHHmZ- YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 919. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 920. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Advisory text contains a presence of closing \$\$. | |
| 921. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |
| 922. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 923. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 924. | MB1 click the WarnGen button in the toolbar, select the Areal Flood radio button, and verify a line similar to the following appears: 'COR.KOAX.FA.Y.xxxx(NEW)' | Verified. | |
| 925. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| <i>Continuing an Areal Flood Advisory (CON) by Issuing a Follow-Up for an Areal Flood Advisory (FLS)</i> | | | |
| 926. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 927. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 928. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 929. | Modify the warning polygon, but do not remove any counties from the original warning polygon. MB1 click the 'Warned/Hatched Area' button. Note: The polygon can only be reduced in size. Select the following warning bulletins: <ul style="list-style-type: none"> • If not generic flood advisory: • Hydrologic conditions/causes if applicable: • CALLS TO ACTION: Turn around...dont drown Then MB1 click the 'Create Text' button. | The Areal Flood Statement text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 930. | In the AWIPS Header Block, verify the following selections are set: <ul style="list-style-type: none"> • TTAaii: SAUS43 • CCCC: KOAX • BBB: NOR • BBB Version: A (grayed out) • WSFO ID: OMA • Product Category: FLS • Product Designator: OAX • Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 931. | Verify the Areal Flood Statement text contains the Areal Flood Template Parameters selected. | The if not generic flood advisory, Hydrologic conditions/causes if applicable, and CALLS TO ACTION exist in the Areal Flood Statement text. | |
| 932. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 933. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | DR #869 |
| 934. | Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CON.KOAX.FA.Y.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 935. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 936. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | DR #782 |
| 937. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |
| 938. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 939. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 940. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 941. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 942. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button, Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify a line similar to the following appears: <ul style="list-style-type: none"> • 'COR.KOAX.FA.Y.xxxx(CON) | Verified. | |
| Extending an Areal Flood Advisory (EXT) | | | |
| 943. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Areal Flood Advisory' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'Correct/Extend /Reissue' dropdown menu and select the 'EXT' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. | |
| 944. | Modify the polygon, the duration and bulletins to be displayed in the warning text product. Then MB1 click the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 945. | In the AWIPS Header Block, verify the following selections are set: <ul style="list-style-type: none"> • TTAAii: SAUS43 • CCCC: KOAX • BBB: NOR • BBB Version: A (grayed out) • WSFO ID: OMA • Product Category: FLS • Product Designator: OAX • Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 946. | Verify the Areal Flood Advisory text contains the Areal Flood Template Parameters selected. | The if not generic flood advisory, Hydrologic conditions/causes if applicable, and CALLS TO ACTION exist in the Areal Flood Advisory statement. | |
| 947. | Verify the Areal Flood Advisory text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 948. | Verify the Areal Flood Advisory text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Advisory statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 949. | Verify the Areal Flood Advisory text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.EXT.KOAX.FA.Y.xxx.YYMMDDTHHmmZ- YYMMDDTHHmmZ/ /00000.0.DM.000000T0000Z.000000T0000Z. 000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 950. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 951. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Advisory text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 952. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |
| 953. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 954. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 955. | MB1 click the WarnGen button in the toolbar, select the Areal Flood radio button, MB1 click the 'Correct/Extend/Reissue' dropdown menu and verify a line similar to the following appears: 'COR.KOAX.FA.Y.xxxx(EXT)' | Verified. | |
| 956. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| <i>Continuing/Canceling an Areal Flood Advisory (CON/CAN)</i> | | | |
| 957. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. | 'FOLLOWUP' appears in the dropdown menu. | |
| 958. | MB1 click on the 'FOLLOWUP' dropdown menu and verify the 'CON' and 'CAN' options are available. | The list includes the 'CON' and 'CAN' options. | |
| 959. | MB1 click the 'CON' option. | The vector and polygon of the original warning appear on the main pane. | |
| 960. | Modify the warning polygon to remove at least one county from the original warning polygon. Select the following warning bulletins: if not generic flood advisory: Hydrologic conditions/causes if applicable: CALLS TO ACTION: Then MB1 click the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|--------------------|
| 961. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 962. | Verify the Areal Flood Advisory text contains the Areal Flood Template Parameters selected. | The if not generic flood advisory, Hydrologic conditions/causes if applicable, and CALLS TO ACTION exist in the Areal Flood Advisory statement. | |
| 963. | Verify the Areal Flood Advisory text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 964. | Verify the Areal Flood Advisory text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Advisory statement. | DR #869 |
| 965. | Verify the Areal Flood Advisory text contains the VTEC code above the BULLETIN section. The 2 lines of VTEC code should be in the following format: /O.CAN.KOAX.FA.Y.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ /O.CON.KOAX.FA.Y.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ /00000.0.DM.000000T0000Z.000000T0000Z.000000T0000Z.00/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 966. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 967. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Advisory text contains a presence of closing \$\$. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 968. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |
| 969. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 970. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 971. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 972. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu. Verify two lines similar to the following appear: <ul style="list-style-type: none"> 'COR.KOAX.FA.Y.xxxx(CON)' 'COR.KOAX.FA.Y.xxxx(CAN)' | Verified. | |
| <i>Reissuing an Areal Flood Advisory (NEW)</i> | | | |
| 973. | In the WarnGen GUI, MB1 click on the 'Other' radio button. Select 'Areal Flood Advisory' from the dropdown menu below the 'Other' radio button. | 'Extend/Reissue' appears in the dropdown menu. | |
| 974. | From the 'Extend/Reissue' dropdown, select the 'NEW' product. | The polygon appears. The polygon is editable. | |
| 975. | Modify the polygon, duration and bulletins for the warning text product. Then MB1 click the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |

| Step | Action | Result | Pass/Fail |
|------|--|---|--------------------|
| 976. | In the AWIPS Header Block, verify the following selections are set: TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 977. | Verify the Areal Flood Advisory text contains the Areal Flood Template Parameters selected. | The if not generic flood advisory, Hydrologic conditions/causes if applicable, and CALLS TO ACTION exist in the Areal Flood Advisory statement. | |
| 978. | Verify the Areal Flood Advisory text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 979. | Verify the Areal Flood Advisory text contains the counties encompassed by the polygon. Verify cities in the warning polygon are included in the pathcast. | The counties are listed in the Areal Flood Advisory statement. The cities in the warning polygon are included in the warning. | DR #869 |
| 980. | Verify the Areal Flood Advisory text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.NEW.KOAX.FA.Y.xxxx.YYMMDDTHHmZ-YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 981. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 982. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Advisory text contains a presence of closing \$\$. | |
| 983. | In the text window, replace the '!**WARNING BASIS**!' and '!-*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|--------------------|
| 984. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 985. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 986. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 987. | MB1 click the WarnGen button in the toolbar and select the 'Other' radio button. Select 'Areal Flood Advisory' from the dropdown menu below the 'Other' radio button. Then verify three lines similar to the following appear: <ul style="list-style-type: none"> 'COR.KOAX.FA.Y.xxxx(NEW)' 'NEW.KOAX.FA.Y.xxxx' 'EXT.KOAX.FA.Y.xxxx' | Verified. | |
| Canceling an Areal Flood Advisory (CAN) | | | |
| 988. | In the WarnGen GUI, MB1 click the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. From the 'FOLLOWUP' dropdown menu, select the 'CAN' product. | The polygon appears. The polygon is uneditable as indicated by the square vertex points. The bulletins are grayed out. | |
| 989. | MB1 click the 'Create Text' button. | The Areal Flood Statement text appears in a 'Text WarnGen' window. An 'AWIPS Header Block' window appears. | |
| 990. | In the AWIPS Header Block, verify the following selections are set: <ul style="list-style-type: none"> TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Statement text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |

| Step | Action | Result | Pass/Fail |
|-------|--|--|-----------|
| 991. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | The date and time attributes exist. The header information is correct. | DR #782 |
| 992. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | DR #869 |
| 993. | Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format: /O.CAN.KOAX.FA.Y.xxxx.000000T0000Z- YYMMDDTHHmZ/ Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC). | The VTEC code exists and is accurate. | |
| 994. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |
| 995. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |
| 996. | In the text window, replace the '!**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 997. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 998. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 999. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 1000. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Then MB1 click the 'FOLLOWUP' dropdown menu and verify a line similar to the following appears: <ul style="list-style-type: none"> 'COR.KOAX.FA.Y.xxxx(CAN)' | Verified. | |
| 1001. | Close the WarnGen GUI. | The WarnGen GUI closes. | |

| Step | Action | Result | Pass/Fail |
|---|---|---|-----------|
| <i>Expiring an Areal Flood Advisory (EXP)</i> | | | |
| 1002. | MB1 click on the 'WarnGen' button in the tool bar. | The WarnGen application loads. A 'Drag me to Storm' labeled point displays in the center of the CAVE display. This point is in edit mode. The WarnGen window appears. | |
| 1003. | In the main pane, click and hold MB1 on the 'Drag me to Storm' point and drag it to another location (ideally on a feature picked up by the radar). | A southwest-northeast oriented vector appears with the point near the center of the line, tick marks, and time values at the starting point, current/endpoint, and arrowhead. An initial warning area hatched box appears. | DR #813 |
| 1004. | In the 'WarnGen' window, select the following: -Track type: One Storm -Edit: Box and Track | The selections are made as indicated by the radio buttons. | |
| 1005. | MB1 click on 'Areal Flood Statement' in the 'Product type' section. | The selection is made as indicated by the radio button. The if not generic flood advisory, Hydrologic conditions/causes if applicable, and CALLS TO ACTION sections update to display items applicable for Areal Flood Advisories. The storm motion vector is removed from the main display, leaving only the hatched polygon. | |
| 1006. | Select the 'Duration:' to 3:00 hours. | The duration is set to 3:00 hours. The ending time of the warning updates with the change in duration. | DR #813 |
| 1007. | MB1 click and hold on a vertex and dragging it to another location outside the koax's CWA boundary. At the same time, ensure that multiple KOAX counties are included in the warning polygon. | The hatched area expands within the enclosed box up to the CWA boundary but does not cross over the CWA boundary. Multiple KOAX counties are included in the polygon. Note: If the polygon encompasses a portion of a county less than a specified percentage of the size of a county, the portion will not be hatched. | |

| Step | Action | Result | Pass/Fail |
|-------|--|---|--------------------|
| 1008. | In the WarnGen GUI, MB1 click on the 'Warned/Hatched Area' button under the 'Redraw Box on Screen from:' section. | The polygon's vertices are redrawn on the vector snapping back to the CWA border while creating additional vertices. Portions of the county not hatched, as discussed in step 16, are not included in the updated polygon. | |
| 1009. | MB1 within the Optional bullets section, select items such that the following Areal Flood Template Parameters are highlighted: <ul style="list-style-type: none"> if not generic flood advisory: Hydrologic conditions/causes if applicable: CALLS TO ACTION: Then click MB1 on the 'Create Text' button. | The Areal Flood Advisory text appears in a 'Text Warngen' window. An 'AWIPS Header Block' window appears. | |
| 1010. | In the AWIPS Header Block, verify the following selections are set: <ul style="list-style-type: none"> TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 Then MB1 click the 'Enter' button. | The Areal Flood Advisory text remains displayed in the text window in edit mode. The AWIPS Header Block window closes. | DR #868 DR #870 |
| 1011. | In the text window, replace the '！**WARNING BASIS**!' and '!-*optional description of the path of the flood-!' lines with a word or phrase and the '！**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Advisory is saved. The text window displays the saved warning. | |
| 1012. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?' | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 1013. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 1014. | Close the Text Warngen: OMAFLSOAX window. | The Text Warngen: OMAFLSOAX window closes. | |

| Step | Action | Result | Pass/Fail |
|-------|--|---|-----------|
| 1015. | <p>MB1 click the WarnGen button in the toolbar and select the 'Other' radio button.</p> <p>Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button.</p> <p>Then MB1 click the 'FOLLOWUP' dropdown menu to verify the created warning is able to expired (EXP). Verify the line similar to the following appears:</p> <ul style="list-style-type: none"> EXP.KOAX.FA.Y.xxxx | The warning is ingested as verified by observing that the ingested warning can be expired (EXP). | |
| 1016. | Select the EXP product. | <p>The polygon appears.</p> <p>The polygon is uneditable as indicated by the square vertex points.</p> <p>The bulletins are grayed out.</p> | |
| 1017. | MB1 click the 'Create Text' button. | <p>The Areal Flood Advisory text appears in a 'Text Warngen' window.</p> <p>An 'AWIPS Header Block' window appears.</p> | |
| 1018. | <p>In the AWIPS Header Block, verify the following selections are set:</p> <ul style="list-style-type: none"> TTAAii: SAUS43 CCCC: KOAX BBB: NOR BBB Version: A (grayed out) WSFO ID: OMA Product Category: FLS Product Designator: OAX Addressee: 000 <p>Then MB1 click the 'Enter' button.</p> | <p>The Areal Flood Statement text remains displayed in the text window in edit mode.</p> <p>The AWIPS Header Block window closes.</p> | |
| 1019. | Verify the Areal Flood Statement text contains the current date and time attributes and the correct header information. | <p>The date and time attributes exist.</p> <p>The header information is correct.</p> | |
| 1020. | Verify the Areal Flood Statement text contains the counties encompassed by the polygon. | The counties are listed in the Areal Flood Statement text. | |
| 1021. | <p>Verify the Areal Flood Statement text contains the VTEC code above the BULLETIN section. The VTEC code should be in the following format:</p> <p>/O.EXP.KOAX.FA.Y.xxxx.000000T0000Z-YYMMDDTHHmZ /</p> <p>Where the date and time attributes in the VTEC code match the warning's start and end dates and times (UTC).</p> | The VTEC code exists and is accurate. | |
| 1022. | Verify the Lat/Lon coordinates appear in the text warning product (E.g., LAT...LON 4471 9981 4488 9977...). | The Lat/Lon information exists in the text product. | |

| Step | Action | Result | Pass/Fail |
|------------------|---|--|-----------|
| 1023. | Verify the location and motion of the weather event exists below the LAT...LON line in the text warning product. | The location and motion of the weather event exists below the LAT...LON line. | |
| 1024. | Verify the text warning contains a presence of closing \$\$. | The Areal Flood Statement text contains a presence of closing \$\$. | |
| 1025. | In the text window, replace the '!'**WARNING BASIS**!' and '!--*optional description of the path of the flood--!' lines with a word or phrase and the '!'**NAME/INITIALS**!' line with the user's initials. MB1 click the 'Save' button. Then MB1 click the 'Send' button. | The Areal Flood Statement is saved. The text window displays the saved warning. | |
| 1026. | MB1 click the 'Cancel' button and MB1 click the 'Yes' button in the message box that states 'Any unsaved changes will be lost. Cancel anyway?'. | A Confirm Cancel window opens. The Confirm Cancel window closes. The warning remains displayed in the 'Text WarnGen: OMAFLSOAX' window (not in edit mode). | |
| 1027. | Ingest the warning text file into the 'warning' endpoint (/awips/edex/opt/data/sbn/warning). (Note: The created warning needs to be manually ingested for display in WarnGen. Direct save to ingest will be implemented in a later TO.) | The warning is ingested. | |
| 1028. | Close the Text WarnGen: OMAFLSOAX window. | The Text WarnGen: OMAFLSOAX window closes. | |
| 1029. | MB1 click the WarnGen button in the toolbar, select the 'Other' radio button. Select 'Areal Flood Statement' from the dropdown menu below the 'Other' radio button. Verify in the 'FOLLOWUP' dropdown menu that an expired product (EXP) that appears as follows: <ul style="list-style-type: none"> 'COR.KOAX.FA.Y.xxxx(EXP)' | The warning is ingested as verified by observing that the expired product (EXP) exists in the Update List dropdown menu. | |
| 1030. | Close the WarnGen GUI. | The WarnGen GUI closes. | |
| End of TO10 Test | | | |

5.0 TO8 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|-------------------|---|--------------|
| CAVE_TO8_013 | CAVE shall contain a WarnGen capability | |
| CAVE_TO8_013.1 | A 'WarnGen: Operational' GUI shall display when the WarnGen button is selected from the menu bar | |
| CAVE_TO8_013.3 | WarnGen shall allow the user to designate the type of warning | |
| CAVE_TO8_013.4 | WarnGen shall allow the user to select to warn on a single storm | |
| CAVE_TO8_013.5 | WarnGen shall allow the user to select to warn on a line of storms | |
| CAVE_TO8_013.5.2 | WarnGen shall allow the user to issue a Severe Thunderstorm Warning for a line of storms | |
| CAVE_TO8_013.5.3 | WarnGen shall allow the user to issue a Tornado Warning for a single storm | |
| CAVE_TO8_013.16 | WarnGen shall allow the user to designate the duration of the warning | |
| CAVE_TO8_013.18 | WarnGen shall allow the user to establish a storm track | |
| CAVE_TO8_013.19 | WarnGen shall allow the user to establish a warning area | |
| CAVE_TO8_013.19.1 | WarnGen shall allow the user to redraw the warning box in CAVE using MB1 in the WarnGen: Operational window | |
| CAVE_TO8_013.20 | WarnGen shall allow the user to select optional text bullets to be included in the warning text | |
| CAVE_TO8_013.22 | WarnGen shall allow the user to send the warning information to the text window | |
| CAVE_TO8_013.28 | WarnGen shall allow the user to Create the Text using MB1 on the 'Create Text' button | |
| CAVE_TO8_013.28.1 | WarnGen shall translate the storm path into text describing the speed and direction of the storm, and the counties and cities affected by the warning | |
| CAVE_TO8_013.28.2 | WarnGen shall generate the warning text that includes any optional bullets selected | |
| CAVE_TO8_013.28.3 | WarnGen text warning shall contain correct header information | |
| CAVE_TO8_013.28.4 | WarnGen text warning shall contain proper UGC and VTEC codes | |
| CAVE_TO8_013.28.5 | WarnGen text warning shall maintain time and Time Zone consistency | |
| CAVE_TO8_013.28.6 | WarnGen text warning shall contain correct product type | |
| CAVE_TO8_013.28.8 | WarnGen text warning shall contain a presence of closing \$\$ | |
| CAVE_TO8_013.31 | CAVE shall have the ability to overlay WarnGen on displayed weather data | |
| CAVE_TO8_013.32 | CAVE shall contain the Warning by Polygon functionality | |
| CAVE_TO8_013.32.1 | CAVE shall draw a hatched area encompassed by the drawn polygon | |
| CAVE_TO8_013.32.2 | The hatched area shall be described by the LAT...LON coordinates in the text warning product | |

| Number | Description | Test Step(s) |
|-------------------|--|--------------|
| CAVE_T08_013.32.3 | WarnGen shall not allow the warned area to cross over CWAs | |
| CAVE_T08_013.32.8 | WarnGen shall encode the location and motion of the weather event below the LAT...LON line in the text warning product | |
| CAVE_T08_013.33 | WarnGen shall be activated by using MB1 on the yellow WarnGen button on the CAVE menu bar | |
| EDEX_T08_019.16 | EDEX shall implement VTEC coding through WarnGen | |

6.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|----------|--|--------------|
| SYSR2094 | The AWIPS system shall implement the Text Product Decoder for warnings. | |
| SYSR3054 | The AWIPS System shall create the SVR - Severe Thunderstorm Warning product as produced by the Public and Fire Weather Services WarnGen Application. | |
| SYSR3055 | The AWIPS System shall create the SVS - Severe Weather Statement product as produced by the Public and Fire Weather Services WarnGen Application. | |
| SYSR3056 | The AWIPS System shall create the TOR - Tornado Warning product as produced by the Public and Fire Weather Services WarnGen Application. | |

7.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |
| SYSR | | |
| SYSR | | |

DRAFT

Test Case Hazards Grids

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0006

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | | <i>Page</i> |
|-----|--|-------------|
| 1.0 | SCOPE | 1 |
| 2.0 | APPLICABLE DOCUMENTS | 2 |
| | 2.1 Source Documents | 2 |
| | 2.2 Reference Documents | 2 |
| 3.0 | TEST CASE DESCRIPTION | 3 |
| | 3.1 Assumptions, Constraints and Preconditions | 3 |
| | 3.2 Recommended Hardware | 3 |
| | 3.3 Test Inputs | 3 |
| | 3.4 Test Outputs | 3 |
| 4.0 | TEST SCENARIO | 4 |
| 5.0 | REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 6 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- GHG Monitor

2.2 Reference Documents

- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

DRAFT

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capabilities in GFE that involve creating Hazards grids through the Make Hazard dialog, separating hazards and merging hazards.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon  and select 'Other'. | The Open Perspective dialog appears. | |
| 2. | MB1 click 'GFE'. Then MB1 click 'OK'. | The Open Perspective dialog closes. The GFE Perspective loads in CAVE. | |
| 3. | From the Main Menu, select 'Hazards' -> 'MakeHazard'. | The MakeHazard dialog box appears. | |
| 4. | From the MakeHazard dialog box, select an available hazard from the hazard list. Then MB1 click and drag over the adjacent forecast zone map to select a forecast zone(s) for the hazard. Adjust the forecast start and end times (automatically set an hour apart) for the hazard at the column to the right. MB1 click 'Run' to save the selections. | The selections are made and saved. The MakeHazard dialog remains open. | |
| 5. | Repeat step 4 to create a second hazard. MB1 click 'Run/Dismiss' to save the selections. | The selections are made and saved. The MakeHazard dialog closes. | |
| 6. | From the Main Menu, MB1 click 'Hazards' -> 'MergeHazards' to merge the Hazards on the main display. | The Hazards merge. | |
| 7. | From the Main Menu, MB1 click the 'Save Forecast' icon  . The Save Forecast dialog box appears. MB1 click 'Save Forecast' to save changes made to the main display. | The changes are saved. | |
| 8. | From the Main Menu, select 'Products' -> 'Formatter Launcher'. | The Formatter Launcher dialog box appears. | |
| 9. | From the Formatter Launcher dialog box, select 'Products' -> 'Hazard' -> <the Hazard created above>. Then MB1 click the 'Run Formatter' icon  to run the Formatter Launcher. Verify that there is a message and that the VTEC code displays. | A message displays in the text area. The VTEC code is present. | |
| 10. | Close the Formatter Launcher dialog. | The Formatter Launcher dialog closes. | |
| 11. | In the Grid Manager, MB3 click and hold on a blank grid in the Hazards parm at a time in the future. Then select 'Create From Scratch' from the popup menu. | The blank grid in the Grid Manager fills in with a gray grid (highlighted yellow since it is the selected grid). The grid is locked by the user as indicated by the green highlight. | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|---|-----------|
| 12. | MB1 click the Edit Areas tool on the tool bar. Then draw a shape on the grid in the Spatial Editor. | The Edit Areas tool is activated. An edit area is drawn in the Spatial Editor. | |
| 13. | MB3 click and hold on the colorbar. In the popup menu, select 'Set Pickup Value...' | The Define Discrete dialog appears. | |
| 14. | Select a hazard from the dropdown menu. Then MB1 click the 'Assign Value' button. | The edit area is assigned the selected hazard. | |
| 15. | Draw a second edit area in the Spatial Editor. | An edit area is drawn in the Spatial Editor. | |
| 16. | In the Define Discrete dialog, select a different hazard. Then MB1 click the 'Assign Value' button. | The edit area is assigned the selected hazard. | |
| 17. | Draw a third edit area in the Spatial Editor. | An edit area is drawn in the Spatial Editor. | |
| 18. | In the Define Discrete dialog, select a different hazard. Then MB1 click the 'Assign Value' button. | The edit area is assigned the selected hazard. | |
| 19. | Close the Define Discrete dialog. | The Define Discrete dialog closes. | |
| 20. | Remove the edit area from the Spatial Editor by MB1 clicking the 'Clear Edit Area' button. | The edit area is removed from the display. | |
| 21. | From the menu bar, MB1 click 'Hazards' -> 'SeparateHazards' to separate the Hazards on the main display. | The Hazards separate into individual parms, one for each hazard. | |
| 22. | MB1 click on the Pencil Tool on the toolbar. | The Pencil Tool is activated. | |
| 23. | Modify the hazards by MB1 dragging the cursor from inside the hazard area elsewhere, and releasing MB1 after returning to the hazard area. | The hazards are modified. | |
| 24. | From the menu bar, MB1 click 'Hazards' -> 'MergeHazards' to merge the Hazards on the main display. | The Hazards merge. | |
| 25. | Verify all hazards merged successfully. | Verified. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case Text Display Edit 2.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0007

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 7 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO8 Text Display Edit 1.0

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Section 4 of the AWIPS D-2D User's Manual Build 8.1
- Existing AWIPS 1 test procedures:
 - Baseline_TextDB_OB8.1
 - Checkout_4.3.9_TextWorkstation_OB8.1
 - Checkout_Text_Message_OB8.1
 - Checkout_TextWorkstation_OB8.1
 - Baseline_TextWKS_1.3.12.1_V1-E
 - TextWks_1.3.12.1
- The Silver Spring NWS AWIPS I test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case, a replication of the TO8 test case of the same name, demonstrates the capability of CAVE to receive, recall, and display text products received via a live data feed (TO8 used “canned data”). This test case also demonstrates the capability to edit text products.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- The Text Workstation has been started.
- The workstation is attached to a working printer.
- TO10 testing repeats steps 1-47 with a live data feed. This test procedure was modified to remove the steps to create a text product required for prior tests. With a live data feed, these steps are not necessary.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.
- Text Generalization Pattern is deferred to a future TO, pending guidance from NWS (GSD).

3.2 Recommended Hardware

See Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

- The text data will be displayed in the Text Window within CAVE.
- Data will be printed from an attached printer.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|-----------------|---|---|-----------|
| Begin TO10 Test | | | |
| 1. | Under the CAVE menu, click on 'New' and select 'Text Workstation'. | The Text Workstation control window and Text 1 window open. | |
| 2. | Select the 'AFOS Browser' button in the 'Text 1' window. | The Text 1 Browser window opens. | |
| 3. | In the Text 1 Browser window, select: Origin: Central Class: Public | The selections in the Node section change accordingly. | |
| 4. | In the Text 1 AFOS Browser window, select a combination of available Nodes and Ctgr that return items in the Designator column. | The Node and Ctgr become highlighted. Selections appear in the Designator and Display sections. The Node-Ctgr combination appears in the AFOS Cmd: command line in the Text 1 window and 'ALL:' appears in the DISPLAY section. | |
| 5. | Select an available item (one with a time and date or labeled as LATEST) in the Designator section. | The item and its associated time become highlighted. The Designator item is also added in the AFOS Cmd: command line in the Text 1 window. | DR #797 |
| 6. | Select 'ALL:' in the display section. Then select Load and Continue. | The selected product is displayed in the Text 1 window. The product name appears in the Text 1 window title. The AFOS Browser remains open. | |
| 7. | Repeat steps 5-7 for another product. Then click the 'Load and Continue' button. | The selected product displays in the text window. The previously displayed text product was removed from the text display. | |
| 8. | Click on 'Accum'. | The 'Accum' box becomes selected. | |
| 9. | Repeat steps 5 and 6 for another product. Then click the 'Load and Close' button. | The selected product is added (Accum.) to the text product displayed in the Text 1 window. The product name appears in the Text 1 window title. The AFOS Browser closes. | |
| 10. | Unselect the 'Accum' option. Then click the 'Clear' button. | The text window clears the text product. | |
| 11. | In the AFOS Cmd: line, enter 'OMAMTROMA'. Then press the 'Enter' key. | The product is returned in the text window. | |
| 12. | Click the 'Clear' button. | The text window clears the text product. | |
| 13. | Enter only a portion of a valid TTAaii CCCC (e.g., SAUS43) and press the 'Enter' key. | An error message is returned stating no product in the database matches the request. | |
| 14. | Click the 'OK' button. | The message closes. | |
| 15. | Click the 'WMO Search' button. | A 'Warning' box appears asking the user to fill in the TTAaii and CCCC and press ENTER. | |
| 16. | Click the 'OK' button. | The 'Warning' window closes. | |

| Step | Action | Result | Pass/Fail |
|------|--|--|-----------|
| 17. | Enter a valid TTAAii CCCC (e.g., SAUS43 KOAX) and press the 'Enter' key. | The text product displays in the text window. | |
| 18. | Click the 'Clear' button. | The text window clears the text product. | |
| 19. | Enter a valid AWIPS ID (e.g., TOROMA) into the 'AWIPS ID' text box. Then press the 'Enter' key. | The text product displays in the text window. | |
| 20. | Click the 'Clear' button. | The text window clears the text product. | |
| 21. | In the Text 1 window, select the Enter Editor button. | The Text 1 window becomes divided into a header section and a text section. A Header Block window also opens. | |
| 22. | Enter 'TST' for the WSFO ID, Product Category and Product Designator in the 'Header Block' window. Then click the 'Enter' button. | A warning message appears that the 'Product Designator TSTTSTTST is not in the list of valid products. Use it anyway?' | |
| 23. | Click the 'Yes' button. | The 'Header Block' window closes. TSTTST appears in the header section. The user is in edit mode. | |
| 24. | Create a message of 3 sentences in the text window. Ensure return was used after each sentence and at least one line is greater than 85 characters where the line wraps automatically. | The text is entered into the text window. The text wraps within the window. | |
| 25. | Click and drag the mouse over a section of the text. Then click the 'Cut' button. | The highlighted section is removed from the text product. | |
| 26. | In a different area of the text product, click the 'Paste' button. | The cut portion of the text is pasted into the text product. | |
| 27. | Click and drag the mouse over the entire text message. Then click the 'Fill' button. | The space within the text created by the Enter/Return button is filled in. | |
| 28. | Click and drag the mouse over a section of the text. Then click the 'Copy' button. | The highlighted section is copied. | |
| 29. | In a different area of the text product, click the 'Paste' button. | The copied portion of the text is pasted into the text product. | |
| 30. | Click 'Options' in the menu bar, select 'Font Size', and select 'Large'. | The font size increases in size. | |
| 31. | Click 'INS' from the edit menu bar. Choose 'Overstrike Mode'. | 'INS' changes to 'OVR'. | |
| 32. | Place the cursor within the text and type a word. | The text entered over the existing text. | |
| 33. | Click the 'Save' button. | The message is saved as the AFOS Cmd: TSTTSTTST. | |
| 34. | Click the 'Cancel' button. | A 'Confirm Cancel' window appears stating 'Any unsaved changes will be lost. Cancel anyway?' | |

| Step | Action | Result | Pass/Fail |
|------------------|---|---|-----------|
| 35. | Click the 'Yes' button. | The 'Confirm Cancel' window closes. The text window exits from edit mode. | |
| 36. | Click the 'Clear' button. | The text window clears the text product. | |
| 37. | In the AFOS Cmd: line, enter 'TSTTSTTST'. Then press the 'Enter' key. | The saved message is returned in the text window. | |
| 38. | Click the 'Clear' button. | The text window clears the text product. | |
| 39. | Open the 'Text 2' window. | A second text window opens. | |
| 40. | From the 'Text Workstation' window, click on 'Windows'. Then click on 'Hide All'. | The 'Text 1' and 'Text 2' windows become hidden. | |
| 41. | From the 'Text Workstation' window, click on 'Windows'. Then click on 'Show All'. | All text windows become visible. | |
| 42. | In one of the text windows, click 'File' and select 'Close'. | The text window closes. | |
| 43. | In another text window, display an available text product. | The text product displays in the text window. | |
| 44. | Print the text product by clicking on 'File' and selecting 'Print All'. | The text product prints from an attached printer. | |
| 45. | Clear the text window. Then request an available text product via AFOS Browser. | The text product displays. | |
| 46. | Edit the text product. Then save the edits. | The text product is modified and saved. | |
| 47. | Clear the text window. Then request the edited product to verify the edits were saved. | The text window clears. The text product displays the modifications. | |
| 48. | From the 'Text Workstation' window, select 'File'. Then select 'Exit'. | All opened text windows and the 'Text Workstation' window close. | |
| End of TO10 Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|-------------------|---|--------------|
| CAVE_TO8_004 | CAVE shall contain a Text Editor with the look and feel, and functionality of the current AWIPS 1 text editor | ALL |
| CAVE_TO8_004.1 | The Text Editor shall contain an AFOS Browser | |
| CAVE_TO8_004.1.1 | The AFOS Browser shall allow the user to display text products in the text window by selecting the Node, Category and Designator. | |
| CAVE_TO8_004.1.5 | The AFOS Browser shall allow the user to Load the selected text product while keeping the AFOS Browser open for further use. | |
| CAVE_TO8_004.1.6 | The AFOS Browser shall allow the user to display the selected text product and close the AFOS Browser. | |
| CAVE_TO8_004.2 | The Text Editor shall provide a print capability. | |
| CAVE_TO8_004.2.1 | The print capability shall allow the user to create a hard copy of all text in the Text Window (Print All) using the menu bar. | |
| CAVE_TO8_004.4 | The Text Editor shall provide a text/bulletin editing capability. | |
| CAVE_TO8_004.9 | The user shall be able to close out the Text Editor Window. | |
| CAVE_TO8_004.11 | The Text Editor shall provide the capability to Autowrap. | |
| CAVE_TO8_004.12 | The Text Editor shall provide the capability to change font size. | |
| CAVE_TO8_004.13 | The Text Editor shall provide the capability to overstrike using the menu bar. | |
| CAVE_TO8_004.24 | The Text Editor shall contain WMO Search Dialog Box that indicates to the user to fill in the TTAii and/or CCCC and press ENTER. | |
| CAVE_TO8_004.25 | The Text Editor shall allow the user to open the Text Editor function. | |
| CAVE_TO8_004.26 | The Text Editor shall allow the user to opt to accumulate text by appending subsequent text product retrievals to the display window. | |
| CAVE_TO8_004.28 | The Text Editor shall allow the user to clear the Text Display window. | |
| CAVE_TO8_004.29 | The Text Editor shall retrieve/display the AFOS product in the Text Display Window via the AFOS Cmd text window. | |
| CAVE_TO8_004.30 | The Text Editor shall retrieve/display the AFOS product in the Text Display Window via the WMO TTAii CCCC text window. | |
| CAVE_TO8_004.31 | The Text Editor shall retrieve/display the AFOS product in the Text Display Window via the AWIPS ID text window. | |
| CAVE_TO8_004.32 | The Text Editor shall launch the AWIPS Header Block GUI when the user enters the edit mode. | |
| CAVE_TO8_004.33 | The text editor function shall display edit functions in a menu bar fashion. | |
| CAVE_TO8_004.33.1 | The menu bar in the edit window shall provide the capability to save text. | |
| CAVE_TO8_004.33.2 | The menu bar in the edit window shall provide the capability to cut out text. | |
| CAVE_TO8_004.33.3 | The menu bar in the edit window shall provide the capability to copy text. | |

| Number | Description | Test Step(s) |
|--------------------|--|--------------|
| CAVE_T08_004.33.4 | The menu bar in the edit window shall provide the capability to paste text. | |
| CAVE_T08_004.33.5 | The menu bar in the edit window shall provide the capability to remove hard returns from selected text (Fill). | |
| CAVE_T08_004.33.6 | The menu bar in the edit window shall provide the capability to edit a bulletin header. | |
| CAVE_T08_004.33.8 | The menu bar in the edit window shall provide the capability to cancel out of the editor function (cancel). | |
| CAVE_T08_004.33.10 | The menu bar in the edit window shall provide the capability to overstrike text. | |
| CAVE_T08_004.36 | The Text Workstation shall allow the user to exit a Text Workstation. | |
| CAVE_T08_004.37 | The Text Workstation shall allow the user to open a Text Workstation. | |
| CAVE_T08_004.38 | The Text Workstation shall allow the user to "Hide All" workstation screens. | |
| CAVE_T08_004.39 | The Text Workstation shall allow the user to "Show All" workstation screens. | |

Test Case Hydroview
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0008

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 38 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_HYDRO_WHFS_Hydroview (OB8.3); Baseline_HYDRO_WHFS_Hydroview_OB8.1; Baseline_HYDRO_PointData.Control; Checkout_4.4.2_Hydroview_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

The purpose of this Test Procedure is to test and verify the functionality found within the current version of the WHFS Hydrologic Data Viewer application known as Hydroview. Also demonstrated in this test case is the Point Data Control functionality. As new functionality is added to this application, these test procedures will be updated to contain the steps required to test this new functionality.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents. Note that Pan and Zoom capabilities highlighted in yellow will be demonstrated following an approach consistent with current CAVE capabilities. Differences in approach from AWIPS I Hydroview may result in a variance or later revision.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | From the 'MapData' pull-down menu, select 'Point Data Control...'. MB1 click the 'Close' button. | The Point Data Control window opens and the stations display in the Hydroview main window. | |
| 3. | From the 'Help' pull-down menu, select 'About'. | An About window displaying the application's name, version number and date is shown. | |
| 4. | On the About window, MB1 click the 'OK' button. | The About window closes. | |
| 5. | From the 'Help' pull-down menu, select 'Map Legend'. | This window displays a legend for Station icons and colors. These are the station icons and colors used by the Point Data Control option. Note: To make sure some stations exist in the Hydroview main window. | |
| 6. | MB1 click the 'Close' button from the Station Legend window. | The Station Legend window closes. | |
| 7. | From the File pull-down menu, select 'Save as Gif'. | The Save as GIF window launches. | |
| 8. | In the Save as GIF window, use the Filter and Directories selection boxes to choose a directory to save a GIF screen capture. In the Selection box, enter the name of the file to save the screen capture to (including the directory) followed by the '.gif' file extension. For best results move the Save as GIF window off of the Hydroview display. MB1 click the 'OK' button. | The Save as GIF window closes. | |
| 9. | In a terminal, go to the directory where the screen capture was saved. Use the "display" command to display the GIF file. | The Hydroview screen capture displays. | |
| 10. | From the 'File' pull-down menu, select 'Print Image'. | The Hydroview image is sent to the printer specified by the whfs_printcommand_LX token. | |
| 11. | From the 'File' pull-down menu, select 'Print Reverse Image'. | The Hydroview image is sent to the printer specified by the whfs_printcommand_LX token. The image will be displayed in reverse video (i.e., black as white and white as black). | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 13. | From the 'Tools' pull-down menu, select 'Point Zoom' -> 'Out'. | The center of the geographic display is zoomed out. | |
| 14. | From the 'Tools' pull-down menu, select 'Point Zoom' -> 'In'. | The center of the geographic display is zoomed in. | |
| 15. | Draw a rectangle on the geographic display by holding down the MB1. Then from the 'Tools' pull-down menu, select 'Areal Zoom'. | The geographic display zooms in on the rectangular area drawn. | |
| 16. | From the 'Tools' pull-down menu, select 'Areal Zoom' again. | The display returns to its previous zoom level. | |
| 17. | From the 'Tools' pull-down menu, select 'Pan' -> 'Up'. | The geographic display moves North. | |
| 18. | From the 'Tools' pull-down menu, select 'Pan' -> 'Down'. | The geographic display moves South. | |
| 19. | From the 'Tools' pull-down menu, select 'Pan' -> 'Right'. | The geographic display moves East. | |
| 20. | From the Tools pull-down menu, select 'Pan' -> 'Left'. | The geographic display moves West. | |
| 21. | From the 'Tools' pull-down menu, select 'Recenter'. | The cursor changes from an arrow into a leftward pointing hand that indicates that recenter functionality is active. | |
| 22. | MB1 click on an area that is not in the center of the display. | The display is recentered on the selected area. | |
| 23. | From the 'Tools' pull-down menu, select 'Recenter' again. Then MB1 click on the area that was originally at the center of the display. | The geographic display returned to its previous viewing state and center. | |
| 24. | From the 'Tools' pull-down menu, select 'Tool Bar'. | A tool bar appears just below the row of pull-down menus. The icons shown perform the same functions as the Zoom and Pan options found in the Tools pull-down menu. | |
| 25. | From the 'Tools' pull-down menu, select 'Tool Bar' again. | The tool bar disappears. | |
| 26. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Small'. | Alphanumeric text annotations on the Hydroview GUI display in their default, startup size. | |
| 27. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Very Small'. | Alphanumeric text annotations on the Hydroview display become smaller when compared to previous size. | |
| 28. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Miniscule'. | Alphanumeric text annotations on the Hydroview display become smaller when compared to previous size. This is the smallest font size. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 29. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Normal'. | Alphanumeric text annotations on the Hydroview display become normal in font size. | |
| 30. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Large'. | Alphanumeric text annotations on the Hydroview display become larger. | |
| 31. | From the 'Tools' pull-down menu, select 'Set Font' -> 'Very Large'. | Alphanumeric text annotations on the Hydroview display become larger than previous size. This is the largest font size. | |
| 32. | From the 'Projections' pull-down menu, select 'Polar Stereographic'. | The geographic map displays a Polar Stereographic projection. | |
| 33. | From the 'Projections' pull-down menu, select 'HRAP'. | The geographic map displays a HRAP projection. | |
| 34. | From the 'Projections' pull-down menu, select 'Flat Lat/Lon'. | The geographic map displays a Flat Latitude / Longitude projection. | |
| 35. | From the 'Overlays' pull-down menu, select 'Streams/Lakes' -> 'No Streams/Lakes'. | No streams or lakes are shown on the geographic display. | |
| 36. | From the 'Overlays' pull-down menu, select 'Streams/Lakes' -> 'Major Streams/Lakes'. | All major streams and lakes are shown on the geographic display if defined in the Overlay Configuration file. | |
| 37. | From the 'Overlays' pull-down menu, select 'Streams/Lakes' -> 'All Streams/Lakes'. | All streams and lakes are shown on the geographic display if defined in the Overlay Configuration file. | |
| 38. | From the 'Overlays' pull-down menu, select 'Basin Boundaries'. | This toggles the displaying of Basin Boundary outlines on the geographic display if defined in the Overlay Configuration file. | |
| 39. | From the 'Overlays' pull-down menu, select 'Counties'. | This toggles the displaying of County outlines on the geographic display if defined in the Overlay Configuration file. | |
| 40. | From the 'Overlays' pull-down menu, select 'County Warning Areas'. | This toggles the displaying of CWA outlines on the geographic display if defined in the Overlay Configuration file. | |
| 41. | From the 'Overlays' pull-down menu, select 'RFC Boundaries'. | This toggles the displaying of RFC Boundary outlines on the geographic display if defined in the Overlay Configuration file. | |
| 42. | From the 'Overlays' pull-down menu, select 'States'. | This toggles the displaying of State Borders on the geographic display if defined in the Overlay Configuration file. | |
| 43. | From the 'Overlays' pull-down menu, select 'Zones'. | This toggles the displaying of Zones on the geographic display if defined in the Overlay Configuration file. | |
| 44. | From the 'Overlays' pull-down menu, select 'Cities/Towns'. | This toggles the displaying of City locations on the geographic display if defined in the Overlay Configuration file. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 45. | From the 'Overlays' pull-down menu, select 'Highways/Roads' -> 'Highways'. | All Highways will be shown on the geographic display if defined in the Overlay Configuration file. | |
| 46. | From the 'Overlays' pull-down menu, select 'Highways/Roads' -> 'None'. | No Highways or Roads are shown on the geographic display. | |
| 47. | From the 'Overlays' pull-down menu, select 'HRAP'. | This toggles the display of the HRAP grid on the geographic display if defined in the Overlay Configuration file. | |
| 48. | From the 'Overlays' pull-down menu, select 'Lat/Lon Lines'. | This toggles the display of Latitude and Longitude lines on the geographic display if defined in the Overlay Configuration file. | |
| 49. | From the 'Overlays' pull-down menu, select 'Time Zones'. | This toggles the display of Time Zone boundaries on the geographic display if defined in the Overlay Configuration file. | |
| 50. | From the 'Overlays' pull-down menu, select 'Radar Locations'. | This toggles the display of Radar locations on the geographic display if defined in the Overlay Configuration file. | |
| 51. | From the 'Overlays' pull-down menu, select 'Radar Rings'. | This toggles the display of the outline of a Radar's coverage area on the geographic display if defined in the Overlay Configuration file. | |
| 52. | On the 'Overlays' menu, the grayed out Basin Names listed below will be implemented in a future build: 'Hydro Service Areas' 'Topography' 'Maps Foreground' | No Action. | |
| 53. | Double MB1 click on a station icon on the geographic display. | The selected station is enclosed in a red square. | |
| 54. | From the 'MapData' pull-down menu, select 'Station Selection'. | The Station List window appears. The entry for the station enclosed in the red square on the Hydroview display is highlighted in the Station Selection list. | |
| 55. | From the 'Station List', select another station. | The station entry in the Station List becomes highlighted. A red rectangle is drawn around the station's location on the Hydroview display. | |
| 56. | In the 'Station List' window, double MB1 click on a station. | The time series control window is shown. | |
| 57. | On the 'Hydroview' display, double MB1 click on another station. | A red rectangle is drawn around that station on the Hydroview display. | |
| 58. | From the 'Station List' window, scroll down the station list, select another station and then use the 'Search' text box to find the station selected in step 59. | The search feature will find the station in the list, highlight its entry in the station list and draw a red rectangle around its location on the Hydroview display. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 59. | From the 'Station List' window, MB1 click the 'Cancel' button. | The Station List window closes. | |
| 60. | From the 'MapData' pull-down menu, select 'Refresh Data'. | This queries the IHFS database and updates the station data shown on the Hydroview display. | |
| 61. | From the 'MapData' pull-down menu, select 'Dam Locations'. | The Dam Display Control window opens. | |
| 62. | Select the 'Map Data' push-button on the Dam Display Control window. | Dam icons along with their names display on the geographic window. | |
| 63. | The Dam Display Control window provides the option to filter the displayed Dams by volume. Enter a value in the threshold volume text box (e.g. 100000) and then try each of the filters by options: greater than, equal to, less than, and All. Each time a filter option is changed, MB1 click the 'Map Data' button. | The Dam icons are selectively displayed based on their volume, the dam volume threshold value and filter option chosen. | |
| 64. | The Dam Display Control window allows the displayed dams to be limited within a specific area on the Hydroview display. This is controlled by a user-selectable center point and a latitude/longitude box centered on this point. Try modifying the 'lat/lon center point' value and the 'lat/long offsets'. Toggle the 'enable' button and select 'Map Data'. | The displayed dams are limited to the defined latitude/longitude box. | |
| 65. | Select different combinations of the filters (Id, Name and Icon) in the Dam Display Control window. This allows the display to show or hide the Id, Name, and Icon. | The Data is selectively displayed based on the filter chosen for Id, Name and Icon filters. | |
| 66. | Place the mouse pointer over a dam location, click and hold MB3 and select 'DamCrest' from the popup menu. | The DamCrest application is launched for the selected dam. Output Manager window opens. | |
| 67. | On the Dam Crest application window, MB1 click 'Close' from the File pull-down menu. | The Dam Crest application is closed. | |
| 68. | Select the 'Clear Data' push-button on the Dam Display Control window. | The Dams will be cleared from the geographic display. | |
| 69. | From the Dam Display Control window, MB1 click the 'Close' button. | The Dam Display Control window closes. | |
| 70. | From the 'MapData' pull-down menu, select 'Best Estimate QPE'. | The Display Best Estimate QPE window opens. | |
| 71. | From the Display Best Estimate QPE window, MB1 click the 'Show Data' button. | A MPE generated 1 hour Best Estimate QPE field displays in the Hydroview GUI. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 72. | From the Display Best Estimate QPE window, MB1 click the 'Time Lapse' button and use the duration slider bar to set the duration to 6 hours. MB1 click the 'Show Data' button. | A time lapse of 6 hours worth of MPE Best Estimate QPE fields displays in the Hydroview GUI. | |
| 73. | From the Display Best Estimate QPE window, MB1 click the ' <<' button adjacent to the time lapse toggle button. | The time lapse stops and enters manual time lapse mode. The oldest QPE field in the time lapse is shown in the Hydroview display (the time of the product is shown in the lower left corner of the display). | |
| 74. | From the Display Best Estimate QPE window, MB1 click the '<' button to manually step backwards through each frame of the time lapse. | Each time the '<' button is clicked, the previous QPE frame in the time lapse is displayed. | |
| 75. | From the Display Best Estimate QPE window, MB1 click the '>' to manually step forward through each frame of the time lapse. | Each time the '>' button is clicked, the next QPE frame in the time lapse is displayed. | |
| 76. | From the Display Best Estimate QPE window, MB1 click the restart timelapse button  to restart the automatic time lapse. | The automatic time lapse resumes. | |
| 77. | From the Display Best Estimate QPE window, MB1 click the 'End Lapse' button. | The time lapse stops. The Hydroview display shows the Best Estimate QPE field which was displayed before the time lapse was started. | |
| 78. | From the Display Best Estimate QPE window, MB1 click the 'Accumulate' toggle button. Set the duration slider bar to '24'. MB1 click the 'Show Data' button. | An accumulation of 24 1-hour Best Estimate QPE fields displays in the Hydroview GUI. | |
| 79. | From the Display Best Estimate QPE window, select 'Basin' from the 'Display As' combo box. MB1 click the 'Show Data' button. Use the grid, zone and county filters. | The 24 hour accumulation is displayed as basin averaged precipitation amounts. | |
| 80. | From the Display Best Estimate QPE window, select 'day adjust' and 'hour adjust' arrow buttons to increment / decrement the date and time. MB1 click 'Show Data'. | The displayed data should have changed according to the data and time selected. | |
| 81. | From the Display Best Estimate QPE window, MB1 click the 'Clear Data' button. | The QPE data are cleared from the MPE display. | |
| 82. | From the Display Best Estimate QPE window, MB1 click the 'Close' button. | The Display Best Estimate QPE window closes. | |
| 83. | From the 'MapData' pull-down menu, select 'Flash Flood Guidance'. | The Flash Flood Guidance window opens. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 84. | Select a product from the top or near the top of the list, and MB1 click 'Select'. | A color map of zones displays, showing the current Flash Flood threat across the area. Warm colors are threats; cool colors are not threats. If the RFC for the WFO does not produce FFG data, the color for missing displays. | |
| 85. | Select the 'FFG Mode Gridded' toggle button and select 'WFO' in the 'FFG area' filter. Select a product from the scroll list and MB1 click 'Select'. | A color map displays showing the Flash Flood threat across the area for the WFO. | |
| 86. | With the 'FFG Mode Gridded' toggle button set, change the 'FFG area' to 'RFC'. Select a product from the list. | A color map displays showing the Flash Flood threat across the area for the RFC. | |
| 87. | With the 'FFG Mode Gridded' toggle button set, choose different durations from the 'Dur' filter. Select products from the list. | The color map shows the Flash Flood threat for the selected duration. | |
| 88. | With the 'FFG Mode Gridded' option set, select a product from the list. Test by choosing 'Basin' once and 'Grid' next time in the 'Display As' filter option. | The color map shows the flash flood threat displayed on an HRAP grid when the Display As filter is 'Grid'. The color map shows the flash flood threat displayed as averaged basin values when the Display As filter is 'Basin'. | |
| 89. | Set the 'FFG Mode' to 'Areal'. | The product list will update with areal FFG products. | |
| 90. | With FFG Mode set to Areal, choose different Areal Types (Zone, County, Basin, All) and select products to display for them. | The areal values display in the Hydroview viewer based on the selected Areal Type filter and the selected product from the FFG product list. The areal values display as colored numbers. The colors of the numbers correspond to the FFG color product legend. | |
| 91. | With the 'FFG Mode' set to 'Areal', select different durations from the 'Dur FFG' option and display FFG products for them. | The areal FFG values display for the selected duration. | |
| 92. | With the 'FFG Mode' set to 'Areal', select a product from the list and test by selecting/deselecting the toggle buttons for 'Id' and 'Value'. | The Areal FFG labels displayed on the Hydroview map are based on the toggle selection of the 'Id' and 'Value'. If 'Id' is only selected then only Ids will be displayed. This holds the same with 'Value' toggle button. If both 'Id' and 'Value' are selected then both Ids and Values display. | |
| 93. | MB1 click the 'Clear' button in the Flash Flood Guidance window. | The FFG data are cleared from the Hydroview geographic display. | |
| 94. | MB1 click the 'Close' in the Flash Flood Guidance window. | The Flash Flood Guidance window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 95. | From the 'LiveData' pull-down menu, select 'Time Series Graphs/Tables'. | The Time Series Control window opens in Station Selection mode with the station selected inside the red square on the Hydroview Display highlighted in the station list. | |
| 96. | MB1 click the 'Close' button in the Time Series Control window. | The Time Series Control window closes. | |
| 97. | From the 'LiveData' pull-down menu, select 'Site Specific Headwater Model'. | The SSHP application launches for the selected station. If that station is not configured for SSHP, an error dialog appears. Select the 'OK' button to close the dialog. | |
| 98. | Select the 'Exit Application' push-button on the SSHP Control window. | The SSHP application closes. | |
| 99. | From the 'LiveData' pull-down menu, select 'Alert and Alarms Data'. | The Alert and Alarm Data Values window opens. The scroll list shows the alert/alarm data. Also details for the item that is highlighted in the list will appear in the all appropriate text areas that is below the scroll list. | |
| 100. | Select different values for the show filter: 'All' 'Observed' 'Forecast' | The scroll list will have only forecast data if 'Forecast' is selected, only observed data if 'Observed' is selected and both observed and forecast data if 'All' is selected. | |
| 101. | Select different values for the show filter: 'Alert&Alarm' 'Alert' 'Alarm' | The scroll list will have only alert data if 'Alert' is selected, only alarm data if 'Alarm' is selected and both alert and alarm data if 'Alert/Alarm' is selected. | |
| 102. | Select different values for the exceeding filter: 'Any Limit' 'Rate-Of-Change' 'Upper Limit' 'Lower Limit' 'Diff Limit' | The scroll list will have only rate-of-change data if 'Rate-Of-Change' is selected, only data that has exceed upper limit if 'Upper Limit' alarm is selected, only data that is lower than the set lower limit if 'Lower limit' is selected and all exceeded data if 'Any Limit' is selected. | |
| 103. | Select 'Sort By Time'. | The data in the scroll list is displayed with their order sorted by validtime. | |
| 104. | Select 'Sort By Location'. | The data in the scroll list is displayed with their order sorted by location id. | |
| 105. | Select any item from the scroll list and MB1 click the 'Delete' button. | A dialog asking confirmation to delete appears. If you select 'Yes', that item will be deleted. | |
| 106. | Select 'Tabular Time Series and Graphical Time Series' to bring up Time Series window. | The Time Series Control window opens in Station Selection mode with the selected station highlighted. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 107. | Select the 'Close' push-button on the Alert and Alarm Data Values window. | The Alert and Alarm Data Values window closes. | |
| 108. | From the 'LiveData' pull-down menu, select 'Questionable and Bad Data'. | The Questionable and Bad Data window opens. Scroll List showing the questionable and bad data displays in the window. The qc description for the item that is highlighted in the list appears in the bottom QC Description box. | |
| 109. | Select 'Filter By Location' and enter a location id. Press the Enter key on the keyboard after entering the location id. | The scroll list has only the data that is pertaining to the location id provided. If there is not questionable and bad data found for that location id, it will give the message stating the data is unavailable. | |
| 110. | Select different values for element from the available values: 'Height' 'Temperature' 'Ground' 'Ice' | The scroll list has only the data that is pertaining to the selection made. If Temperature is selected, only temperature data is displayed and so on. | |
| 111. | Enter the number of days (say 11) in the test box available for last days. | The scroll list has the data that is pertaining to the past 11 days. | |
| 112. | Select 'Sort By Location'. | The scroll list has the data sorted based on location id. | |
| 113. | Select 'Sort By Time'. | The scroll list has the data sorted based on observation time. | |
| 114. | Select 'Sort By Shef Quality'. | The scroll list has the data sorted based on shef quality (the SQ column). | |
| 115. | Select 'Sort By Quality Code'. | The scroll list has the data sorted based on quality code (the QC column). | |
| 116. | Highlight an item in the scroll list and MB1 click 'Set Missing'. | The item is set to have its value missing and the item is removed from the scroll list displayed. | |
| 117. | Highlight an item in the scroll list and MB1 click 'Delete Selected'. | The item is moved to rejecteddata table in the database and the type field in the table has its value as 'M' (meaning it is manually sent to rejecteddata table and not through shefdecode). The item is removed from the scroll list displayed. | |
| 118. | Select 'Tabular Time Series and Graphical Time Series' to bring up Time Series window. | The Time Series Control window opens in Station Selection mode with the selected station highlighted. | |
| 119. | Select the 'Close' push-button on the Questionable and Bad Data window. | The Questionable and Bad Data window closes. | |
| 120. | From the 'LiveData' pull-down menu, select 'Rejected Data Trash Can'. | The Data Trash Can window opens. The scroll list has the rejected data displayed. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 121. | Select 'Filter By Location' and enter a location id. | The scroll list has only the rejected data that is pertaining to the location id provided. | |
| 122. | Select 'Filter By Physical Element' and select any physical element from the physical element scroll list. | The scroll list has only the rejected data that is pertaining to the physical element selected. | |
| 123. | Uncheck the 'Location' toggle button. Select 'Sort By Location'. | The scroll list has the data sorted based on location id. | |
| 124. | Select 'Sort By Time'. | The scroll list has the data sorted based on observation time. | |
| 125. | Select the 'Reject Type' option to be either: 'All' 'Auto' 'Manual' | The scroll list has only the data that is manually rejected using the questionable and bad data window and MB1 clicking the 'Delete Selected' button if the reject type option is 'Manual'. The list will have only the data that is entered into rejecteddata table by shefdecode (automatic data) if the reject type is 'Auto'. The list will have both the manual and auto data from the rejecteddata table if the reject type option is 'All'. | |
| 126. | Highlight an item in the scroll list and MB1 click Move Selected to Data Tables'. | The selected data are moved to its respective data table and the entry is removed from rejecteddata table. | |
| 127. | Highlight an item in the scroll list and MB1 click 'Delete Selected'. | The selected data is deleted from the rejecteddata table and the entry is removed from the scroll list. | |
| 128. | MB1 click the 'Delete All' button. | A confirmation window appears asking whether you want to delete all the data in the Rejected Data Trash Bin. This will delete all records from RejectedData table in the database. | |
| 129. | Select 'Close' in the Data Trash Can window. | The Data Trash Can window closes. | |
| 130. | From the 'LiveData' pull-down menu, select 'Station Reporting Status/Latest Observations'. | The Station Reporting Status window opens, showing the station ID, the station name, when the last observation was made, and when the latest data were received. This window updates if the shef_post_latest token is set to 'ON' in the /awips/hydroapps/.Apps_defaults_site file. | |
| 131. | From the 'List' options, select 'All Locations With Latest Data'. | This results in the display of all the location with their latest data information in the scroll list. | |
| 132. | From the 'List' option, select 'Only Locations With Latest Data Older Than'. | The 'Hours Ago' command line becomes active. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 133. | In the 'Hours Ago' command line, type '12 Hours'. Then press the 'Enter' key on the keyboard. | All stations which have not reported in last 12 hours display. | |
| 134. | In the 'Sort' option, select 'By Time'. | The list is sorted by Observation Time (Z), with the most recent time at the top. | |
| 135. | In the 'Sort' option, select 'By Location'. | The list is sorted by Location Id. | |
| 136. | In the Station Reporting Status window, selected different stations in the top window. | The Latest Data for Selected Station list in the bottom of the Station Reporting Status window updates to display the latest data elements received for that station. For reference purposes, the current time field updates to show the current time. Also, information about the station's telemetry and dcp reporting status can also be seen in the bottom of the window. | |
| 137. | In the Station Reporting Status window, select locations without any latest data. | The list of stations for which latest observation data is not found in the database is shown in the scroll list. | |
| 138. | Select the 'Close' push-button on the Station Reporting Status window. | The Station Reporting Status window closes. | |
| 139. | From the 'LiveData' pull-down menu, select 'Point Precipitation Accumulations'. | The Point Precipitation Accumulations window opens. | |
| 140. | Select the 'Load Data' push-button. | Data is listed in the scrolled window based on the criteria selected. | |
| 141. | The up and down arrow buttons are used to change the date and time to specify the end time. Change the end time using the arrows and select 'Load Data'. | Data is listed in the scrolled window based on the time and other criteria selected in the window. | |
| 142. | Select 'Filter By HSA' button and select one or more item from the HSA scroll list and select 'Load Data'. | Data is listed based on the HSA selected in the scroll list and other criteria selected in the window. | |
| 143. | Select the 'Filter By Data Source' button and select one or more item from the 'PC' or 'PP' scroll list. Then select 'Load Data'. | Data is listed based on the items selected in the scroll list and other criteria selected in the window. | |
| 144. | Select option 'Show Details'. Then select 'Load Data'. | The summary has additional information about the displayed data report in brief. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 145. | Select option 'Add PP Reports as Needed'. Select 'Load Data'. | The summary shows the PP summed values which (if not selected) would otherwise be reported as MSG (missing) if there is no direct report for the mentioned duration window. The summed values are nothing but the value obtained by adding all PP reports available within that duration. Also, if the 'Show Details' options is selected, the reported summed PP values shows (24.0s) at the end of the line, which would have been (0.0s) meaning MSG if there is no PP report and the 'Add PP Report As Needed' is deselected. | |
| 146. | Select 'Sort By Location'. MB1 click the 'Load' data button. | The report is sorted by the location id. | |
| 147. | Select 'Sort by Value'. | The report is sorted by their value with the highest value in the top. | |
| 148. | Select 'Other' in the duration scroll list and type a number (say 7) in the text box and select load data. (No fraction values, even if providing only the whole number before the decimal point, will be considered) | The report is based on the value supplied in the text box. If there is any other item selected in the duration scroll list (say 24) along with 'Other', the report will have values for both 24hr and 7 hr durations. | |
| 149. | Select 'By Location' and enter a location id in the text box provided. Then select the 'Load Data' button. | The report displays for the location id mentioned. The report has additional information about the individual data reported in the specified duration with their reported time, quality code etc. | |
| 150. | Select 'Save and Close.' | A window for choosing the directory and file name to save the report appears. Specify the filename along with its path. The report is saved in that file. | |
| 151. | Select 'Print'. | The report is printed. | |
| 152. | Select the 'Close' push-button on the Point Precipitation Accumulations window. | The Point Precipitation Accumulations window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 153. | Select a station by double MB1 clicking on a station in the map. From the 'LiveData' pull-down menu, select 'Station Profile'. | The Station Profile window opens for the selected station. The window has an elevation graph showing the river stream on which the selected station (gage) is located. It will also show other stations (gages) that are located on this stream. The graph also shows the latest observation for any of the gages located on the stream. The window has different stations that are located on this stream being listed on the station option. Upon selection of any station from this station option, the window shows its name, reach, action and flood stage information. | |
| 154. | Select the 'Close' push-button on the Station Profile window. | The Station Profile window closes. | |
| 155. | From the 'LiveData' pull-down menu, select 'River Summary'. | The River Summary window opens. The list of streams (rivers) displays in the scroll list. | |
| 156. | Select an item in the scroll list. | A flood stage map displays for the selected stream. This shows the flood, stage (red), warning stage (yellow), action stage (green) for all the stations located on this stream. The graph also shows the value (blue) for the station if available. | |
| 157. | Select different values for stage basis: 'Max Obs/Fcst' 'Observed' 'Forecast' | The value (blue) color on the graph shows the max of obs/fcst if the 'Max Obs/Fcst' option is selected, the observed value if the 'Observed' option is selected, or the forecast value if the 'Forecast' option is selected. The blue color does not appear if the value is not found. | |
| 158. | Select the 'Close' push-button on the River Summary program. | The River Summary program closes. | |
| 159. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Staff Gage'. | The Staff Gage window opens for that station. The window has a graph that shows the flood stage, action stage, warning stage, record stage, minor stage, major stage, bank full stage etc about the gage. The window also shows the name, basin, state, etc information for that station selected. | |
| 160. | Select the 'Close' push-button from the bottom of the Staff Gage window. | The Staff Gage window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 161. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Impact Statement Gage'. | The Impact Statement window opens for that station. The impact window shows the impact value, impact pe, begin date, end data, tendency of the impact in the scroll list if data is found. On selecting an item in the scroll list, the characteristics display for that statement below the scroll list. The impact also displays in the text box in the bottom of the window. | |
| 162. | Select the 'Cancel' push-button from the bottom of the Impact Statement window. | The Impact Statement window closes. | |
| 163. | Select a station by double MB1 clicking on the station in the map. From the 'ReferenceData' pull-down menu, select 'Low Water Statement'. | The Low Water Statement window opens for that station. The window shows a list of lower and upper limits of a river physical element in the scrolled list in the top of the window. Selecting an entry in this list shows low water impact details in the information block in the lower window. | |
| 164. | Select the 'Close' button on the Low Water Statement window. | The Low Water Statement window closes. | |
| 165. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Rating Curve'. | The Rating Curve window opens for that station. The window shows the rating curve stage vs. flow graph. This graph is based on the shift value that is highlighted in the list box at the bottom of the screen, which has the shift value, shift data and its status (active-T inactive-F). The window shows the stage and discharge values in two different scroll lists: one with shift value applied and the other without shift value. The window also shows the flood stage and record flood stage on top of screen for the selected station. | |
| 166. | Place the mouse at any point on the graph. Click and hold MB1 and keep moving the mouse. | This results in showing the stage and flow (KCFS) values displayed on the top left corner of the window. The value is in correspondence to the mouse point on the map. | |
| 167. | Select the 'Close' push-button from the bottom of the Rating Curve window. | The Rating Curve window closes. | |
| 168. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Data Sources'. | The Data Sources window opens for that station. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 169. | Select different values for the type option: 'Observer' 'DCP' 'Telemetry' | The data pertaining to the station selected and the type selected displays. In case of the scroll lists shown, the applicable value for the station and type are highlighted. | |
| 170. | Select the 'Close' push-button from the bottom of the Data Sources window. | The Data Sources window closes. | |
| 171. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Contacts'. | The Contacts window opens for that station. The contact window specifies the contact information for this station display in their order of escalation (1- to be the highest in the hierarchy in person of contact list for that station) in scroll list. All the available contact information for the item that is highlighted in the scroll list is shown in the information portion of the window. | |
| 172. | Select the 'Close' push-button from the bottom of the Contacts window. | The Contacts window closes. | |
| 173. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Crest History'. | The Crest History window opens for that station. The window shows the stage vs. year of occurrence map. | |
| 174. | Choose different options for filter crests by selecting the following options: 'All' 'Above Action Stage' 'Below Action Stage' | The map displayed changes accordingly and the data displayed in the right side of the window also changes appropriately. | |
| 175. | MB1 click on an 'X' on the map. | The data displayed in the right side of the window changes appropriately. | |
| 176. | Choose different options for the sort crests by option: 'Stage' 'Date' 'Flow' | The scroll list showing stage, flow, date and time is sorted based on date if 'Date' is selected, stage if 'Stage' is selected, or flow if 'Flow' is selected. | |
| 177. | Select the 'Close' push-button from the bottom of the Crest History window. | The Crest History window closes. | |
| 178. | Select a station by double MB1 clicking on a station in the map. From the 'ReferenceData' pull-down menu, select 'Text Reports'. | The E-19 Report window opens for that station. | |
| 179. | Scroll through the various types of reports in the Report option menu and try selecting them. | Different reports display as different report option items are selected. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 180. | With report option menu at E-19, scroll through the various values in page option menu and try selecting them. (Page option is shown only for E-19 report option.) | Different reports display as different values selected for page option. | |
| 181. | Select a report option value to be sorted station list. | This shows the report of all the stations sorted based on location id. | |
| 182. | Change the sort by option to: 'Name' 'County' 'Basin' 'Observer' | The report of all the stations are sorted based on the location name if 'Name' is selected, county if 'County' is selected, basin if 'Basin' is selected, or observer name if 'Observer' is selected. | |
| 183. | Select the report option value to be 'Station Class'. | This shows the report of all the stations detailing the station class information. | |
| 184. | Select report option value to be 'Service Backup'. | This shows the report of all the stations detailing the list of stations sorted by station id. | |
| 185. | Change the sort by option to: 'Station' 'WFO' 'HSA' | This shows the report of all the stations sorted based on the station id if 'Station' is selected, based on WFO if 'WFO' is selected, based on HSA if HSA' is selected. | |
| 186. | Select 'Save'. | A dialog showing the file name with the path displays, asking for confirmation to save. MB1 clicking the report saves the file. If cancel is selected, the dialog window closes. | |
| 187. | Set the report option value to 'E-19'. Select 'Print'. Select the contents that are needed in the printed report. Then select 'Print' to print the report. Select 'Close' to close this window. | The report content window displays. The item prints. The window closes. | |
| 188. | Select the 'Close' push-button from the bottom of the Report window. | The Report window closes. | |
| 189. | From the 'Product' pull-down menu, select 'Product Viewer'. | The Product Viewer window opens. | |
| 190. | From the 'List' option, select 'Text Products in Database'. | A list of products displays in the Product Information section. | |
| 191. | If any products appear in the Product Information section, select one. | The Product chosen display below. | |
| 192. | Select the 'Close' push-button from the bottom of the Product Viewer window. | The Product Viewer window closes. | |
| 193. | Zoom into an area of interest by using MB2 or the 'Zoom' and 'Recenter' tools from the 'Tools' menu. | The selected area of the map is enlarged and shows a greater level of detail. | |

| Step # | Action | Result | Pass/Fail |
|----------------------------------|---|---|-----------|
| 194. | MB3 click and hold on the Hydro Perspective tab and select 'Close'. | The Hydro Perspective closes. | |
| End of Hydroview Test | | | |
| Start of Point Data Control Test | | | |
| 195. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 196. | From the 'MapData' pull-down menu, select 'Point Data Control...' | The Point Data Control window opens and the stations display in the Hydroview main window. | |
| 197. | In the Presets/Query Mode Frame, MB1 click on the Ad Hoc radio button | The Ad Hoc radio button is red. | |
| 198. | <p>In the Elements frame, MB1 click on the first combo box and select 'River'. *</p> <p>*In the second combo box (PE), the PEs that appear are the same ones that are in the <i>ingestfilter</i> table. This is true for Steps 3-22. The elements that are listed in Action Steps 3-22 display in the same order in the first combo box. For example:</p> <ul style="list-style-type: none"> • River • Rain • Snow • etc. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> (look for it in Hydrobase) table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • Primary • HA – Reading Height • HB – Depth below Sfc • HC – Ceiling Height • HD – Head Height • HE – Regulating Gate • HG – River Stage • HI – Stage Trnd Indicator • HP – Pool Elevation • HQ – Distance to River • HS – Spillwy Forebay El • HT – Tailwater Elev • QC – Runoff Volume • QD – Canal Divers. Dsch • QI – Inflow Discharge • QR – River Discharge • QT – Total Discharge | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 199. | In the Elements frame, MB1 click on the first combo box and select 'Rain'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • PC and PP • PC Precip Accumulator • PP Precip Increment • PR Precip Rate • PT Precip Type | |
| 200. | In the Elements frame, MB1 click on the first combo box and select 'Snow'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • SA Areal Snowfall • SD Snow Depth • SF New Snowfall • SR Snow Report • SS Snow Density • ST Snow Temp at Depth • SW Snow Water Equiv | |
| 201. | In the Elements frame, MB1 click on the first combo box and select 'Temperature'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • TA Air Temperature • TB Soil Temp at Depth • TD Dew Point Temp • TE Air Temp at Elev • TM Wet Bulb Temperature • TP Pan water Temp • TS Soil Temp at Sfc • TV Veg Soil Temp • TW Water Temperature | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 202. | In the Elements frame, MB1 click on the first combo box and select 'Agriculture'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • AD Reserved • AF Sfc Frost Intensity • AM Sfc Dew Intensity • AT Time Below 25 deg F • AU Time Below 32 deg F • AW Leaf Wetness Time | |
| 203. | In the Elements frame, MB1 click on the first combo box and select 'Evaporation'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • EP Evap Pan Increment • ET Evap Trans Total • EV Evap Lake Computed | |
| 204. | In the Elements frame, MB1 click on the first combo box and select 'FishCount'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • FS Steelhead Fish Count | |
| 205. | In the Elements frame, MB1 click on the first combo box and select 'Ground'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • GD Frost Penetr Depth • GR Frost Report • GS Ground State • GT Sfc Frost Thawed Dep | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 206. | In the Elements frame, MB1 click on the first combo box and select 'Ice'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • IC Ice Cover • IE Extent of Ice • IO Extent of Open Water • IR Ice Report • IT Ice Thickness | |
| 207. | In the Elements frame, MB1 click on the first combo box and select 'Lake'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • LA Lake Surface Area • LS Lake Storage Volume | |
| 208. | In the Elements frame, MB1 click on the first combo box and select 'Moisture'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • MI Moisture Index • MM Wood Moisture • MS Soil Moisture Amount • MT Wood Temperature | |
| 209. | In the Elements frame, MB1 click on the first combo box and select 'GateDam'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • NN Spillway Gate Number • NO Spec. Gate Opening | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 210. | In the Elements frame, MB1 click on the first combo box and select 'Pressure'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • PA Atmospheric Pressure • PD 3-hour Press Change • PE Press Characteristic • PL Sea Level Pressure | |
| 211. | In the Elements frame, MB1 click on the first combo box and select 'Radiation'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • RI Incoming Radiation • RP Possible Radiation • RT Total Radiation Time • RW Totl Solar Radiation | |
| 212. | In the Elements frame, MB1 click on the first combo box and select 'Weather'. | In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column. Some of the common PEs are: <ul style="list-style-type: none"> • XC Total Sky Cover • XP Past Weather • XR Relative Humidity • XV Visibility • XW Present Weather | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 213. | In the Elements frame, MB1 click on the first combo box and select 'Wind'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • UC Accumulated Wind • UD Wind Direction • UG Wind Gust Speed • UL Wind Travel Length • UP Peak Wind Speed • UQ Wind Direct & Speed • UR Wind Dir at Peak Spd • US Wind Speed | |
| 214. | In the Elements frame, MB1 click on the first combo box and select 'Power'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • VB Battery Voltage • VE Energy Gener Total | |
| 215. | In the Elements frame, MB1 click on the first combo box and select 'WaterQuality'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • WV Water Velocity | |
| 216. | In the Elements frame, MB1 click on the first combo box and select 'YUnique'. | <p>In the Elements frame, the PEs that appear in the second combo box (PE) depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • YA 15m Per Above Stage • YC Random Rep Seq Num • YF Forward Power • YG • YH • YI • YJ | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 217. | <p>If the shef_procobs token value in the .Apps_defaults_site file is set to OFF, the first combo box in the Elements frame will have an option called 'Processed'.</p> <p>If the token value is set to 'ON', the first combo box will not have an option called 'Processed'.</p> | <p>If the token value of shef_procobs is set to 'OFF', the PEs that appear in the second combo box (PE) in the Elements frame depend on what PE's are in the <i>ingestfilter</i> table with a value of 'T' for the <i>ingest</i> column.</p> <p>Some of the common PEs are:</p> <ul style="list-style-type: none"> • IR Ice Report • PP Precip Increment • QR River Discharge • SI Snow Depth on Ice • TA Air Temperature | |
| 218. | In the Value/Time frame, MB1 click on the up and down arrow of the first set of arrows on the left side. | <p>When the up arrow is clicked, the day is increased. For example, 2006-01-22 18:00 changes to 2006-01-23 18:00.</p> <p>When the down arrow is clicked, the day is decreased. For example, 2006-01-23 18:00 changes to 2006-01-22 18:00.</p> | |
| 219. | In the Value/Time frame, MB1 click on the up and down arrow of the second set of arrows on the right side. | <p>When the up arrow is clicked, the hour is increased. For example, 2006-01-22 18:00 changes to 2006-01-22 19:00.</p> <p>When the down arrow is clicked, the hour is decreased. For example, 2006-01-22 19:00 changes to 2006-01-22 18:00.</p> | |
| 220. | In the Value/Time frame, MB1 click on the 'Value Is' combo box. | <p>In the Value Is combo box, the default value is Latest Value. The following options are also available:</p> <ul style="list-style-type: none"> • Latest Value • Value for Selected Time • Min Value in Window • Max Value in Window • Value Change in Window | |
| 221. | <p>In the Elements frame, select 'Temperature' in the first combo box on the left.</p> <p>In the Elements frame, select 'TA Air Temperature' in the second combo box on the right.</p> <p>In the Filtering frame, MB1 click on the check box next to the button labeled 'Type/Source'.</p> | When the check box next to the 'Type/Source' button is checked, data values display in the Hydroview GUI displaying temperature data. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 222. | In the Filtering frame, MB1 click on the 'Type/Source' button. | When the 'Type/Source' button is clicked, a window appears displaying type sources. The list of type sources come from the <i>ingestfilter</i> table. Some of the common Type/Sources for Temperature are: <ul style="list-style-type: none"> • RG GOES • RZ Nonspecific Observed | |
| 223. | In the Type/Source popup window, MB1 click on 'RG GOES', if available. (If not available, then select any single type/source.) MB1 click on 'Apply'. Then MB1 click on the 'Close' button. | If 'RG' was selected, any values that have a type/source of 'RZ' disappear. Some of the values displayed in the Hydroview GUI disappear. This occurs if there are some values displayed that have a Type/Source of 'RZ'. If a different type/source was selected, any values that do not have that particular type/source disappear from the GUI When the 'Close' button is clicked, the Type/Source popup window closes. | |
| 224. | In the Filtering frame, enable the checkbox next to the 'Service Area...' button. MB1 click on the 'Service Area...' button. Select the first HSA and make sure all of the other HSAs are unselected. MB1 click 'Apply'. Then MB1 click the 'Close' button. | When the checkbox is checked, some values displayed disappear from the GUI. When the 'Service Area...' button is clicked, a window appears displaying a list of HSAs. When the first HSA is selected and the 'Apply' button is clicked, the values displayed on the map are for stations whose HSA is the same as the HSA the user selected in the popup window. When the 'Close' button is clicked, the Service Area popup window closes. | |
| 225. | In the Filtering frame, enable the checkbox next to the 'Data Source...' button. MB1 click on the 'Data Source...' button. Select two of the options which appear in the popup window (Observer and DCP) and MB1 click 'Apply'. Then MB1 click the 'Close' button. | When the checkbox is checked, all of the values displayed disappear from the GUI. When the 'Data Source...' button is clicked, a new window appears displaying a list of telem types. This list includes all of the telem types from the <i>telmtypes</i> table and as well as 'Observer', 'DCP' and 'undefined'. When the first two options ('Observer' and 'DCP') are selected and the 'Apply' button is clicked, some of the values display on the GUI. The values that display have a telem_type value of 'Observer' or 'DCP' in the <i>stnclass</i> table. When the 'Close' button is clicked, the 'Data Source...' popup window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 226. | In the Elements frame, MB1 click on the left combo box and select 'River'. At the bottom of the GUI, MB1 click on the 'Map' button. | When 'River' is selected in the left combo box in the Elements frame, the right combo box in the Elements frame is set to 'Primary'. When the 'Map' button is clicked, the GUI updates with river data for all the stations not filtered out. | |
| 227. | In the Display frame, check the box labeled 'Color River Icons:'. | The icons in the display change to 1 of 5 colors: <ul style="list-style-type: none"> • Light green – river stage/flow for the station is below the action/flood levels • Yellow – river stage/flow for the station is at or above the action level but below the flood level • Red – river stage/flow for the station is at or above the flood level • Gray – stage/flow data could not be retrieved for the station • Dark green – the station has a value but the action/flood stage data are not available in the <i>RiverStatus</i> table. | |
| 228. | In the Display frame, MB1 click on the 'River Color/Value Based On:' combo box and select 'Observed Value'. | The values that display in the GUI are the observed values for each station for that particular date/time. | |
| 229. | In the Display frame, MB1 click on the 'River Color/Value Based On:' combo box and select 'Forecast Value'. | The values that display in the GUI are the largest forecast values for each station for each station for that particular date/time. | |
| 230. | In the Display frame, MB1 click on the 'River Color/Value Based On:' combo box and select 'Max (Obs, Fcst)'. | The value that displays in the GUI for each station is the maximum of the forecast or the observed value. | |
| 231. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Raw Value'. | The value that displays in the GUI for each station is just the raw data value which comes from the database. | |
| 232. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Raw Value/Flood Level'. | The values that display in the GUI for each station are the raw data values and the flood stage. The flood stage/level is the value of the <i>fs</i> field which is located in the <i>Riverstat</i> table. If a flood stage/level is not defined for a station, an 'M' displays above the raw data value. The flood stage/level value displays above the raw data value. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 233. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Raw Value/Stage Flow'. | The values that display in the GUI for each station are the raw data values and a derived stage or flow value. The derived value is a flow if the raw value is a stage and vice versa. If a derived value is not defined for a station, an 'M' displays above the raw data value. The derived value displays above the raw data value. | |
| 234. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Flood Depart'. | If the value is not missing, the value that displays in the GUI for each station is the current stage value minus the flood stage value. This value is the Flood Stage departure. If a flood stage is not defined for a particular station, then the station data is missing. | |
| 235. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Flood Depart/Level'. | The values that display in the GUI for each station are the flood stage departure and the flood stage/level. The flood stage/level displays on top of the flood depart value. If a flood stage/level is not defined for a particular station, then the station data is missing. | |
| 236. | In the Display frame, MB1 click on the 'Display Values As:' combo box and select 'Raw Value'. MB1 click on the 'Tabulate' button. | The Point Data Tabular Display appears showing all the stations not filtered out and the values that are currently displayed in the GUI. | |
| 237. | In the <i>Point Data Tabular Display</i> window, MB1 click on the first station listed that has non-missing data. MB1 click on the 'Time Series Graph' button and select 'Graph' button. Close the Time Series Display and Control. | When the 'Time Series Graph' button is clicked, the Time Series loads. The time series for the selected station displays in a graphical format. | |
| 238. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Time Series Table' button. Close the Time Series Tabular Time Series and Control. | When the Time Series Table button is clicked, Time Series loads. The time series for the selected station displays in a tabular format. | |
| 239. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Print' button. | The data displayed in the table prints. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 240. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Save' button. Enter 'test_save.pdc' in the 'Selection' textbox. MB1 click the 'OK' button. | When the 'Save' button is clicked, a dialog window appears allowing the user to specify a location and filename. When the 'OK' button is clicked, the report is saved to the file "test_save.pdc" in the specified save directory (awips/hydroapps/whfs/local/data/report). The report contains data that is identical to the data displayed in the <i>Point Data Tabular Display</i> window. | |
| 241. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Close' button. | The <i>Point Data Tabular Display</i> window closes and control is returned to the <i>Point Data Control</i> GUI. | |
| 242. | In the <i>Point Data Control</i> GUI, MB1 click on the 'Unmap' button. | When the 'Unmap' button is clicked, all of the values displayed in the Hydroview GUI are removed (unmapped). | |
| 243. | In the <i>Point Data Control</i> GUI, MB1 click on the 'Map' button. | When the 'Map' button is clicked, all of the station values that are currently not filtered out are mapped to the Hydroview GUI. The stations and data displayed are the same ones that were displayed during Step 48. | |
| 244. | In the <i>Point Data Control</i> window, MB1 click on the 'Close' button. | The <i>Point Data Control</i> window closes. | |
| 245. | MB3 click and hold on the <i>Hydroview</i> Perspective tab and select 'Close'. | The <i>Hydroview</i> Perspective closes. | |
| 246. | Test – Time Step Mode | | |
| 247. | In CAVE, MB1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 248. | From the 'MapData' pull-down menu, select 'Point Data Control...' | The Point Data Control window opens and the stations display in the Hydroview main window. | |
| 249. | In the Presets/Query Mode Frame, MB1 click on the 'Time-Step' radio button. | The 'Time Step' radio button is filled in. The GUI changes in the 'Elements', 'Value/Time', 'Filtering' and 'Display' sections. | |
| 250. | In the Elements frame, MB1 click on the first combo box, the 'Element Type Combo Box'. | The available selections listed are: 'River', 'Rain', 'Snow', 'Temperature', 'Humidity' and 'Wind'. | |
| 251. | In the Elements First Combo Box, select 'River'. | The selected element in the Elements Second Combo Box is 'STAGE/POOL'. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 252. | MB1 click on the 'Elements Second Combo Box' (right one). | The available selections listed are: 'STAGE/POOL', 'FLOW/STORAGE', 'DEPTH ABOVE FLOOD STAGE' and 'PERCENT OF FLOOD FLOW'. | |
| 253. | In the Elements frame, MB1 click on the 'Element Type Combo Box' (left one) and select 'Rain'. | The selected element in the Element Combo Box is 'INSTANTANEOUS'. | |
| 254. | MB1 click on the 'Element Combo Box' (right one). | The available selections listed are: 'INSTANTANEOUS', '1-HOUR PRECIP TOTAL', '3-HOUR PRECIP TOTAL', '6-HOUR PRECIP TOTAL' and '24-HOUR TOTAL (12Z)'. | |
| 255. | In the Elements frame, MB1 click on the 'Element Type Combo Box' and select 'Snow'. | The selected element in the Element Combo Box is 'SNOW WATER EQUIV'. | |
| 256. | MB1 click on the 'Element Combo Box' (right one). | The available selections listed are: 'SNOW WATER EQUIV' and 'SWE – 24 HOUR CHANGE'. | |
| 257. | In the Elements frame, MB1 click on the 'Element Type Combo Box' and select 'Temperature'. | The selected element in the Element Combo Box is 'TEMPERATURE'. | |
| 258. | MB1 click on the 'Element Combo Box' (right one). | The available selections listed are: 'TEMPERATURE', 'TEMP. 24 HOUR CHANGE', 'MAX TEMP' and 'MIN TEMP'. | |
| 259. | In the Elements frame, MB1 click on the 'Element Type Combo Box' and select 'Humidity'. | The selected element in the Element Combo Box is 'DEWPOINT'. | |
| 260. | MB1 click on the 'Element Combo Box' (right one). | The available selections listed are: 'DEWPOINT', 'DEWPT - 24 HR CHANGE' and 'RELATIVE HUMIDITY'. | |
| 261. | In the Elements frame, MB1 click on the 'Element Type Combo Box' and select 'Wind'. | The selected element in the Element Combo Box is 'WIND SPEED'. | |
| 262. | MB1 click on the 'Element Combo Box' (right one). | The available selections listed are: 'WIND SPEED' and 'WIND DIRECTION'. | |
| 263. | In the Value/Time frame, MB1 click on the up and down arrow of the first set of arrows on the left side. | When the up arrow is clicked, the day is increased. For example, 2006-01-22 18:00 changes to 2006-01-23 18:00. When the down arrow is clicked, the day is decreased. For example, 2006-01-23 18:00 changes to 2006-01-22 18:00. The data displayed on the Map changes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 264. | In the Value/Time frame, MB1 click on the up and down arrow of the second set of arrows on the right side. | When the up arrow is clicked, the hour is increased. For example, 2006-01-22 18:00 changes to 2006-01-22 19:00. When the down arrow is clicked, the hour is decreased. For example, 2006-01-22 19:00 changes to 2006-01-22 18:00. The data displayed on the Map changes. | |
| 265. | In the Elements section, choose the 'Temperature' element type. In the Filtering frame, make sure the 'Type/Source' check box is checked. MB1 click on the 'Type/Source...' button. | When the 'Type/Source' button is clicked, a window appears displaying type sources. The list of type sources come from the <i>ingestfilter</i> table. Some of the common Type/Sources for Temperature are: <ul style="list-style-type: none"> • GOES - RG • LARC - RP • SNOTEL - RM • ALERT - RR • METAR - RZ | |
| 266. | In the Type/Source popup window, MB1 click on 'GOES - RG'. Then MB1 click on 'Apply'. | If 'RG' was selected, any values that have a type/source of 'RZ' disappear. (Verify by turning on the Display Section's Param Code button.) Some of the values displayed in the Hydroview GUI disappear. This occurs if there are some values displayed that have a Type/Source of 'RZ'. | |
| 267. | MB1 click the 'Close' button in the Type/Source dialog. | The Type/Source dialog closes. | |
| 268. | In the Filtering frame, enable the checkbox next to the 'Service Area...' button. MB1 click on the 'Service Area...' button. Select the first <i>HSA</i> and make sure all of the other <i>HSAs</i> are unselected. MB1 click on 'Apply'. | If the associated checkbox is checked, some values displayed disappear from the GUI. When the 'Service Area...' button is clicked, a window appears displaying a list of <i>HSAs</i> . When the first <i>HSA</i> is selected and the 'Apply' button is clicked, the values displayed on the map is for stations whose <i>HSA</i> is the same as the <i>HSA</i> the user selected in the popup window. | |
| 269. | MB1 click 'Close' in the Service Area dialog. | The Service Area dialog closes. | |
| 270. | In the Elements section, select the 'RIVER' Element Type. | In the Filtering Section, there appears a 'Stations:' option menu with 'All' as the default. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 271. | In the Filtering Section, deselect all Type/Source and Service Area checkboxes (to make sure that stations are not unnecessarily being filtered out). In the Display Section, check the 'Icon' checkbox. Choose the 'Stream' option under the 'Stations' option in the Filtering section. | Only plain stream locations display. Triangles with NO rectangles are plain stream locations. | |
| 272. | In the Filtering Section, select the 'Reservoir' option. | Only standard reservoir locations display. Triangles with rectangles under them represent reservoirs. | |
| 273. | Test - Common Filter and Display Options Procedure | | |
| 274. | In the Filtering frame, uncheck the 'Show NonFcstPts' checkbox. | Only Forecast points display. A station is a forecast point if the station's entry in the StnClass table has the character F in its disp_class field. A forecast point has a circle on top of the triangle. | |
| 275. | Check the 'Show NonFcstPts' checkbox. | All points that were filtered out from the previous steps are displayed. | |
| 276. | In the Filtering frame, uncheck the 'Show Missing' checkbox. | Only stations with non-missing values display in the GUI. | |
| 277. | Check the 'Show Missing' checkbox. | Stations with missing values display in the GUI (with 'M' for the value if that displays). | |
| 278. | In the Filtering frame, enter '25' in the textbox next to the 'Value' combo box. MB1 click on the 'Value' combo box and select 'Value >='. MB1 click on the 'Value' combo box and select 'Value <='. In the Filtering frame, MB1 click on the 'Value' combo box and select 'Any Value'. | When the 'Show Pts With:' combo box is set to 'Value >=', any value that is greater than or equal to 25 displays in the GUI. When the 'Value' combo box is set to 'Value <=', any value that is less than or equal to 25 displays in the GUI. When the 'Value' combo box is set to 'Any Value', all data values that are not filtered out display again in the GUI. | |
| 279. | Enter '100' in the textbox next to the 'Elev' combo box. MB1 click on the 'Elev' combo box and select 'Elev >='. MB1 click on the 'Elev' combo box and select 'Elev <='. MB1 click on the 'Elev' combo box and select 'Any Elev'. | When the 'Elev' combo box is set to 'Elev >=', any station that has an elevation greater than or equal to 100 display in the GUI. When the 'Elev' combo box is set to 'Elev <=', any station that has an elevation less than or equal to 100 display in the GUI. When the 'Elev' combo box is set to 'Any Elev', all data values that are not filtered out display again in the GUI. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 280. | In the Display frame, check and uncheck the following buttons. 'Value, Id, Name, Icon Name' 'Time, Elevation, Param Code' | When a box for a data element is checked, that data element display on the map. A maximum of one of 'Time', 'Elevation', or 'Param Code' can be selected at a time. The rest of the buttons can be selected in any combination. | |
| 281. | MB1 click on the 'Tabulate' button. | The Point Data Tabular Display appears showing all the stations not filtered out and the values that are currently displayed in the GUI. | |
| 282. | In the <i>Point Data Tabular Display</i> window, MB1 click on the stations that have non-missing values. MB1 click on the 'Time Series Graph' button. Close the Time Series Display window. | When the 'Time Series Graph' button is clicked, the Time Series loads. The time series for the selected station displays in a graphical format. | |
| 283. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Print' button. | The data displayed in the table prints. | |
| 284. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Save' button. Enter 'test_save.pdc' in the 'Selection' textbox. MB1 click on 'OK'. | When the 'Save' button is clicked, a dialog window appears allowing the user to specify a location and filename. When the 'OK' button is clicked, the report is saved to the file 'test_save.pdc' in the specified save directory (awips/hydroapps/whfs/local/data/report). The report contains data that is identical to the data displayed in the <i>Point Data Tabular Display</i> window. | |
| 285. | In the <i>Point Data Tabular Display</i> window, MB1 click on the 'Close' button. | The <i>Point Data Tabular Display</i> window closes and control is returned to the <i>Point Data Control</i> GUI. | |
| 286. | In the <i>Point Data Control</i> GUI, MB1 click on the 'Unmap' button. | When the 'Unmap' button is clicked, all of the values displayed in the Hydroview GUI are removed (unmapped). | |
| 287. | In the <i>Point Data Control</i> GUI, MB1 click on the 'Map' button. | When the 'Map' button is clicked, all of the station values that are currently not filtered out are mapped to the Hydroview GUI. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--------|-----------|
| 288. | <p>Set the following options. Apply and close filter dialogs as needed.</p> <ul style="list-style-type: none"> • In the Presets/Query Mode frame, the 'Query Mode' is set to 'Ad Hoc'. • In the Elements frame, the 'Element Type' (left) combo box is set to 'River'. • In the Elements frame, the 'Element' (right) combo box is set to 'Primary'. • In the Value/Time frame, the 'Value Filters' combo box is set to 'Latest Value'. • In the Filtering frame, the 'Type/Source' button is unchecked. • In the Filtering frame, the 'Service Area...' checkbox is checked. <ul style="list-style-type: none"> ○ Select the first HSA. • In the Filtering frame, the 'Data Source...' checkbox is checked. • In the 'Data Source...', the dialog box is set to select 'Observer Only'. • In the Filtering frame, the 'Show NonFcstPts' checkbox is checked. • In the Filtering frame, the 'Show Missing' checkbox is unchecked. • In the Filtering frame, the two Show Pts with combo boxes are set to 'Any Value' and 'Any Elev'. The corresponding text boxes are desensitized. • In the Display frame, the 'Value', 'ID' and 'Icon' checkboxes are checked. | | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 289. | Continued from step 92: Set the following options. Apply and close filter dialogs as needed. <ul style="list-style-type: none"> The 'Name' checkbox is unchecked. In the Display frame, the 'Time' and 'Elevationand Param Code' radio buttons are unchecked. In the Display frame, the 'Color River Icons' checkbox are checked. In the Display frame, the 'River Color/Value Based On:' combo box is set to 'Max(Obs, Fcst)' In the Display frame, the 'Display Values As:' combo box is set to 'Raw Value'. In the <i>Point Data Control</i> GUI, MB1 click on the 'Save...' button. | The <i>Save Present Options</i> dialog appears. | |
| 290. | Enter 'test_set' in the 'Uniqueld:' textbox under the New Information section. Enter 'test option set' in the 'Description:' textbox. Enter '2' in the 'Rank:' textbox. MB1 click on the 'Ok' button. | When the 'Ok' button is clicked, the <i>Save Preset Options</i> dialog box closes and the option set is saved to the <i>pointdatapresets</i> table in the IHFS database. | |
| 291. | In the <i>Point Data Control</i> window, MB1 click on the 'Close' button. MB3 click and hold on the <i>Hydroview</i> tab. Select 'Close'. | The <i>Point Data Control</i> GUI and Hydroview Perspective close. | |
| 292. | MB1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 293. | From the 'MapData' pull-down menu, select 'Point Data Control...'. | The Point Data Control window opens and the stations display in the Hydroview main window. | |

| Step # | Action | Result | Pass/Fail |
|--------------------------------|---|--|-----------|
| 294. | In the Presets/Query Mode frame, change the value of the 'Selected Preset:' combo box to 'test option set'. | When 'test option set' is selected in the 'Selected Preset:' combo box, all of the following is set in the GUI: <ul style="list-style-type: none"> In the Presets/Query Mode frame, the 'Selected Preset:' combo box displays 'test option set'. The other settings are the same as mentioned in Action Steps 92 and 93. | |
| 295. | In the Presets/Query mode frame, MB1 click on the 'Delete' button. | When the 'Delete' button is clicked, the preset is deleted and removed from the <i>pointdatapresets</i> table upon the relaunch of Hydroview. | |
| 296. | In the <i>Point Data Control</i> window, MB1 click on the 'Close' button. | When the 'Close' button is clicked, the <i>Point Data Control</i> GUI closes. | |
| 297. | Exit the Hydroview Perspective. | The Hydroview Perspective closes. | |
| End of Point Data Control Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case Hydrobase
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0009

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 17364
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 8 |
| 6.0 APPENDIX A. FIGURES | A-1 |

List of Figures

| | <i>Page</i> |
|-------------------------|-------------|
| Figure 1: Step 8 | A-1 |
| Figure 2: Step 13 | A-1 |
| Figure 3: Step 17 | A-2 |
| Figure 4: Step 22 | A-2 |
| Figure 5: Step 22 | A-3 |
| Figure 6: Step 31 | A-3 |
| Figure 7: Step 33 | A-4 |
| Figure 8: Step 36 | A-4 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_Hydrobase (OB8.3); Baseline_Hydrobase_OB8.1; Hydrologic Database; Check_Out_4.4.1_Hydrobase_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that AWIPS provides the capability to execute the WFO Hydrologic Forecast System (WHFS) Hydrologic Database Manager (HydroBaseMgr). Hydrobase allows a WFO to manage the IHFS database that supports hydrologic forecasting.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested .
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | Under the 'HydroApps' menu, select the 'Launch Hydrobase...' option. | The HydroBase window opens, listing all of the forecast points in the site-specific database for the WFO. | |
| 3. | From the 'Sort By' option, select each of the following options in succession: 'Station' 'Name' 'State, County' | The list is sorted according to the criteria selected. | |
| 4. | Search for a station (e.g., BLUC1) by using the Search box in the lower right side of the panel. | As each letter is added, the search is further defined. | |
| 5. | Select 'Add Location' from the Location menu. | The Add Location window opens with a template to add new locations. The Add Location window is on the Geophysical Page option. | |
| 6. | Add a new location named 'AWIP2'. See Appendix (end of document) image 1 for input. | None. | |
| 7. | Select 'Apply' and 'OK'. | The new location is added to the listing of forecast points in the HydroBase window. | |
| 8. | Select 'Modify Location' from the Location menu. [See App. A, Fig. 1.] | The Modify Location window opens with the data just entered. | |
| 9. | Select Cancel. | Window closes. | |
| 10. | Select Contacts from the Location menu. | The Contacts window opens. | |
| 11. | MB1 click on New. Add the Contact and Phone information shown in Appendix image 2. Then MB1 click on 'Apply'. | Contacts are added. NOTE: Select New before each entry and Apply after each entry. | |
| 12. | Select Ok to close the window. | Window closes. | |
| 13. | Reopen the window by selecting Contacts from the Location menu to verify that the information was added. Then select 'Close'. [See App. A, Fig. 2.] | Contacts are there. The window closes. | |
| 14. | From the River Gage menu, select 'River Gage'. | The River Gage window opens. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 15. | With the 'Page' option set to 'Geophysical', add information to this window from Appendix image 3. | See Appendix image 3. NOTE: Application may crash if the Date of Rating field is left blank with the Page option set to Additional Info (DR #19887). | |
| 16. | Select 'Apply' and 'OK' to close the window. | The data is added and window closes. | |
| 17. | Select 'River Gage' under the River Gage menu to reopen it. Verify that the information was added. [See App. A, Fig. 3.] | The data is verifies as saved on the system. | |
| 18. | Select 'Cancel'. | The window closes. | |
| 19. | From the 'River Gage' menu, select 'Crest History' to display the Crest History window. | The window opens. | |
| 20. | MB1 click 'New'. Add information to this window from Appendix Image 4 and Image 5. Then MB1 click on 'Apply'. | See Appendix Image 4 and Image 5. NOTE: Select 'New' before each entry and 'Apply' after each entry. | |
| 21. | Select 'OK' to close the window. | Information is saved and the window closes. | |
| 22. | Select 'Crest History' from the 'River Gage' menu to verify that the information was added. Then select 'Close'. [See App. A, Figures 4 and 5.] | The data is verified as saved and the window closes. | |
| 23. | From the 'Location' menu, select 'County/Zone UGC'. | The County/Zone UGC window opens. This window contains counties affected for the forecast point plus all of the available counties in the area. | |
| 24. | Add information to this window by selecting the county names in the 'Available' section and selecting the 'Add' button. | The data is added. | |
| 25. | Select 'Apply' and 'OK' to close the window. | The data saved and the window closes. | |
| 26. | Select 'County/Zone UGC' from the 'Location' menu to reopen the window. Verify that the information was added. | The data is verified as saved. | |
| 27. | Select 'Cancel'. | The window closes. | |
| 28. | Select 'Flood Category' from the 'River Gage' menu. | The Flood Category window opens, showing definitions of the following flood types: Major, Moderate, and Minor. | |
| 29. | Add information to this window from Appendix image 6. | The data is added. | |
| 30. | Select 'OK' to apply and close the window. | The data is saved and the window closes. | |
| 31. | Select 'Crest History' from the 'River Gage' menu. [See App. A, Figure 6.] | The flood stage categories are depicted as colored lines (See Image 7 in the Appendix for an example). | |
| 32. | Select 'Close'. | The window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 33. | From the 'River Gage' menu, select the 'Impact Statement' option. [See App. A, Fig. 7.] | The Impact Statement window opens with the following types of information: Impact Value, Impact PE, Begin, End, and Tendency. | |
| 34. | MB1 click on 'New'. Add information to this window from Appendix image 8. Then MB1 click on 'Apply'. | The data is added. NOTE: Select 'New' before each entry and 'Apply' after each entry. | |
| 35. | Select 'OK' to close the window. | The data is saved and the window closes. | |
| 36. | Select 'Impact Statement' from the 'River Gage' menu to verify that the data were added. Then select 'Cancel'. [See App. A, Fig. 8.] | The data is verified as saved and the window closes. | |
| 37. | Select a Reservoir in the Hydrologic Database. BDBC1 is an example of a reservoir on TBDW, WINC3 on TBW3. Other systems will have other stations selected. | The station is selected. Note: Point Data Control on Hydroview may be used to locate other reservoirs. | |
| 38. | Select 'Reservoir' from the 'Reservoir' menu. | The Reservoir window opens with information on the selected reservoir. | |
| 39. | Select 'Cancel'. | The window closes. | |
| 40. | From the 'Setup' on the menu bar option (right side of menu bar, next to Help), select the 'Reference Fields' option. | The Reference Fields window opens containing a 'Fields' option and 'Add', 'Update', and 'Delete' buttons. | |
| 41. | Select 'OK' from the Reference Fields window. | The window closes. | |
| 42. | Select 'AWIP2' from the HydroBase window. | 'AWIP2' is selected. | |
| 43. | Select 'Rating Curve' from the 'River Gage' menu. | The Rating Curve window opens. Verify that flood stage is a red line and the record flood stage is a blue line. | |
| 44. | Select 'Close'. | The window closes. | |
| 45. | Select 'Flood Report' from the 'Reports' menu. | The Flood Report window opens with a flood report for the Area of Responsibility. | |
| 46. | Select 'Last 12 Months' from the 'Reporting Period' option. | A graphic history of flooding displays. | |
| 47. | Select 'Close' from the Flood Report window. | The window closes. | |
| 48. | Select 'AWIP2' from the listing of forecast points, and select 'Ingest Filter' from the 'Data Ingest' menu. | The Data Ingest Filter window opens. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 49. | Select 'New'. In the 'NEW Item' section, add the following: Location: AWIP2 Physical Element : HT Tailwater Elev Duration: Instantaneous (0) TypeSource: GOES (RG) Extremum: Null Character (Z) Also, toggle on the 'Master Switch' button. | The data is added. | |
| 50. | Select 'Apply'. | 'AWIP2' appears highlighted in the Ingest Filter Contents for Locations section. | |
| 51. | Select 'OK'. | The window closes. | |
| 52. | In the HydroBase window, select 'Station List Filter Options'. | The Station List Filter Options window opens. | |
| 53. | Select an HSA under 'Filter by HAS'. | The item is selected. | |
| 54. | Select 'Apply'. | The stations in the HydroBase window are filtered. Only stations in counties with the selected responsible WFO are shown. | |
| 55. | Select 'Exit' from the 'File' menu of the HydroBase window. | The HydroBase window closes. | |
| | End of Test | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |
| SYSR | | |
| SYSR | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

APPENDIX A. FIGURES

Figure 1. Step 8

| Sequence | Contact | Phone |
|----------|--------------------------|--------------|
| 0 | Will Leverenz | 301-495-2210 |
| 0 | Network Control Facility | 301-713-9344 |

Figure 2. Step 13

River Gage - AWIPS2 - AWIPS TEST

Page: **Geophysical**

Geographic/Physical

Stream: PAUL REVERE RIVER **Revise Date:** 10/28/2000

Lat/Lon: 41 50 00 73 50 00 **Forecast Point Group Assignment:** CONCORD

Drainage Area: 2000.0

River Mile: 75.0

Flood Stage: 23.00 **Flow:** 23400

Action Stage: 18.00 **Flow:** 19000

Zero Datum: 10.000

Threshold Runoff: 32.000

Primary Stage/Flow Physical Element

- IG River Stage
- HI Reading Height - MSL
- HI Stage Trend Indicator
- HJ Spillway Gate Height
- HK Lake Elev Abv Datum
- HL Lake Elevation

Use Latest Forecast When Computing Maximum Forecast Value

Remarks

This information is entered for an AWIPS Test

Buttons: **Ok** **Apply** **Cancel** **Delete**

Figure 3. Step 17

Crest History - AWIPS2 - AWIPS TEST

| Stage | Flow | Date | Time |
|-----------------|------|------|------|
| 18.0 ACTION (0) | | | |

Info for Selected Crest

Stage: 18.00 **Date:** 10/21/1983

Flow: 23400 **Time:** []

Based on Old Data **Official Crest**

Observed by High Water Mark **Affected by Ice Jam**

Suppress Printed Display

Remarks:

AWIPS TEST...

Filter Crests By: **All** Sort Crests By: **Stage**

Buttons: **Ok** **Apply** **Close** **New** **Delete**

Figure 4. Step 22

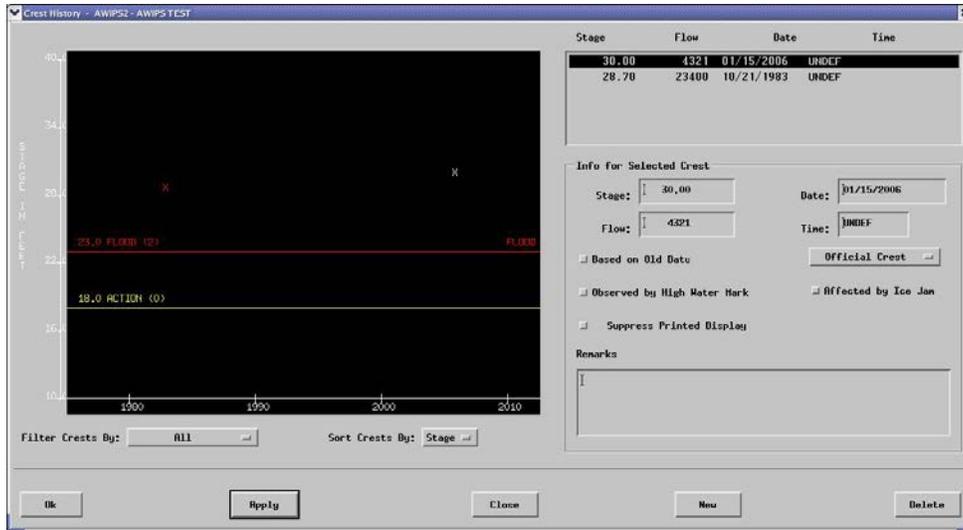


Figure 5. Step 22

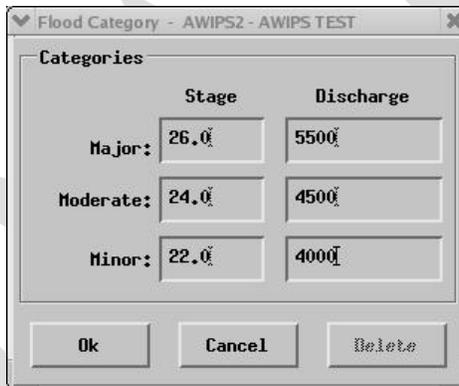


Figure 6. Step 31

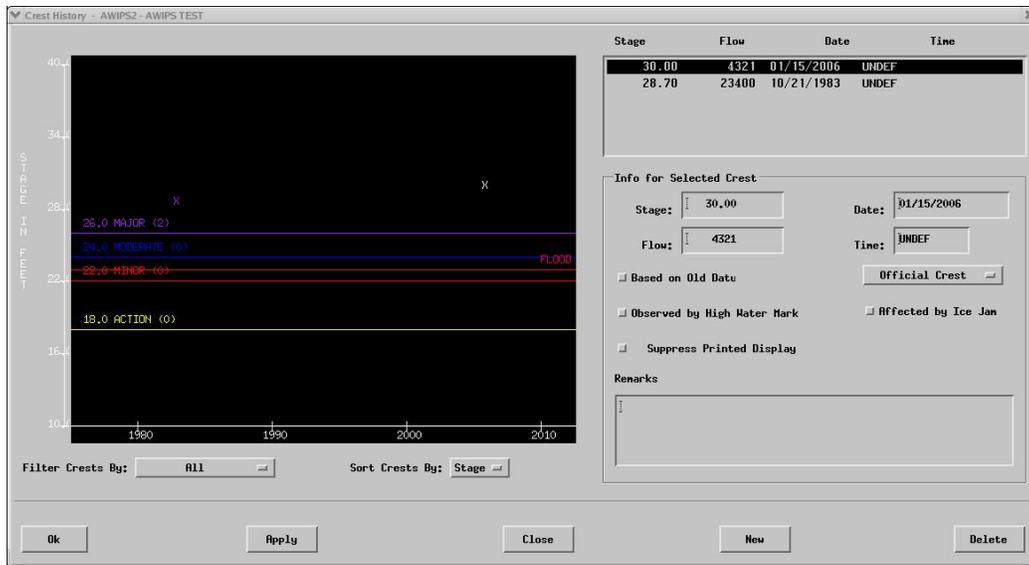


Figure 7. Step 33

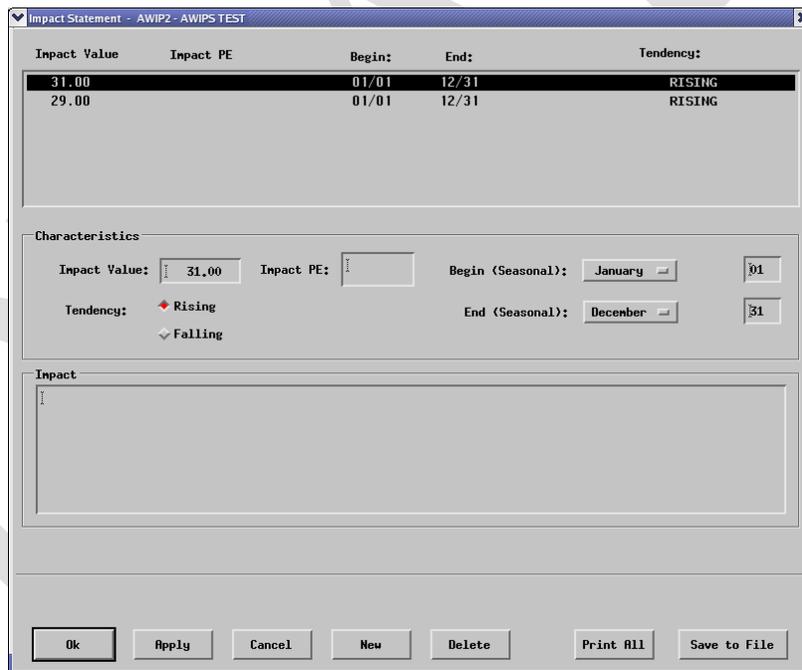


Figure 8. Step 36

Test Case Site Specific

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0010

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Revision History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 15 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline _SSHP_OB8.1; Checkout_SSHP_OB8.1.
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that AWIPS provides the capability to execute the WHFS Site Specific Hydrologic Prediction software (SSHP). The SSHP software allows a WFO to run a simple hydrologic model for a single point.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirement highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | From the 'MapData' pull-down menu, select 'Site Specific...' | The Point Data Control window opens and the stations display in the Hydroview main window. | |
| 3. | Select 'Site Specific' from the 'Hydrology' submenu. From the 'Configuration' menu of the SSHP GUI, select 'Configure Fcst Points for SSHP'. | The SSHP Config window comes up with the first record selected by default. | |
| 4. | MB1 click on the 'Clear' button within the SSHP Config window. | The values in the text boxes are cleared out. The Model Preference changes to API-MKC. The Source Preference changes to 'LOCAL'. Posting time is set to 'Not Posted Yet.' | |
| 5. | Enter the following values in the text fields after MB1 clicking 'Clear': LID: 'ABCD1' Basin ID: 'ABCD1' Model Preference: 'SAC-SMA' Update Model States?: unchecked Source Preference: 'RFC' Use ET Demand Curve?: unchecked | Settings change. | |
| 6. | MB1 click on 'Save' after entering the data. | The table updates showing the new entry. The data displayed in the table is the same as what was entered in the text fields. | |
| 7. | Select another LID from the table. | The text fields in the GUI show the data of the LID selected. | |
| 8. | Select the 'ABCD1 LID' from the table and MB1 click on 'Delete'. When the confirmation dialog appears, select 'Yes'. | After selecting Yes, the Config is deleted and the table refreshes. | |
| 9. | MB1 click on the 'Close' button | The SSHP Config window closes and the Control Window becomes active. | |
| 10. | From the 'Extra' menu, select 'Run MAP Preprocessor'. | The MAP Preprocessor runs in the status window. A log is created in the log directory. There are warnings about files missing and this is normal. For the files that do exist, data is inserted into the | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| | | ProcValue table with duration of 1001, and a PE of 'PP'. The lid is the same as the Basin Id specified in the SSHPConfig Window. | |
| 11. | MB1 click on the button labeled 'Analysis Window' from the Control Window. | The Analysis window appears. The Rainfall-Runoff Model matches the one set within the SSHP Config window for that particular LID. | |
| 12. | Change the Rainfall-Runoff Model to 'SAC-SMA'. | If the station was set for the API-MKC model, the API-MKC settings panel changes to the SAC-SMA settings panel. The model run start time label should indicate the same time as the model state selected in the state drop-down box below it. The model run start time indicated by the vertical magenta line on the precip graph and the hydrographs should also match the model run start time. | |
| 13. | MB1 click the 'Refresh State List' button. | The contents of the state drop-down box are updated based on the contents of the database. If the previously selected state is still available, it is selected. Otherwise, the first item in the list is selected. If no states are available for that location in the database, there is a default state that is selected. It is named 'BOGUS DEFAULT State' to indicate the lack of proper data. | |
| 14. | Draw some precip bars in the 1 Hour Mean Areal Precip Time Series graph. Then MB1 click 'Reload Precip.' | The precip bars appear as drawn. After clicking 'Reload Precip', the application reloads the precip time series with the data in the database. Missing data in the database appears as zero precip. The drawn precip bars disappear and are replaced with whatever mean areal precip (MAP) data is available for that basin. | |
| 15. | MB1 click 'Reload Stream Obs'. | The latest observed stage readings displays in the hydrograph. This becomes more obvious, if 1) there is a live data feed with river stages and 2) another reading is added after the Analysis The window has been started. | |
| 16. | Change the 'Rainfall-Runoff Model' option to 'API-MKC'. | The API-MKC Settings Panel replaces the SAC-SMA Settings Panel. | |
| 17. | Action: MB1 click on the button labeled with | Both graphs shift back in time by 24 | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| | a blue double left arrow (<<). | hours | |
| 18. | MB1 click on the button labeled with a blue double right arrow (>>). | Both graphs shift forward in time by 24 hours | |
| 19. | MB1 click on the button labeled with a blue single left arrow (<). | Both graphs shift back in time by 1 hour. | |
| 20. | MB1 click on the button labeled with a blue single right arrow (>). | Both graphs shift forward in time by 1 hour. | |
| 21. | MB1 click on the button labeled with a blue double right arrow (>>) 3 times. MB1 click the button with the circle icon. | After clicking the double right arrow, both graphs shift forward in time by 72 hours. Then, after clicking the circle button, the graphs return to the 'home' position with the vertical magenta line approximately one-third of the graph display to the right of the left-most position. | |
| 22. | MB1 click the 'Scale to Flood Stage' checkbox. | When the checkbox is checked, the flood stage (if set in database) and the action stage (if set in database) displays as red and yellow horizontal lines, respectively, on the lower graph. When it is not checked, the red and yellow lines appear only if they are within the scaling range of the lower graph. For example, if the highest observed stage is 24.7 and the highest forecast stage is 25, then a flood stage of 52.6, is not displayed. However, if the flood stage is 20, then the flood stage and action stage appears. | |
| 23. | MB1 click the 'Show Obs Stages' checkbox. | When the checkbox is checked, the observed hydrograph (yellow circles) appears in the bottom graph. When it is not checked, the observed hydrograph does not appear. | |
| 24. | MB1 click the 'Show Minor Precip Lines' checkbox. | When the checkbox is checked, the dotted horizontal lines appear in the precip graph (upper graph). When it is not checked, the dotted horizontal lines do not appear. | |
| 25. | MB1 click the 'Show Minor Stage Lines' checkbox. | When the checkbox is checked, the dotted horizontal lines appear in the hydrograph (lower graph). When it is not checked, the dotted horizontal lines do not appear. | |
| 26. | MB1 click anywhere above the zero line to the left of the vertical magenta line (model run time) on the upper graph. | The vertical magenta line signifies the model run time. Since the user clicked to the left of the magenta line, it has no | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| | | effect on the stage graph below and no blue bars appear. | |
| 27. | MB1 click anywhere above the zero line to the right of the vertical purple line (model run time) on the upper graph. | A blue bar appears where the user clicked on the graph. Since the user clicked to the right of the vertical magenta line (model run time), the bottom graph changes accordingly. Any precipitation that is shown before the model run time (left of the vertical magenta line) is not used in calculating the runoff. | |
| 28. | Directly under one of the previously created blue precip bars, MB1 click on the upper graph. | The blue bar disappears after clicking below the zero line. | |
| 29. | MB1 click and slowly drag anywhere above the zero line in the precip graph. After some mouse travel, release the mouse button. | Precip bars are created where the mouse traveled. If the mouse moved too fast, some GUI event loss is expected and some precip bars will be missing. As each precip bar is created, the model is rerun. This is seen in the hydrograph (the lower graph). | |
| 30. | Check the 'Delay Rerun While Drawing' check box in the Graph Controls Panel. MB1 click and drag anywhere above the zero line in the precip graph. Release the mouse button. | Precip bars are created where the mouse traveled. Less event loss should occur and the model is rerun only after the mouse button is released or the mouse cursor leaves the precip graph. | |
| 31. | Above the zero line and to the right of the magenta vertical line, MB3 on the hydrograph (the lower graph). | The forecast hydrograph (the connected green circles) changes to reflect the point where the user clicked. | |
| 32. | MB1 click on the precip graph, creating a precip bar. | The forecast hydrograph is recomputed, losing the change made in the previous step. | |
| 33. | MB1 click on the button labeled 'Capture Screen'. Enter picture1.jpg for the File Name. MB1 click on 'Save' after typing in the name. | The Save dialog appears prompting the user for a filename. After entering picture1.jpg and clicking on the 'Save' button, the screen is captured to the specified filename and the save dialog closes. MB1 clicking 'Cancel' results in a dialog box informing the user that the image file was not saved. MB1 clicking 'OK' returns the user to the Analysis window. | |
| 34. | MB1 click on the button labeled 'Control Window'. | The SSHP Control Window appears in the foreground. The user is able to open up multiple analysis windows per Control Window. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 35. | In the 'Model Controls' Panel, select 'API-MKC' as the Rainfall-Runoff Model. | The API-MKC Settings Panel displays. | |
| 36. | In the API-MKC Settings Panel, check the 'Use Custom Time' check box. | The Model Run Start Time changes to the time indicated next to the check box. This changes the model run start time on the precip graph and the hydrograph. The only circumstance in which the Model Run Start Time Label disagrees with the selected product time is when this check box is checked and the selected custom time is different. | |
| 37. | In the API-MKC Settings Panel, MB1 click on the time control next to the Use Custom Time check box. Change the time and MB1 click the 'Apply' button. | A date-time editor window appears. The time changes as a result of clicking the up and down blue triangles. After clicking the 'Apply' button, the model run start time changes to the newly selected time. This is reflected in the Model Controls Panel and the graphs. | |
| 38. | In the API-MKC Settings Panel, uncheck the 'Use Custom Time' check box. | The Model Run Start Time returns to the value selected in the model state drop-down box below the Model Run Start Time Label. | |
| 39. | In the API-MKC Settings Panel, change the FFH value in the text box next to the 'FFH(inches):' label to '155'. MB1 click the 'Apply' button in the same panel. | The forecast model is rerun and a new forecast stage time series displays in the hydrograph display. | |
| 40. | In the API-MKC Settings Panel, change the Threshold Runoff value in the text box next to the 'Threshold Runoff(inches):' label. MB1 click the 'Apply' button in the same panel. | The model is rerun and a new forecast stage time series displays in the hydrograph display. | |
| 41. | In the API-MKC Settings Panel, MB1 click the 'Reload FFH' button. | The previously selected FFH value load from the selected item in the state list placed in adjacent text box. The model has been rerun and the new forecast hydrograph displays. | |
| 42. | In the API-MKC Settings Panel, MB1 click the 'Reload T. Runoff' button. | A new value (usually the same as the original) loads from the database placed in adjacent text box. The model has been rerun and the new forecast hydrograph displays. | |
| 43. | In the Medel Controls Panel, change the Rainfall-Runoff model to 'SAC-SMA'. MB1 click on the button labeled 'Edit Params' from the Analysis window. | The SacSma Parameters window appears. In the table, Basin ID, Source, and Valid Times are listed for each record. Clicking on any Basin ID populates the text fields with the | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| | | appropriate data. | |
| 44. | MB1 click on the Valid Time Text Field of 'ABCD1'. | The Date/Time Display appears providing the user with a GUI interface to set the date/time. Clicking on the up and down arrows increases and decreases the value respectively. The Date/Time Display takes account of Leap Years as well. MB1 clicking on 'Apply' sets the Valid Time to the selected time and closes the Date/Time Display. MB1 clicking on 'Cancel' closes the Date/Time Display without changing the time. | |
| 45. | MB1 click on the 'Clear' button. | All of the text fields are cleared out. The Valid-Time text field is set to 'yyyy-mm-dd hh:mm:ss'. | |
| 46. | Enter the following data into the text fields. Then MB1 click on the 'Save' button: Basin ID: ABCD1 Source: RFC Valid Time: current time UZTWM: 15.0 UZFWM: 15.0 UZK: 0.3 PCTIM: 0.04 ADIMP: 0.3 RIVA: 0.0 ZPERC: 95.0 REXP: 3.0 LZTWM: 90.0 LZFSM: 80.0 LZFPM: 170.0 LZSK: 0.225 LZPK: 0.012 PFREE: 0.1 RSERV: 0.3 SIDE: 0.0 PEADJ: 1.0 PXADJ: 1.0 EFC: 0.0 | Settings changed. | |
| 47. | MB1 click on the 'Save' button. | If there is already a record in the table with the same Basin ID, Source, and Valid Time entered in the text fields, | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| | | clicking on Save updates the record with the changes from the text field. If the Basin ID, Source, or Valid Time are unique, clicking on Save inserts a new record. MB1 clicking on the Valid Time text field brings up a Date/Time GUI which was tested in step 16. MB1 click on the 'Apply' button within the Date/Time GUI to set the valid time to the current time. MB1 clicking on the 'Save' button inserts the new record into the database. The record is saved in the SacSmaParams table. | |
| 48. | Select the record that was just inserted in the previous step. MB1 click on the 'Delete' button. | A confirmation dialog box appears stating whether to delete the Param or not. MB1 clicking 'No' returns the user back to the SacSma Parameters window. MB1 clicking 'Yes' deletes the selected Param and refreshes the table. | |
| 49. | MB1 click on the 'Close' button. | The 'SacSma Parameters' window closes and the Analysis window reappears. | |
| 50. | MB1 click on the button labeled 'Edit States' from the Analysis window. | The SacSma State window appears. In the table, Basin ID, Source, and Valid Times are listed for each record. MB1 clicking on any Basin ID populates the text fields with the appropriate data. | |
| 51. | MB1 click on the 'Valid Time/Basis Time Text Field'. | The Date/Time Display appears providing the user with a GUI interface to set the date/time. MB1 clicking on the up and down arrows increases and decreases the value respectively. The Date/Time Display takes account of Leap Years as well. MB1 clicking on 'Apply' sets the Valid Time/Basis Time to the selected time and closes the Date/Time Display. MB1 clicking on Cancel closes the Date/Time Display without changing the time. | |
| 52. | MB1 click on the 'Clear' button. | All of the text fields are cleared out. The Valid-Time and Basis Time text fields are set to 'yyyy-mm-dd hh:mm:ss'. | |
| 53. | Enter the following data into the text fields. Then MB1 click on the 'Save' button: Basin ID: ABCD1 Source: RFC | The settings change. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| | Valid Time: current time Basis Time: current time UZTWC: 31.02 UZFWC: 0.0090 LZTWC: 31.94 LZFSC: 0.01079483884 LZFPC: 68.4223323 ADIMC: 62.04 | | |
| 54. | MB1 click on the 'Save' button. | If there is already a record in the table with the same Basin ID, Source, and Valid Time entered in the text fields, MB1 clicking on Save updates the record with the changes from the text field. If the Basin ID, Source, or Valid Time are unique, MB1 clicking on Save inserts a new record. MB1 clicking on the Valid Time text field bring up a Date/Time GUI which was tested in step 16. MB1 click on the 'Apply' button within the Date/Time GUI to set the valid time to the current time. MB1 clicking on the 'Save' button inserts the new record into the database. The record is saved in the SacSmaState table. | |
| 55. | Select the record that was just inserted in step 53. MB1 click on the 'Delete' button. | A confirmation dialog box appears stating whether to delete the State or not. MB1 clicking 'No' returns the user back to the 'SacSma State' window. MB1 clicking 'Yes' deletes the selected State and refreshes the table. | |
| 56. | MB1 click on the 'Close' button. | The 'SacSma State' window closes and the Analysis window reappears. | |
| 57. | MB1 click on the button labeled 'MAPE Monthly Values' from the Analysis window. | The 'Monthly Value Editor' window will come up. In the table, Loc ID, PE, Dur, TS, Extremum, and Adjustment are displayed for each Location. MB1 clicking on any Loc ID populates the text fields below. Only records that have a PE value of EA display in the table. The PE text field is uneditable and is set to EA. | |
| 58. | MB1 click on the 'Clear' button. | All of the text fields are cleared out. The Posting Time changes to 'Not Posted Yet.' The Duration defaults to 1 hour. The Adjustment check box is unchecked. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 59. | Enter the following data into the text fields. Then MB1 click on the 'Save' button: Basin ID: ABCD1 PE: EA Duration: 3 hours TS: FZ Extremum: Z Adjustment: Checked January: 0.7 February: 0.5 March: 0.4 April: 0.2 May: 0.3 June: 1.2 July: 1.1 August: 1.1 September: 1.1 October: 0.9 November: 0.8 December: 0.8 | The settings change. | |
| 60. | MB1 click on the 'Save' button. | If there is already a record in the table with the same Basin ID, PE, Dur, TS, Extremum, and Adjustment entered in the text fields, MB1 clicking on Save updates the record with the changes from the text field. If the Basin ID, PE, Dur, TS, Extremum, or Adjustment is unique, MB1 clicking on Save inserts a new record. MB1 clicking on the Valid Time text field brings up a Date/Time GUI which was tested in step 16. MB1 click on the 'Apply' button within the Date/Time GUI to set the valid time to the current time. MB1 clicking on the 'Save' button inserts the new record into the database. The record is saved in the SacSmaState table. | |
| 61. | Select the record that was just inserted in step 59. MB1 click on the 'Delete' button. | A confirmation dialog box appears stating whether to delete the record or not. MB1 clicking 'No' returns the user back to the Monthly Value Editor window. MB1 clicking 'Yes' deletes the selected record and refreshes the table. | |
| 62. | MB1 click on the 'Close' button. | The Monthly Value Editor window closes | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| | | and the Analysis window reappears. | |
| 63. | From the 'View/Edit' menu, select 'Forecast Stage Editor' from the Analysis window. | The Forecast Stage Editor window appears. The Time, Stage, Discharge, and or missing value (if applicable) displays. The discharge is uneditable and is calculated from the given Stage value. | |
| 64. | Select a stage and delete the value in the text box. Then MB1 click on another text box. | After MB1 clicking on the second text box, the first text box automatically has a 0.0 entered into it. The corresponding discharge value updates to reflect this change. | |
| 65. | MB1 click on the 'Missing Value?' checkbox for the first row changed in Step 63. | The Stage reloads its old value in place of the 0.00. The corresponding discharge value updates to reflect this change. | |
| 66. | Change one of the Stage values to '45.0'. Then MB1 click on the 'Apply' button. | The TimeSeries updates with the new data. The bottom graph reflects this change. | |
| 67. | MB1 click on the 'Close' button. | The Forecast Stage Editor window closes. | |
| 68. | Note: 'Save FcstHeight', 'Save FcstDischarge..' and 'Save Evap' all use the same GUI. As a result, the following steps test each window out. From the 'Save' menu, select 'Save Forecast Stage'. | The Save Forecast window appears. The Physical Element is set to HG for Save FcstHeight, QR for Save FcstDischarge, and EA for Save Evap. They cannot be edited. There is a Type Source (TS) and a SHEF Qualifier combo box. The Product ID text box is blank. The Basis Time and the Product Time are set to the current time. | |
| 69. | Change the type source to 'FG'. Change the SHEF Qualifier to 'Z'. Enter 'TestProduct' in the Product ID. MB1 click on the 'Save to Database' button. | If the insert is successful, a dialog appears stating so. If the insert fails, a dialog appears with an error message. | |
| 70. | MB1 click on the 'Close' button. | The Save Forecast window closes and the Analysis window appears. | |
| 71. | Note: 'View Prior Runoff' and 'View Runoff' both use the same GUI. As a result, the following steps test both windows out. From the 'View/Edit' menu, select 'Prior Runoff Viewer'. | The 'Prior Computed Runoff' window appears. The Time, Runoff and missing values display. If there is no prior runoff, nothing is displayed below the column headers. The missing value check boxes are disabled as they are not needed here. | |
| 72. | MB1 click on the 'Close' button. | The Prior Computed Runoff window closes and the Analysis window appears. | |
| 73. | From the 'View/Edit' menu, select 'Precip | The Mean Areal Precip Editor window | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|--|-----------|
| | Editor..' | appears. The Time, Precip, and missing values check boxes display. | |
| 74. | MB1 click on any text field and change the value to 45.00'. Then MB1 click on another text field. Then MB1 click on the 'Missing Value?' checkbox for the first text field. | The value of the text field changes to '-9999.00' when the user MB1 clicks on the second text field. | |
| 75. | MB1 click on the 'Apply' button. | The top graph reflects the change made in the Observed Mean Areal Precip Editor. If the changed value's time is after the model start time, the bottom graph updates to reflect the change in the top graph. If the changed value's time is before the model start time, the bottom graph does not change. | |
| 76. | MB1 click on the 'Close' button. | The Observed Mean Areal Precip Editor window closes and the Analysis window appears. | |
| 77. | From the View/Edit menu, select 'Evapotraspiration Editor..' | The Mean Areal Potential Evaporation window appears. The Time, Evap and missing values check boxes display. | |
| 78. | MB1 click on any text field and change the value to '45.00'. Then MB1 click on another text field. Then MB1 click on the 'Missing Value?' checkbox for the first text field. | The value of the text field changes to '45.00' when the user MB1 clicks on the text field. The value remains the same when the user MB1 clicks on another text filed box. When user MB1 clicks on missing value the value changes to '-9999.0'. | |
| 79. | MB1 click on the 'Apply' button. | The top graph reflects the change made in the Mean Areal Potential Evaporation window. If the changed value's time is after the model start time, the bottom graph updates to reflect the change in the top graph. If the changed value's time is before the model start time, the bottom graph does not change. | |
| 80. | MB1 click on the 'Close' button. | The Mean Areal Potential Evaporation window closes and the Analysis window appears. | |
| 81. | Select 'Close' from SSHP Analysis window. | The GUI closes. | |
| 82. | Select 'Exit Application' from SSHP Control window. | The GUI closes. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | | |

Test Case River Monitor

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0011

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 10 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_RiverMonitor (OB8.3).
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that the River Monitor Software can be successfully utilized. This test case also illustrates the Alert Alarm support.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Data has been ingested
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | Under the 'HydroApps' menu, select the 'Launch River Monitor...' option. | The HydroBase window opens, listing all of the forecast points in the site-specific database for the WFO. | |
| 3. | MB1 click 'Display' → 'Select Columns'. | Column Selection window displays. | |
| 4. | Choose one or more columns from the 'Allowed Items' list. Then MB1 click on the 'Add' button. | The selected items list updates with the chosen columns. | |
| 5. | Choose one or more columns from the 'Selected Items' list. Then MB1 click on the 'Remove' button. | The selected items list updates with the removal of the chosen columns. | |
| 6. | Choose one or more columns from the 'Selected Items' list. Then MB1 click on the '^' or 'v' buttons. | The columns position moves by one step up or down depending on the button clicked. | |
| 7. | MB1 click the 'Confirm' button. | The Column Selection window closes. The table updates to reflect the columns in the selected columns list. | |
| 8. | MB1 click 'Display' → 'Select Columns'. | The Column Selection window displays. | |
| 9. | Choose one or more columns from the 'Allowed Items' list. Then MB1 click on the 'Add' button. | The selected items list updates with the chosen columns. | |
| 10. | MB1 click on 'Cancel'. | The column selection window closes. The displayed table is unchanged. | |
| 11. | MB1 click 'File' → 'Save Settings'. | The Save window opens to /awips/hydroapps/whfs/local/data/app/rivermon . The user can select a file name to save the settings. | |
| 12. | Enter a filename and MB1 click the 'Save' button. | The displayed settings are saved in the file selected. | |
| 13. | MB1 click 'File' → 'Load Settings'. MB1 click 'Cancel' in the Open window. | The Open window opens to /awips/hydroapps/whfs/local/data/app/rivermon . The user can select the path and file name to load settings. Verify the file saved in step 12 is there. After clicking 'Cancel', the Open window closes. | |
| 14. | MB1 click 'File' → 'Load Office Settings'. | The tree and the table update based on the information in the file. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 15. | MB1 click 'Display' → 'Refresh'. | The data in the table updates. The refresh panel updates to reflect the appropriate last and next refresh time. | |
| 16. | MB1 click 'File' → 'Export Data To Text File'. MB1 click 'Cancel' in the Save window. | The menu displays the save window which allows the user to choose the directory and file name for saving the table information. | |
| 17. | MB1 click 'Config' → 'RiverMon Group'. | The RiverMon Group window appears. | |
| 18. | Type 'FIRST' in Group ID, 'first group' in group name, and '1' in group ordinal. MB1 click 'Save'. The HSA is automatically set to the admin HSA and is uneditable. | The RiverMon Group table in the database is inserted with this entry. Also, the information displays in the table in RiverMonGroup window. | |
| 19. | Highlight the RiverMon Group created above in the table in RiverMon Group window. Modify the group name field as 'first created group' and MB1 click 'Save'. | The RiverMon Group table in the database updates and the information displays in the table in RiverMon Group window. | |
| 20. | MB1 click the 'Close' button in the RiverMon Group window. Verify that the location tree and main table update to reflect the change. | The RiverMon Group window closes. Verified. | |
| 21. | MB1 click 'Config' → 'RiverMon Location'. | The RiverMon Location window displays. | |
| 22. | Select a location ID, a group, and 5 as location ordinal. MB1 click 'Save'. MB1 click 'Close'. | The RiverMon Location table in the database updates with this entry and the information displays in the table in RiverMon Location window. The location tree and main table update to reflect the change. | |
| 23. | Highlight the RiverMon Location created above in the table in RiverMon Location window. Modify the group ordinal to 4. MB1 click 'Save'. MB1 click 'Close'. | The RiverMon Location table in the database updates and the information displays in the table in the RiverMon Location window. The location tree and main table update to reflect the change. | |
| 24. | Highlight the RiverMon Location created above in the table in RiverMon Location window and MB1 click 'Delete'. | The entry is deleted from the RiverMon Location table and is removed from the table. | |
| 25. | MB1 click the 'Close' button. | The RiverMon Location window closes. Verify that the location tree and main table update to reflect the change. | |
| 26. | MB1 click 'Config' → 'Derived Columns'. | An editor with Derived Columns file opens. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 27. | Change the information in a column and MB1 click 'Save and Update Now' in the main GUI. MB1 click 'X' on the DerivedColumns.txt window to close. | The change is visualized. | |
| 28. | MB1 click 'Config' → 'RiverMonitor PE Config'. MB1 click the 'X' on the DerivedColumns.txt window to close. | An editor with the RiverMonitor PE Config file opens. | |
| 29. | MB1 click 'Display' → 'Forecast Source'. | A sub menu with radio buttons displays. Only one button can be selected at a time. NOTE: There should be a <i>MaxFcst Value</i> column listed in the table. If not, add that column as was done in Steps 2-6. There should be some values listed in the <i>MaxFcst Value</i> column. If not, select 'Display' -> 'Latest Fcst Basis Time...' from the River Monitor Application GUI menu, which opens the Latest Fcst Basis Time Filter GUI. Then enter a value greater than or equal to 72 and MB1 click 'Close'. MB1 click on the 'MaxFcst Value' column to sort to see if there are any values present. If there are still no values, check to see that hydro data are being ingested. | |
| 30. | MB1 click 'Display' → 'Forecast Source' → 'Choose FF'. | Only forecast data type source FF displays in the table (E.g., some of the MaxFcst should be changed/deleted from that data column, but the site rows for the modified values should remain). | |
| 31. | MB1 click 'Display' → 'Forecast Source' → 'FZ'. | Only forecast data type source FZ displays in the table. (E.g. some of the MaxFcst should be changed/deleted from that data column, but the site rows for the modified values should remain). | |
| 32. | MB1 click 'Display' → 'Forecast Source' → 'Ingest Filter'. | Only forecast data type source that has a ranking per the ingest filter displays in the table. (E.g. the MaxFcst should be restored to the way they were at Step 29). | |
| 33. | MB1 click 'Display' → 'Alert Alarm Valid Time'. | The AlertAlarm valid time filter window displays. | |
| 34. | Change the box value by MB1 clicking the '^' and 'v' buttons. Then close the window by MB1 clicking 'Close' or the 'X' on the upper right corner of the window. | The value in the box is used to determine how much alert alarm data should be included in the AlertAlarm summary column in the main window. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 35. | MB1 click 'Display' → 'VTEC Event EndTime'. | The VTEC Event EndTime filter window appears. | |
| 36. | Change the box value by MB1 clicking the '^' and 'v' buttons. Then close the window by MB1 clicking on the 'Close' button in the window or 'X' on the upper right corner of the window. | The value in the box is used to determine the color of the VTEC Summary and Event EndTime cells included in the main window. | |
| 37. | MB1 click 'Display' → 'UGCExpire Time'. | The UGC Expire Time filter window appears. | |
| 38. | Change the box value by MB1 clicking the '^' and 'v' buttons. Then close the window by MB1 clicking on the 'Close' button in the window or 'X' on the upper right corner of the window. | The value in the box is used to determine the color of the UGC Expire Time cells included in the main window. | |
| 39. | MB1 click 'Display' → 'Latest ObsTime'. | The Latest ObsTime filter window appears. | |
| 40. | Change the box value by MB1 clicking the '^' and 'v' buttons. Then close the window by MB1 clicking on the 'Close' button in the window or 'X' on the upper right corner of the window. | The value in the box is used to determine the color of LatestObs Time, LatestObs Value, Latest StgValue, Latest StgTime, Latest FlowValue, Latest FlowTime cells in the main window. | |
| 41. | MB1 click 'Sort' → 'HSA Group Location - Order'. | Choosing this menu causes the displayed data to be sorted first by HSA (ascending order), then by group ordinal (ascending order), then by location ordinal (ascending order). | |
| 42. | MB1 click 'Details' → 'Office Notes'. | The Office Notes window appears. When this window displays, it highlights the first row (if any exist) that matched the location id of the station selected (if any) in the main window. Upon selecting the existing id in the combo box, its name, state and county display. | |
| 43. | Choose an ID from the ID box, enter topic say 'Rivermon', enter note as say 'flooding from tomorrow', enter data time and expire time. Then MB1 click the 'Save' button. | The Officenotes table in the database contains this entry. The posting time and update time is the current system time. Also the information displays in the upper portion of the Officenotes window. | |
| 44. | Highlight the above created office notes in the upper portion of the Officenotes window, and modify the notes field as 'may be flooding tomorrow'. Then MB1 click the 'Save' button. | The Officenotes table in the database updates with this change. The update time changes to current system time. Also the information displays in the upper portion of the Officenotes window. | |
| 45. | Highlight the above created office notes in the upper portion of the Officenotes window and MB1 click on the 'Delete' button. | The highlighted entry is deleted from the Officenotes table. The highlighted row is removed from the upper portion of the Officenotes window. | |
| 46. | MB1 click the 'Close' button. | The Officenotes window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 47. | MB1 click 'Details' → 'VTEC Events'. | The Valid Time Event Code (VTEC) History window appears. When this window displays, it highlights the first row (if any exist) that matches the location id of the station selected (if any) in the main window. | |
| 48. | MB1 click the 'Close' button. | The Valid Time Event Code (VTEC) History window closes. | |
| 49. | MB1 click 'Details' → 'AlertAlarm'. | The AlertAlarm window appears. When this window displays, it highlights the first row (if any exist) that matches the location id of the station selected (if any) in the main window. | |
| 50. | MB1 click the 'Close' button. | The AlertAlarm window closes. | |
| 51. | MB1 click 'Details' → 'Time Series Lite'. | The TimeSeriesLite window appears only if a row is selected in the main window and it has latest obsvalue and/or maxfcst value displayed, or the forecast source option is not IngestFilter. If the row is not highlighted before choosing this option then a window asking the user to highlight the row will display. | |
| 52. | MB1 click 'File' → 'Close'. | The Time Series window closes. | |
| 53. | MB1 click on the 'Update Now' button on the main window. | The main window table updates with the current data from database. The last update time shows the current time. The next update time is the last update time + x minutes (where x is equal to the value in the spin box near update now button). | |
| 54. | Change the value in the update box to '5'. Then MB1 click the 'Update Now' button. | The main window table updates with the current data from database. The last update time shows the current time. The next update time is the last update time + 5 minutes. | |
| 55. | Choose a location not displayed in the table in the left tree. Select the checkbox to show selected. | The location information displays in the table. | |
| 56. | Deselect the location in the left tree. Unselect the checkbox to show not selected. | The location information does not display in the table. | |
| 57. | Choose a group name in the left tree, and select the checkbox to show selected. | All the location ids under this group are selected in the tree. All the location's information displays on the table. | |
| 58. | Deselect the group name in the left tree. Unselect the checkbox to show not selected. | All the location ids under this group are deselected in the tree. All the location's information does not display on the table. | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|---|-----------|
| 59. | Choose a HSA in the left tree. Select the checkbox to show selected. | All the groups under this HSA and the location ids under these groups are selected in the tree. All the location's information displays on the table. | |
| 60. | Deselect the HSA in the left tree. Unselect the checkbox to show not selected. | All the groups under this HSA and the location ids under these groups are deselected in the tree. All the location's information does not display on the table. | |
| 61. | MB1 click on any of the column header in the table. | All the rows are sorted based on the data in the column that is clicked. | |
| 62. | Extend/Shrink the width of the columns, by dragging the column border with MB1. | The column width extends/shrinks based on the direction of the MB1 drag. | |
| 63. | Move the order of the columns displayed by MB1 clicking on the column header, dragging it and placing it in another position. | The column is placed to the new position the user places the column. | |
| 64. | MB1 click 'File' → 'Save Settings'. The save window opens and the user can select the path and file name to save the settings. MB1 click the 'Save' button. | The currently displayed settings like displayed columns, their order, sort information, fcst ts option, alertalarm valid time look up hours are saved in the file selected. | |
| 65. | MB1 click 'File' → 'Load Office Settings'. | This causes the settings file RiverMonitorSettings.txt (if it exists) file to be read and the display updated according to its contents. The tree and the table update based on the information in the file. If the file doesn't exist then the message displays in a window. | |
| 66. | MB1 click 'File' -> 'Load Settings'. Select the file created in step 64. MB1 click on the 'Open' button. | The display of the main window has the look and feel as it was just before performing step 64. | |
| 67. | MB1 click 'File' -> 'Exit' or close the window by MB1 clicking on the 'X' in the upper right corner of the window. | This causes the application to exit. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case Time Series Heavy

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)

Operations & Maintenance

AWP.TE.SWCTR/TO10-0012

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 7 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_HydroTS (OB8.3); Baseline_HydroTS_OB8.1; Checkout_HydroTS_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that AWIPS provides the capability to execute the WHFS Hydro Time Series. The Hydro Time Series allows a WFO to monitor hydrologic points of interest by providing the interface to information necessary for daily hydrologic monitoring and forecasting. Hydro Time Series allows for the observation of X_Y plots, and tabular listing of stage data and precipitation data. This test case also verifies, through the Time Series tool, the ingest and storage of precipitation data in the IHFS database.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested .
- The Test Group is set up.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 14. | Select a time series by MB1 clicking on the trace of a time series. | All the time series are represented by points and lines. The time series selected is highlighted in white, signifying that it can be edited. | |
| 15. | Select 'Insert' from the Edit menu. Then MB1 click on about half a dozen places around the active trace. | Points are added where the mouse button is clicked. A line connects the points. | |
| 16. | Select 'Delete' from the Edit menu. Then MB1 click on a point in the active time series. | The point selected is deleted. | |
| 17. | Select 'Move' from the Edit menu. | The Move option is selected. | |
| 18. | MB1 click and drag a point on the active time series. | The point can be moved vertically but not horizontally. | |
| 19. | Select 'Cancel Changes' from the Edit menu. | All the changes in the graph that were made in Steps 15–18 are undone, and the time series returns to its original state | |
| 20. | From the Edit menu, select 'Select Trace'. | The mouse icon becomes a hand when hovering over a line, signifying that it is ready to select a trace. | |
| 21. | Select a time series by MB1 clicking on a trace of a time series. | All the time series are represented by points and lines. The time series selected is highlighted in white, signifying that it can be edited. | |
| 22. | Select 'Insert' from the Edit menu. Then MB1 click on about half a dozen places around the active trace. | Points are added where the mouse button is clicked. A line connects the points. | |
| 23. | Select 'Save' from the Edit menu. | A Save window opens. | |
| 24. | Select 'Cancel' in the Save window. | The Save window closes. The changes in the trace are not saved to the database. | |
| 25. | Select 'Quit' from the File menu of the Time Series Display window. | The Time Series Display closes. | |
| 26. | In the Time Series window, MB1 click the Mode dropdown arrow (Station Selection) and select 'Predefined Group'. | The Time Series window changes to Predefined Group mode. | |
| 27. | Select 'TestGroup'. Then MB1 click the 'Table' button. Note: This step assumes the TestGroup was set up prior to running this step. | The Tabular Time Series window opens with data for the predefined groups of stations. | |
| 28. | MB1 click the 'Close' button in the Tabular Time Series window. | The Tabular Time Series window closes. | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|---|-----------|
| 29. | Select 'Graph' in the Time Series window. | The Time Series Display window opens. The Time Series Display window shows data for stations defined in the /awips/hydroapps/whfs/local/data/app/Time Series/group_definition.cfg configuration file. | |
| 30. | Press the 'PgDown' key. | The second page of data defined in the configuration file is shown (if there are two pages). | |
| 31. | Select 'Quit' from the File menu in the Time Series Display window. | The Time Series Display window closes. | |
| 32. | MB1 click the 'Close' button in the Time Series window. | The Time Series window closes. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case RiverPro
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0013

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

DRAFT

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | Page |
|--|------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 19 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_Riverpro (OB8.3); Baseline_Riverpro_OB8.1; Baseline_WANMHS_OB8.1; Baseline_RiverproNWRWAVES_OB8.1; Checkout_Riverpro-OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case tests and verifies the functionality found within the current version of the WHFS RiverPro Product Formatter application known as RiverPro.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | Under the 'HydroApps' menu, select the 'Launch RiverPro...' option. | The main RiverPro River Product Formatter window opens in OPERATIONAL Mode, listing 'Products to Generate' panel with recommended type of product (Statement/Warning) and 'Forecast Groups/Points for RVS,FLS,FLW' panel with the points included in the recommended type of product. | |
| 3. | From the 'Product to Generate' selection panel, select one non-recommended product. For example, if the recommended product is 'Flood Statement Default' (FLS), then select 'River Statement Default' (RVS). | The non-recommended product is highlighted. | |
| 4. | MB1 click the 'Recomm for Current Product' button in the RiverPro main window. | The forecast points included in the highlighted product are selected in the 'Forecast Groups/Points to Include' selection panel. If none are highlighted, select a few points. | |
| 5. | From the 'settings' menu in the RiverPro main window, select 'Recompute recommendations' | Compute internally the recommendations by using current information. It is possible that no display changes in the 'Product to Generate' and 'Forecast Groups/Point to Include' panels. | |
| 6. | From the 'Settings...' menu in the RiverPro main window, select 'Reset to recommended'. | The recommended product is highlighted (FLS as described above) in the 'Product to Generate' panel. The forecast points included in the recommended product are highlighted in the 'Forecast Groups/Points for RVS,FLS,FLW' panel. | |
| 7. | From the 'Settings...' menu in the RiverPro main window, select 'Select HSA...' | The Office Selection window opens. It displays the offices' id, number of forecast points and number of product definitions in that office. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 8. | Select the other office and MB1 click 'OK' in the Office Selection window. (NOTE: there might be only one office to select) | The Office Selection window closes. The main RiverPro window updates its listing 'Products to Generate' panel with recommended type of product (Statement/Warning) and 'Forecast Groups/Points for RVS,FLS,FLW' panel with the points included in the recommended type of product for the new office. | |
| 9. | From the 'Settings...' menu in the RiverPro main window, select 'Select HSA...' again. | The Office Selection window opens. | |
| 10. | Select the original office in the Office Selection window, MB1 click 'OK'. | The Office Selection window closes. The main RiverPro window updates its listing 'Products to Generate' panel with recommended type of product (Statement/Warning) and 'Forecast Groups/Points for RVS,FLS,FLW' panel with the points included in the recommended type of product for the original office. | |
| 11. | From the 'ForecastPoint' menu in the RiverPro main window, select 'Show recommendations...'. Should include information on VTEC if used a VTEC product. | The Recommendation/ Previous Product Information window opens. It displays the recommended product information, previous and current VTEC information and issued products information. | |
| 12. | Select 'Close'. | The Recommendation/ Previous Product Information window closes. | |
| 13. | From the 'Product to Generate' panel in the River Pro main window, select 'River Statement Default Product' (RVS). | The RVS product is highlighted. | |
| 14. | From the 'ForecastGroups/Points for RVS, FLS, FLW' panel in the RiverPro main window, select some forecast points. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 15. | From the 'Forecast Point' menu in the RiverPro main window, select 'Show river data...' | The Forecast Point Stage/Discharge information window opens. It displays the observed and forecast data, flood threshold information for each forecast point. | |
| 16. | From the Forecast Point Stage/Discharge information window, select 'View Table'. | The Time Series Control window open. (Note: sometimes the Tabular window opens at the same time, could be a potential minor DR.) | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 17. | Select 'Table'. | The Tabular Time Series window opens | |
| 18. | Select 'Close' on the Time Series Control window and Tabular Time Series window | Both windows close. | |
| 19. | From the Forecast Point Stage/Discharge Information window, select 'View graph'. | The Time Series Control window open. | |
| 20. | Select 'Graph'. | Time Series Display window opens. | |
| 21. | Select 'Close' on the Time Series Control window and 'Quit' from the 'File' menu in the Time Series Display window. | Both windows close. | |
| 22. | Select 'Close' from the Forecast Point Stage/Discharge Information window. | The window closes. | |
| 23. | From the 'ForecastPoint' menu in the RiverPro main window, select 'Show reference info...' | The Reference Information window opens. It displays the forecast points' information such as associated county, zone, state, river, group, HSA and its primary backup and secondary backup service offices. | |
| 24. | From the Reference Information window, select 'Close'. | The window closes. | |
| 25. | From the 'Logs' menu in the RiverPro main window, select 'Current session errors/info...' | The text editor opens with name as 'rpf_message.log.xxx'. It displays the application's log message with the latest information is at the bottom of this text file. | |
| 26. | Select 'Quit' from the 'File' menu in the text editor. | The text editor closes. | |
| 27. | From the 'Product to Generate' panel, select 'FLS (Flood Statement Default)' | The Flood Statement Default is highlighted. | |
| 28. | Select some groups/points from the 'Forecast Groups/Points for RVS,FLS,FLW' panel. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 29. | From the 'Settings' menu in the RiverPro main window, select 'Modify product sections'. | The Product Generation Settings window opens. | |
| 30. | From the 'General Settings' section, select the 'Official' and 'Non-segmented' buttons. | The buttons are selected. | |
| 31. | Select 'Apply', then 'Close' in the Product Generation Settings window. | The settings are saved and the Product Generation Settings window closes. | |
| 32. | From the 'Product' menu, select 'Create...' to create a statement. | A text editor window opens with the filename 'work_product.xxx' which contains FLS product. | |
| 33. | Type some test comments to the end of the product. Select 'Save As' from the 'File' menu in the text editor. | The file is saved. | |
| 34. | Select 'Quit' from the 'File' menu of the text editor window. | The text editor window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 35. | From the 'Issue' menu in the main RiverPro window, select 'Issue Product...' | The Product Issuance window opens asking the user if they would like to issue this generated product. | |
| 36. | Select 'Send' in the 'Product Issuance' window. | The Product Issuance window closes and a second Product Issuance window opens with message stating 'Product issued and definitions reset to recommended'. | |
| 37. | Select 'OK' in the second Product Issuance window. | The product is sent out. | |
| 38. | From the 'Product' menu, select 'View/Corrected/Send Previous Product'. | The View/Corrected/Send Previous Product window opens with the most recent product highlighted. | |
| 39. | Select 'View Product' from the View/Corrected/Send Previous Product window and verify that the test comments from above are in the FLS product. | The Product Viewer window opens and shows the FLS product including the test comments. | |
| 40. | Select 'OK' in the RiverPro Product View window. | The Product View window closes. | |
| 41. | Select 'Close' in the View/Corrected/Send Previous Product window. | The View/Corrected/Send Previous Product window closes. | |
| 42. | From the 'Logs' menu in the RiverPro main window, select 'Daily product issuances...' | The text editor opens with name as 'rpf_issue.log.xxx'. It displays the daily product issuance log message for the just issued product. | |
| 43. | Select 'Quit' from 'File' menu in the text editor. | The text editor closes. | |
| 44. | From an lx1 terminal window, check the <i>handleOUP.log</i> file at <i>/data/logs/fxa/display/localhost:0.x/<yyyymmdd></i> , and the distributeProduct logs at <i>/data/logs/fxa/display/<yyyymmdd></i> . Make sure the logs are updated with the product just sent from RiverPro. | Logs have been updated. <i>Note: x is either 0, 1 or 2 depending on which display that Riverpro is running.</i> | |
| 45. | Open NRRWAVES GUI by MB1 clicking to open the start-up menu and under <i>Hydro Apps</i> select NRRBrowser. Make sure the product you just sent is under the pending column. Open it and verify its contents (date, time, data, text) | Product is under the Pending column and it is verified. <i>Note: If you don't see the product there, most likely is because it is not included in the NRRWAVES triggers text file located under: /data/fxa/siteConfig/textApps</i> <i>Steps 43 and 44 can be executed for verification after each product is sent.</i> | |
| 46. | From the 'Product to Generate' panel, select 'FLW (Flood Statement Warning)'. | The Flood Statement Warning is highlighted. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 47. | Select some groups/points from the 'Forecast Groups/Points for RVS,FLS,FLW' panel. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 48. | From the 'Settings' menu, select 'Modify product sections'. | The Product Generation Settings window opens. | |
| 49. | In the 'General Settings' section of the Product Generation Settings window, for 'Product Text Case', select 'Mixed Case'. | The 'Mixed Case' button is selected. | |
| 50. | In the 'Product Sections/Subsections to Include' section of the Product Generation Settings window, select 'Product Header'. | The Product Header Settings window opens. | |
| 51. | In the Product Header Settings window, edit the 'Issuance Number', 'Expiration Date', and 'TimeZ' with valid values, and note the changes. | The 'Issuance Number', 'Expiration Date', and 'TimeZ' with valid values are modified and noted. | |
| 52. | Select 'Apply' and 'Close' in the Product Header Settings window. Open template and make sure changes are applied. | The changes are applied and the Product Header Settings window closes. | |
| 53. | In the 'General Settings' section of the Product Generation Settings window, select the 'Official' and 'Segmented' buttons. In the 'By:' options menu, select 'Forecast Point'. | | |
| 54. | Select 'Apply', then 'Close' in the Product Generation Settings window. | These changes for settings are saved and the Product Generation Settings window closes. | |
| 55. | From the 'Product' menu on the main RiverPro window, select 'Create...' | The text editor window opens with the statement incorporating the chosen settings. | |
| 56. | Add test comments, select 'Save As' then quit. | The window closes. | |
| 57. | From 'Issue' menu in the RiverPro main window, select 'Issue Product...' | The Product Issuance window opens asking the user if they would like to issue this generated product. | |
| 58. | Select 'Send' in the Product Issuance window. | The Product Issuance window closes and a second Product Issuance window opens with message 'Product issued and definitions reset to recommended'. | |
| 59. | Select 'OK' in the second Product Issuance window. | The product is sent out. | |
| 60. | From the 'Products' menu in the RiverPro main window, select 'View/Corrected/Send Previous Product'. | The View/Corrected/Send Previous Product window opens and the most recent product is highlighted. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 61. | Select 'View product' for the issued FLW product in the View/Corrected/Send Previous Product window. | The text editor opens, check the changes made in the Product Header section. Make sure variable changes display in the template. | |
| 62. | Select 'OK' in product viewer. | The window closes. | |
| 63. | Select Close from 'View/Corrected/Send Previous Product'. | The window closes. | |
| 64. | From the 'Product to Generate' panel, select 'FLW (Flood Statement Warning)'. Select some groups/points from the 'Forecast Groups/Points for RVS,FLS,FLW' panel. From the 'Settings' menu in the RiverPro main menu, select 'Modify product sections...' | The Product Generation Settings window opens. | |
| 65. | In the 'General Settings' section of the Product Generation Settings window, select the 'Segmented' button. In the 'Product Sections/Subsection to Include' panel in the Product Generation Settings window, include all product sections and all three forecast point subsections by selecting an order. Choose the sections in any order, and note the order from the pull down option menu next to the section. Do not duplicate the order. | The options are selected. | |
| 66. | From 'Product Generation Settings', MB1 click each section/subsection button. Select a template in the opened window. For example, MB1 click the 'Headline' button, pick a template in the Headline Section Settings window, MB1 click the 'View' button to review the template content and make a note of it. Then select 'Apply' and 'OK'. | The Product xxx Section Settings window opens. E.g. Product Headline Section Settings window. Open a text editor to review the selected template if the 'View' button is clicked. After 'Apply' and 'OK', the settings are saved and the Product xxx Section Settings window closes. | |
| 67. | Select the 'Impact Statement' button from the 'Product Generation Settings' panel. | The Impact Statement Sub-Section Settings window opens, allowing the tester to customize the impact statement search parameters to select the impact statements. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 68. | <p>Select each of the following options in turn, and note any changes made:</p> <ul style="list-style-type: none"> a. Reference Stage/Flow: select one of the following: Current Observed, Max Forecast or Current Obs/Max Fcst b. Stage Window sliders (-5.0 - 5.0): change the slider c. Maximum Depth below Flood Stage slider (-10.0 – 0): change the slider d. Search Type: select one of the following: Closest in Stage/Flow Window, Highest in Stage/Flow Window or All Below Upper Stage/Flow <p>The items b and c above can be replaced by specifying flow parameters instead of stage as the followings.</p> <ul style="list-style-type: none"> b. Flow Window: enter the percentage values for the lower and upper limits c. Max Offset below Flood Flow: enter the percentage value for the maximum offset <p>Note, the impact statement search parameters can be based on stage or flow.</p> | | |
| 69. | <p>From the Impact Statement Sub-Section Settings window, select the 'Apply Parameters' button and then the 'Apply' button.</p> | <p>If there is impact statement found for the forecast point based on these parameters, the results are:</p> <ul style="list-style-type: none"> a. The line of data (ImpactStg/Flow Start End Tendency) is highlighted in the 'Settings for Selected Forecast Point' list window. b. The 'Impact(s) to Use' field is filled with the impact values. c. The impact statement related to the highlighted 'ImpactStg/Flow' is displayed in the bottom window list. d. The 'Text for Stage/Flow' text box displays the highlighted 'ImpactStg/Flow' value. | |
| 70. | <p>From the Impact Statement Sub-Section Settings window, select 'OK'.</p> | <p>The Impact Statement Sub-Section Settings window closes.</p> | |
| 71. | <p>From the Product Generation Settings window, select the 'Crest Comparison'.</p> | <p>The Comparison Subsection Sub-Section Settings window opens, allowing the tester to edit parameters to select historical comparisons.</p> | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 72. | <p>Select each of the following options in turn, and note any changes made:</p> <ul style="list-style-type: none"> a. Reference Stage/Flow: select one of Current Obs/Max Fcst, Current Observed and Max Forecast b. Stage Window sliders (-5.0 – 5.0): change the slider c. Maximum Depth below Flood Stage slider (-10.0 – 0.0): change the slider d. Year Lookback slider (-150 - 0): change the slider e. Search Type options: select one of the five items <p>The items b and c above can be replaced by specifying flow parameters instead of stage as the followings.</p> <ul style="list-style-type: none"> b. Flow Window: enter the percentage values for the lower and upper limits c. Max Depth below Flood Flow: enter the percentage value for the maximum offset <p>Note, the crest comparison search parameters can be based on stage or flow</p> | | |
| 73. | <p>From the 'Crest Comparison Sub-Section Settings', select the 'Apply Parameters' button and then the 'Apply' button.</p> | <p>If there is crest comparison found for the forecast point based on these parameters, the results are:</p> <ul style="list-style-type: none"> a. The 'Crest to Use' field is filled with the crest stage/flow and the date the crest happened b. The line of data Crest Stg/Flow/CrestDate is highlighted | |
| 74. | <p>From the Crest Comparison Sub-Section Settings window, select 'OK'.</p> | <p>The 'Crest Comparison Sub-Section Settings window closes.</p> | |
| 75. | <p>Select 'Apply' and 'Close' in Product Generation Settings.</p> | <p>Selected.</p> | |
| 76. | <p>From the 'Settings' menu in the RiverPro main menu, select 'Save to settings file...' to save settings into file.</p> | <p>The Save Product Settings window opens, allowing the tester to save the selected definitions with a Description: e.g RVS - Test RVS, a FileName as rvs_new.pcc.<SITE>, where SITE is the site localization ID in capital letters.</p> | |
| 77. | <p>Select 'OK' in the Save Product Settings window.</p> | <p>The Saving Product Definition window opens and display message: 'Do you wish to overwrite ...'.</p> | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 78. | From Saving Product Definition window, select 'OK'. | Overwrite the previous version of flw_new.pcc.<SITE> The Saving Product Definition window closes. | |
| 79. | From the 'Product' menu in the main RiverPro menu, select 'Create...' | The text window opens. The modified RVS product is created and displayed in the text editor window. Segments for individual forecast points have been created. The point-based segments are separated by '\$\$' character. The tabular section includes information for all included forecast points. The segment for each forecast point starts with the UGC code, followed by the MND date/time and includes the Roundup subsection, Impact Statement subsection and Crest Comparison subsection if the river stages/flows are within the ranges chosen from the Impact Statement and Crest Comparison windows. The Headline, Summary of Groups, Call to Action and Hydromet Basis sections do not appear in the segmented section of the product, they are ordered by the order number selected in the Product Generation Settings window. | |
| 80. | From 'File' menu in the text editor, select 'Quit'. | The text editor closes. | |
| 81. | From the 'Product to Generate' selection panel in the RiverPro main window, select 'River Statement Default (RVS)'. | The RVS product is highlighted. | |
| 82. | Select some groups/points from the 'Forecast Groups/Points for RVS,FLS,FLW' selection panel in the main RiverPro window. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 83. | From the 'Settings' menu in the RiverPro main window, select 'Modify product sections...' | The Product Generation Settings window opens. | |
| 84. | In the 'General Settings' panel of the Product Generation Settings window, select the 'Official' and 'Segmented' buttons. In the 'By:' options menu, select 'County'. | | |
| 85. | In the 'Product Sections/Subsections to Include' panel of the Product Generation Settings window, include all product sections and all three forecast point subsections by selecting an order. Choose the sections in any order, and note the order from the pull down option menu next to the section. Do not duplicate the order. | | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 86. | From 'Product Generation Settings', MB1 click each sections/subsections buttons. Select a template in the opened window. For example, MB1 click the 'Headline' button, pick a template in the 'Headline Section Settings' window, MB1 click the 'View' button to review the template content and make a note of it. Then select 'Apply' and 'Close'. | The Product xxx Section Settings window opens. E.g. Product Headline Section Settings window. Open a text editor to review the selected template if the 'View' button is clicked. After 'Apply' and 'OK', the settings are saved and the Product xxx Section Settings window closes. | |
| 87. | Select 'Apply' and 'Close' in the Product Generation Settings window. | The settings are saved and the Product Generation Settings window closes. | |
| 88. | From the 'Product' menu in the RiverPro main window, select 'Create...' | The text editor window opens with the RVS product segmented by counties. The tabular section includes information for all included forecast points grouped by counties. The county-based segments are separated by '\$\$' character. The segment for each county starts with UGC code, follows by MND date/time and includes the 'Summary of Groups' section, roundup subsection, Impact Statement subsection and Crest Comparison subsection if the river stage/flow are within the ranges chosen from the Impact Statement and Crest Comparison windows. The Headline, Call to Action and Hydromet Basis sections do not appear in the segmented part of the product, they are ordered by the order number selected in the Product Generation Settings window. | |
| 89. | From the 'File' menu in the text editor, select 'Quit'. | The text editor closes. | |
| 90. | From the 'Product to Generate' selection panel in the RiverPro main window, select 'Flood Statement Default' (FLS). | The 'Flood Statement Default' option is highlighted. | |
| 91. | Select some points from the 'Forecast Groups/Points for RVS/FLS/FLW' selection panel. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 92. | From the 'Settings' menu in the RiverPro main window, select 'Modify product sections'. | The Product Generation Settings window opens with five sections that are contained in the statement and allows the tester to select the order in which they are to appear. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 93. | Select all the product sections and all three forecast point subsections by selecting an order of appearance from the option menu next to each product section. Do not duplicate an order. Choose sections in any order, and note the order. | | |
| 94. | From 'Product Sections/Subsections to Include' panel in the Product Generation Settings window, MB1 click each sections/subsections buttons. Select a template in the opened window. For example, MB1 click the 'Headline' button, pick a template in the 'Headline Section Settings' window, MB1 click the 'View' button to review the template content and make a note of it. Then select 'Apply' and 'Close'. | The Product xxx Section Settings window opens. E.g. Product Headline Section Settings window. Open a text editor to review the selected template if the 'View' button is clicked. After 'Apply' and 'Close', the settings are saved and the Product xxx Section Settings window closes. | |
| 95. | Under 'General Settings' in the Product Generation Settings window, select the 'Official', 'Segmented' buttons and 'Forecast Group' from the 'By:' option menu. | | |
| 96. | Select 'Apply' and 'Close' in the Product Generation Settings window. | The settings are saved and the Product Generation Settings window closes. | |
| 97. | From the 'Product' menu in the RiverPro main window, select 'Create...' to create the product. | | |
| 98. | Respond 'OK' if the Product Creation Warning window opens. | <p>The text editor window opens with the Flood Statement Default (FLS) product segmented by groups of forecast points. Segments for groups of forecast points have been created. These segments are separated by '\$\$' characters.</p> <p>The segment for each group starts with UGC code, follows by MND date/time, and includes the 'Summary of Groups' section, roundup subsection, Impact Statement subsection and Crest Comparison subsection if the river stage/flow are within the ranges chosen from the Impact Statement and Crest Comparison windows. These sections do not appear in the exact order as previously chosen. Usually the Summary Body (in Summary section) appears on the top of the segmented section.</p> <p>The Headline, Tabular, Call to Action and Hydromet Basis sections do not appear in the segmented part of the product, they are ordered by the order number selected</p> | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| | | in the Product Generation Settings window. | |
| 99. | From the 'File' menu in the text editor, select 'Quit'. | The text editor closes. | |
| 100. | From the 'Product to Generate' selection panel in the RiverPro main window, select VTEC Flood Statement Default (FLS). | The 'VTEC Flood Statement Default' product is highlighted. | |
| 101. | Select some points from the 'Forecast Groups/Points for RVS/FLS/FLW' selection panel. | If a forecast point is selected, only that point is highlighted. If a group is selected, all the forecast points in that group are highlighted. | |
| 102. | From the 'Settings' menu in the RiverPro main window, select 'Modify product sections...' | The Product Generation Settings window opens. | |
| 103. | From 'Product Sections/Subsections to Include' panel in the 'Product Generation Settings' window, MB1 click each sections/subsections buttons. Select a template in the opened window. For example, MB1 click the 'Headline' button, pick a template in the 'Headline Section Settings' window, MB1 click the 'View' button to review the template content and make a note of it. Then select 'Apply' and 'Close'. | The Product xxx Section Settings window opens. E.g. Product Headline Section Settings window. Open a text editor to review the selected template if the 'View' button is clicked. After 'Apply' and 'Close', the settings are saved and the Product xxx Section Settings window closes. | |
| 104. | From the 'Generated Settings' panel in the Product Generation Settings window, MB1 click the 'Official', 'Segmented' buttons, and 'Forecast Point' for the 'By:' option menu, MB1 click the 'Use VTEC' button, pick one of the key identifier (O/E/X/T). | | |
| 105. | Select 'Apply' and 'Close' in the Product Generation Settings window. | The settings are saved and the Product Generation Settings window closes. | |
| 106. | From the 'Settings' menu in the RiverPro main window, select 'Modify VTEC settings...' | The Valid Time Event Coding (VTEC) Settings window opens. It displays the VTEC information for the proposed events and previous issued events. The forecast point shown on the top of the 'Proposed Events' and the 'Previous Events' list windows are highlighted. | |
| 107. | From the Valid Time Event Coding (VTEC) Settings window, select the 'Check Selected' button. | The VTEC QC Check Report window opens to display the errors/warnings for the highlighted forecast point in the 'Proposed Events' list window. | |
| 108. | Select 'Close' from the VTEC QC Check Report window. | The window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 109. | From the Valid Time Event Coding(VTEC) Settings window, select the 'Check All' button. | The VTEC QC Check Report window opens to display the errors/warnings for all the forecast points included in the 'Proposed Event' list window. | |
| 110. | Select 'Close' from the VTEC QC Check Report window. | The VTEC QC Check Report window closes. | |
| 111. | From the 'Cause:' option menu in the Valid Time Event Coding (VTEC) Settings window, select another immediate cause. | The new immediate cause displays in the option menu. | |
| 112. | Select the 'Update Cause for All' button in the Valid Time Event Coding(VTEC) Settings window. | The 'Cause' fields for all forecast points are updated to the new immediate cause in the 'Proposed Event' list window. | |
| 113. | From the 'Action:' option menu in the Valid Time Event Coding (VTEC) Settings window, select another action code. | The new action code displays in the 'Action:' option menu. | |
| 114. | Select the 'Update' button in the Valid Time Event Coding (VTEC) Settings window. | The 'Act.Ph.Sig.ETN' field is updated with the new action code for the highlighted forecast point in the 'Proposed Events' list window. (Note: if the product was already issued and this is a continuation or extension of and FL.Y, then it should not say '.NEW.' in the VTEC line and the ETN should be the one from the original issued product and not a new one). | |
| 115. | Select 'Close' from the Valid Time Event Coding (VTEC) Settings window. | The Valid Time Event Coding(VTEC) Settings window closes. | |
| 116. | From 'Product' menu in the RiverPro main window, select 'Create...' | The text editor window opens with the VTEC Flood Statement Default (FLS) product segmented by forecast points. | |
| 117. | Respond 'Close' if 'VTEC QC Check Report' window opens. | <p>These segments are separated by '\$\$' characters.</p> <p>The segment for each point starts with UGC code, follows by VTEC P-VTEC and H-VTEC lines (defined as /.../), and includes MND date/time, the Roundup subsection, Impact Statement subsection and Crest Comparison subsection if the river stage/flow are within the ranges chosen from the Impact Statement and Crest Comparison windows.</p> <p>The Headline, Tabular, Call to Action and Hydromet Basis sections do not appear in the segmented part of the product, they are ordered by the order number selected in the Product Generation Settings window.</p> | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 118. | From the 'File' menu in the text editor, select 'Quit'. | The text editor closes. | |
| 119. | From the 'Product to Generate' selection panel in the RiverPro main window, select 'NWR Flood Warning Default'. If testing on TBW4 (Alaska OCONUS), stop and go to Step 133. | The NWR Flood Warning Default is highlighted. NOTE: NWR products are not configured for testing on TBW4. | |
| 120. | Select 'All' from the 'Forecast Groups/Points for RVS/FLS/FLW' selection panel in the RiverPro main window. | All forecast points in the 'Forecast Groups/Points for RVS, FLS, FLW' panel are highlighted. | |
| 121. | From the 'Product' menu in the RiverPro main window, select 'Create...' | The text window opens. | |
| 122. | Respond 'OK' if the Product Creation Warning window opens. | The product is displayed in the text editor window with the following information: Number of NWR towers considered for each tower, the call sign, city name, and WFO. Any locations that are to be included for that particular tower are listed, and the actual product for those locations is displayed. | |
| 123. | In the text editor, add some test comments at the end of each tower product. | | |
| 124. | Select 'Save' from the 'File' menu in the text editor. | | |
| 125. | From the 'File' menu in the text editor, select 'Quit'. | The text editor closes. | |
| 126. | From the 'Issue menu' in the RiverPro main window, select 'Issue Product...' | The Product Issuance dialog opens, confirming that the tester wants to issue the NWR Flood Warning Default product. | |
| 127. | Select 'Send' in the 'Product Issuance' window. | Another Product Issuance dialog opens, confirming issuance of the NWR Flood Warning Default product(s). | |
| 128. | Select 'OK' in the second Product Issuance window. | The Product Issuance dialog closes. | |
| 129. | From the 'Product' menu in the RiverPro main window, select 'View/Corrected/Send Previous Product'. | The View/Corrected/Send Previous Product window opens, and the most recent product is highlighted. | |
| 130. | Select 'All Products' from the 'List:' option menu. The products can be filtered by 'VTEC Products', 'Non-VTEC Products', 'NWR Products' or 'All Products'. | All issued products display as ProductId/TimeZ/Type. | |
| 131. | Select 'View Product' for the just issued NWR Flood Warning Default product, and verify the edits in it. | | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|---|-----------|
| 132. | Select 'OK' in the 'Product Viewer'. | The Product Viewer window closes. | |
| 133. | Select 'Close' in the View/Corrected/Send Previous Product window. | The View/Corrected/Send Previous Product window closes. | |
| 134. | From the 'Product' menu in the RiverPro main window, select 'Exit' to close the RiverPro application. | RiverPro main window closes. | |
| 135. | This concludes the test case | Done. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case MPE
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0014

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | Page |
|---|------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 17 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_HYDRO_WHFS_MPE_OB8.1.
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case tests and verifies the functionality found within the WHFS MPE Data Viewer application known as MPE Editor. As new functionality is added to this application, these test procedures will be updated to contain the steps required to test this new functionality. The MPE FieldGen application is also demonstrated in this test case.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested .
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'MPE' from the dropdown menu if available. If not available, select 'Other...'. Then select 'MPE' from the Open Perspective dialog. | The MPE Perspective and MPE Choose Data Period window display in CAVE. | |
| 2. | On the Choose Data Period window, select the date along the top of the window and the hour from the MPE Options. MB1 click the 'Display MPE Data' button. | A MPE field for the selected date and hour displays in the MPE viewer. | |
| 3. | From the 'Help' pull-down menu (on the right side top corner of the window), select 'About'. | An About window displays the application's name, version number and date. | |
| 4. | Select 'OK' from the About window. | The About window closes. | |
| 5. | From the 'File' pull-down menu, select 'Save As Gif'. | The Save As GIF window launches. | |
| 6. | In the Save as GIF window, use the Filter and Directories selection boxes to choose a directory to save a GIF screen capture. In the Selection box, enter the name of the file (including the directory) followed by the '.gif' file extension. For best results move the Save as GIF window off of the MPE display. Click 'OK'. | The Save As GIF window closes. The file is saved in /awips/hydroapps/whfs/local/data/image/xxx.gif | |
| 7. | In a terminal, go to the directory in which the screen capture was saved. Use the display command to display the GIF file. | The MPE screen capture displays. | |
| 8. | From the 'File' pull-down menu, select 'Print Image'. Note: You can print in color (lp2) printer by uncomment out the 'whfs_print_color and whfs_printcommand_LX' tokens under /awips/hydroapps/.Apps_defaults_site file. | The MPE image is sent to the printer specified by the whfs_printcommand_LX token. By default it is printed on lp1 (gray) printer. | |
| 9. | From the 'File' pull-down menu, select 'Print Reverse Image'. | The MPE image is sent to the printer specified by the whfs_printcommand_LX token. The image displays in reverse video (i.e., black as white and white as black). | |
| 10. | From the 'Tools' pull-down menu, select 'Point Zoom'. Then click 'Out'. | The center of the geographic display zooms out. | |
| 11. | From the 'Tools' pull-down menu, select 'Point Zoom'. Then click 'In'. | The center of the geographic display zooms in. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 12. | Draw a rectangle on the geographic display by holding down and dragging MB1. Then from the 'Tools' pull-down menu, select 'Areal Zoom'. | The geographic display zooms in on the rectangular area drawn by the MB1 button. | |
| 13. | From the 'Tools' pull-down menu, select 'Areal Zoom' again. | The display returns to its previous zoom level. | |
| 14. | From the 'Tools' pull-down menu, select 'Pan'. Then click 'Up'. | The geographic display moves North. | |
| 15. | From the 'Tools' pull-down menu, select 'Pan'. Then click 'Down'. | The geographic display moves South. | |
| 16. | From the 'Tools' pull-down menu, select 'Pan'. Then click 'Right'. | The geographic display moves East. | |
| 17. | From the 'Tools' pull-down menu, select 'Pan'. Then click 'Left'. | The geographic display moves West. | |
| 18. | From the 'Tools' pull-down menu, select 'Recenter'. | The cursor changes from an arrow into a leftward pointing hand that indicates that recenter functionality is active. | |
| 19. | Click on an area that is not in the center of the display. | The display recenters on the selected area. | |
| 20. | From the 'Tools' pull-down menu, select 'Recenter' again. Then click on the area that was originally at the center of the display. | The geographic display returns to its previous viewing state and center. | |
| 21. | From the 'Tools' pull-down menu, select 'Tool Bar'. | A tool bar appears just below the row of pull-down menus. The icons shown perform the same functions as the Zoom and Pan options found in the 'Tools' pull-down menu. | |
| 22. | From the 'Tools' pull-down menu, select 'Tool Bar' again. | The tool bar disappears. | |
| 23. | From the 'Gages' pull-down menu, select 'Show Gage Identifiers'. | Alphanumeric gage labels appear on the MPE display. | |
| 24. | From the 'Tools' pull-down menu, select 'Set Font'. Then try selecting different font sizes. | The alphanumeric gage labels change size. | |
| 25. | From the 'Gages' pull-down menu, select 'Show Gage Identifiers'. | The gage labels disappear from the display. | |
| 26. | From the 'Tools' pull-down menu, select 'Set Colors'. | The Color Thresholds window appears. | |
| 27. | On the Color Thresholds window, select the '<MINIMUM' item from the list. Select 'BLUE1' from the color name list at the bottom of the window and click the 'Save To User Set' button. | Black areas within the MPE data field on the MPE display turn blue. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 28. | On the Color Thresholds window, select the '<MINIMUM' item from the list. Select 'BLACK' from the color name list at the bottom of the window and click the 'Save To User Set' button. | The blue areas within the MPE data field on the MPE display turn back to black. | |
| 29. | Close the Color Thresholds window. | The Color Thresholds window closes. | |
| 30. | On the 'Tools' pull-down menu, select 'View'. Then click 'Split Screen'. | The MPE display splits into two geographic areas, each with its own legend. | |
| 31. | On the 'Tools' pull-down menu, select 'View'. Then click 'Full Screen'. | The MPE display shows one geographic area with only one legend. | |
| 32. | On the 'Tools' pull-down menu, select 'Clear Data'. | A dialog box indicating that the data has not been saved displays. Click 'OK' in this dialog box. | |
| 33. | On the 'Tools' pull-down menu, verify the 'Restore Initial' option exists. | Verified. | |
| 34. | On the 'Tools' pull-down menu, verify the 'Find Station' option exists. | Verified. | |
| 35. | From the 'Projections' pull-down menu, select 'Polar Stereographic'. | The geographic display uses a Polar Stereographic projection. | |
| 36. | From the 'Projections' pull-down menu, select 'HRAP'. | The geographic display uses a HRAP projection. | |
| 37. | From the 'Projections' pull-down menu, select 'Flat Lat/Lon'. | The geographic display uses a Flat Latitude/Longitude projection. | |
| 38. | From the 'Overlays' pull-down menu, select 'Streams/Lakes'. Then click 'No Streams/Lakes'. | No streams or lakes display on the geographic display. | |
| 39. | From the 'Overlays' pull-down menu, select 'Streams/Lakes'. Then click 'All Streams/Lakes'. | All streams and lakes display on the geographic display if defined in the Overlay Configuration file. | |
| 40. | From the 'Overlays' pull-down menu, select 'Basin Boundaries'. | This toggles the display of Basin Boundary outlines on the geographic display if defined in the Overlay Configuration file. | |
| 41. | From the 'Overlays' pull-down menu, select 'Counties'. | This toggles the display of County outlines on the geographic display if defined in the Overlay Configuration file. | |
| 42. | From the 'Overlays' pull-down menu, select 'County Warning Areas'. | This toggles the display of CWA outlines on the geographic display if defined in the Overlay Configuration file. | |
| 43. | From the 'Overlays' pull-down menu, select 'RFC Boundaries'. | This toggles the display of RFC Boundary outlines on the geographic display if defined in the Overlay Configuration file. | |
| 44. | From the 'Overlays' pull-down menu, select 'States'. | This toggles the display of State Borders on the geographic display if defined in the Overlay Configuration file. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 45. | From the 'Overlays' pull-down menu, select 'Zones'. | This toggles the display of Zones on the geographic display if defined in the Overlay Configuration file. | |
| 46. | From the 'Overlays' pull-down menu, select 'Cities/Towns'. | This toggles the display of City locations on the geographic display if defined in the Overlay Configuration file. | |
| 47. | From the 'Overlays' pull-down menu, select 'Highways/Roads'. Then click 'Highways'. | All Highways display on the geographic display if defined in the Overlay Configuration file. | |
| 48. | From the 'Overlays' pull-down menu, select 'Highways/Roads'. Then click 'None'. | No Highways or Roads display on the geographic display. | |
| 49. | From the 'Overlays' pull-down menu, select 'HRAP'. | This toggles the display of the HRAP grid on the geographic display if defined in the Overlay Configuration file. | |
| 50. | From the 'Overlays' pull-down menu, select 'Lat/Lon Lines'. | This toggles the display of Latitude and Longitude lines on the geographic display if defined in the Overlay Configuration file. | |
| 51. | From the 'Overlays' pull-down menu, select 'Time Zones'. | This toggles the display of Time Zone boundaries on the geographic display if defined in the Overlay Configuration file. | |
| 52. | From the 'Overlays' pull-down menu, select 'Radar Locations'. | This toggles the display of Radar locations on the geographic display if defined in the Overlay Configuration file. | |
| 53. | From the 'Overlays' pull-down menu, select 'Radar Rings'. | This toggles the display of the outline of the Radar's coverage area on the geographic display if defined in the Overlay Configuration file. Note the colors of the radar rings. A red radar ring indicates that there is no data for that radar site. A green radar ring indicates that there is data for the radar site. | |
| 54. | On the Overlays pull-down menu, verify the 'Basin Names', 'Hydro Service Areas', and 'Maps Foreground' options exist. | Verified. | |
| 55. | From the 'MPEcontrol' pull-down menu, select 'Previous Hour'. | A dialog box indicating that this hour's MPE field has not been saved displays. Select 'OK' from this dialog to display the previous hour's MPE field. | |
| 56. | From the 'MPEcontrol' pull-down menu, select 'Next Hour'. | A dialog box indicating that this hour's MPE field has not been saved displays. Select 'OK' from this dialog to display the next hour's MPE field. | |
| 57. | From the 'MPEcontrol' pull-down menu, select 'Choose Hour'. | The Choose Data Period window displays. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|---|-----------|
| 58. | From the Choose Data Period window, click the 'Close Window Button'. | The Choose Data Period window closes. | |
| 59. | From the 'MPEcontrol' pull-down menu, select 'Save Best Estimate Top'. | The currently displayed MPE field is saved as the best estimate QPE. To verify this, go to /awips/hydroapps/precip_proc/local/data/mpe/qpe and verify the time stamp on the xmrg file for this hour. | |
| 60. | From the 'MPEcontrol' pull-down menu, the 'Save Best Estimate Bottom' option only applies when in split screen mode. When in split screen mode, this option saves the MPE field displayed in the lower window as the best estimate QPE. | The MPE field displayed is saved as the best estimate QPE. | |
| 61. | From the 'MPEcontrol' pull-down menu, select 'Regenerate Hour Fields'. | The Regenerate Hour Fields Dialog window displays. | |
| 62. | From the 'Regenerate Hour Fields Dialog' window, click 'Yes'. | <i>MPE Fieldgen</i> is rerun for the displayed hour's MPE data. To verify this, go to /awips/hydroapps/precip_proc/local/data/mpe/rmosaic and verify the timestamp on the RMOSAIC file for this hour. | |
| 63. | From the 'Precipfields' pull-down menu, select 'Radar Mosaic'. | The Radar Mosaic Precip Field displays. | |
| 64. | From the 'Precipfields' pull-down menu, select 'Average Radar Mosaic'. | The Average Radar Mosaic field displays. If the 'Average Radar Mosaic' option is grayed out, then AVGRMOSAIC is not listed in either the mpe_generate_list token or the mpe_base_radar_mosaic token. | |
| 65. | From the 'Precipfields' pull-down menu, select 'Max Radar Mosaic'. | The Maximum Radar Mosaic field displays. If the 'Max Radar Mosaic' option is grayed out, then MAXRMOSAIC is not listed in either the mpe_generate_list token or the mpe_base_radar_mosaic token. | |
| 66. | From the 'Precipfields' pull-down menu, select 'Field Bias Radar Mosaic'. | The Field Bias Radar Mosaic displays. If the 'Field Bias Radar Mosaic' option is grayed out, then BMOSAIC is not listed in the mpe_generate_list token or MMOSAIC is not listed in the mpe_generate_list token. | |
| 67. | From the 'Precipfields' pull-down menu, select 'Local Bias Radar Mosaic'. | The Local Bias Radar Mosaic displays. If the 'Local Bias Radar Mosaic' option is grayed out, then LMOSAIC is not listed in the mpe_generate_list token or MLMOSAIC is not listed in the mpe_generate_list token. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 68. | From the 'Precipfields' pull-down menu, select 'Gage Only Analysis'. | The Gage Only Analysis displays. If the 'Gage Only Analysis' option is grayed out, then GAGEONLY is not listed in the mpe_generate_list token. | |
| 69. | From the 'Precipfields' pull-down menu, select 'Satellite Precip'. | The Satellite Precipitation field displays. If the 'Satellite Precip' option is grayed out, then SATPRE is not listed in the mpe_generate_list token. | |
| 70. | From the 'Precipfields' pull-down menu, select 'Local Bias Satellite Precip'. | The Local Bias Satellite Precipitation field displays. If the 'Local Bias Satellite Precip' field option is grayed out, then LSATPRE is not listed in the mpe_generate_list token. | |
| 71. | From the 'Precipfields' pull-down menu, select 'Multisensor Mosaic'. | The Multisensor Mosaic displays. If the 'Multisensor Mosaic' option is grayed out, then MMOSAIC is not listed in the mpe_generate_list token. | |
| 72. | From the 'Precipfields' pull-down menu, select 'Local Bias Multisensor Mosaic'. | The Local Bias Multisensor Mosaic displays. If the 'Local Bias Multisensor Mosaic' option is grayed out, then LMOSAIC is not listed in the mpe_generate_list token. | |
| 73. | From the 'Precipfields' pull-down menu, select 'Triangulated Local Bias Mosaic'. | The Triangulated Local Bias Mosaic displays. If the 'Triangulated Local Bias Mosaic' option is grayed out, then P3LMOSAIC is not listed in the mpe_generate_list token. | |
| 74. | From the 'PrecipFields' menu, select 'Best Estimate OPE'. | The Best Estimate OPE field displays. | |
| 75. | From the 'Basefields' pull-down menu, select 'Local Span'. | The Local Span Field displays if LMOSAIC or MLMOSAIC is listed in the mpe_generate_list token. | |
| 76. | From the 'Basefields' pull-down menu, select 'Local Bias'. | The Local Bias Field displays if LMOSAIC or MLMOSAIC is listed in the mpe_generate_list token. | |
| 77. | From the 'Basefields' pull-down menu, select 'Height Field'. | The Height Field displays. | |
| 78. | From the 'Basefields' pull-down menu, select 'Radar Coverage Field'. | The Radar Coverage Field displays. | |
| 79. | From the 'Basefields' pull-down menu, select 'Gage Triangles'. | The Gage Triangles displays if P3LMOSAIC is specified in the mpe_generate_list token. (note**: it is grayed out) | |
| 80. | On the 'Gages' pull-down menu, verify the 'QC Precipitation' option exists. | Verified. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 81. | On the 'Gages' pull-down menu, verify the 'QC Temperature' option exists. | Verified. | |
| 82. | On the 'Gages' pull-down menu, verify the 'QC Freezing Level' option exists. | Verified. | |
| 83. | On the 'Gages' pull-down menu, verify the 'Save Level 2 Data' option exists. | Verified. | |
| 84. | From the 'Precipfields' pull-down menu, select 'Gage Only Analysis'. | The Gage Only Analysis displays. | |
| 85. | From the 'Gages' pull-down menu, select 'Add Pseudo Gage'. | The mouse pointer turns into a left pointing hand. | |
| 86. | MB1 click on a location inside the currently displayed 'Gage Only Analysis' field. | The Add Pseudo Gage window appears. | |
| 87. | Using the Pseudo Gage Accumulation slider bar on the Add Pseudo Gage window, choose '0.50 inches' and click the 'OK' button. | The Add Pseudo Gage window closes. | |
| 88. | From the 'MPEcontrol' pull-down menu, select Regenerate Hour Fields. Select 'Yes' in the pop up confirmation window. | The <i>MPE_Fieldgen</i> process is run for the chosen hour. After <i>MPE_Fieldgen</i> has run, the Gage Only Analysis field is regenerated. The field appears to be altered in the vicinity of the newly created pseudo gage. | |
| 89. | From the 'Gages' pull-down menu, select 'Gage Table'. | The Gage Table displays. | |
| 90. | Select 'by Gage Value' from the 'Gage Table Sort Gages' menu. | The gages are sorted by descending value. | |
| 91. | Select by 'by Radar ID' from the 'Gage Table Sort Gages' menu. | The gages are grouped and sorted by ascending Radar ID. | |
| 92. | Select 'by Gage ID' from the 'Gage Table Sort Gages' menu. | The gages are grouped and sorted by ascending Gage ID. | |
| 93. | From the 'Gages' pull-down menu, select 'Show Gage Identifiers'. | The gage identifiers are drawn on the MPE display. | |
| 94. | From the 'Gages' pull-down menu, select 'Show Gage Values'. | The gage values are drawn on the MPE display. | |
| 95. | Find a zero-valued gage on the MPE display and locate this gage in the Gage Table window. | The gage is located. | |
| 96. | In the Edit column, modify the value of this gage to a large non-zero amount. | The value of the gage is modified to a large non-zero amount. | |
| 97. | Select 'Quit' from the 'Control' menu in the Gage Table window. | The Gage Table closes. The edited gage value is saved. Note**: Value is not saved | |
| 98. | From the 'MPEcontrol' pull-down menu, select 'Regenerate Hour Fields'. | The Rerun FieldGen Dialog window displays. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 99. | From the Rerun FieldGen Dialog window, click 'Yes'. | <i>MPE_Fieldgen</i> is rerun for the hour's MPE data being displayed. After <i>MPE_Fieldgen</i> has run, the MPE window shows the results of the gage edit on the Gage Only Analysis precipitation field. | |
| 100. | From the 'Gages' pull-down menu, select 'Show Missing Gages'. Then select 'All Missing' from the 'Missing Gages' submenu. | Gages with missing values display in the MPE window with values of 'M'. There may not be any. | |
| 101. | From the 'Gages' pull-down menu, select 'Gage Color' -> 'Solid Color'. | The gage identifiers and gage values display in a sandy brown color. | |
| 102. | Select 'Display 7 x 7' from the 'Gages' pull-down menu. | The pointer changes shape so that the user can choose a gage. | |
| 103. | MB1 click near a gage. The tester should choose a gage in an area that has precipitation. | A Display 7x7 Gage Editing Utility window opens for the precipitation gage closest to the area selected. | |
| 104. | In the Display 7x7 Gage Editing Utility window, slide the Edit Gage Value bar partially to the right. Then select 'Set Value'. | The change is accepted. The gage value shown directly beneath the gage identifier in the Display 7x7 Gage Editing Utility window updates to the value chosen on the Edit Gage Value slider bar. | |
| 105. | From the Display 7x7 Gage Editing Utility window, select 'Close'. | The Display 7x7 Gage Editing Utility window closes. | |
| 106. | Select 'Regenerate Hour Fields' from the 'MPEcontrol' pull-down menu. | The Rerun FieldGen Dialog window appears. | |
| 107. | Select 'Yes' in the Rerun FieldGen Dialog window. | The <i>MPE_Fieldgen</i> process is run for the chosen hour. After <i>MPE_Fieldgen</i> has run, the MPE window shows the results of the gage edit on the Gage Only Analysis precipitation field. | |
| 108. | From the Polygons pull-down menu, select 'Draw Polygons'. | The option is selected. | |
| 109. | Using single MB1 clicks, draw a polygon on the displayed MPE data field. | A line connecting the polygon vertices defined by the MB1 click points is drawn on the MPE display. | |
| 110. | Perform a single MB3 click to close the polygon. | The displayed polygon outline is closed by a line connecting the last polygon vertex to the first polygon vertex. The Edit Precipitation window displays. | |
| 111. | From the Edit Precipitation window, select a nonzero value on the Adjust Precipitation Value slider. Then click the 'Set' button below the slider. | The drawn polygon fills with a solid color representing the value chosen on the Adjust Precipitation Value slider. | |
| 112. | From the Edit Precipitation window, select 'Close'. | The Edit Precipitation window closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 113. | From the 'Polygons' pull-down menu, select 'Delete Polygons'. | The Delete Polygons window displays. In its text field, there should be an entry for the polygon just drawn. | |
| 114. | In the Delete Polygons window, select the entry corresponding to the polygon just created. Click the 'Undisplay' button. | The polygon is removed from the MPE display. Its displayed flag is set from 'T' to 'F'. | |
| 115. | In the Delete Polygons window, select the 'Display' button. | The polygon is shown on the MPE display. Its displayed flag is set from 'F' to 'T'. | |
| 116. | In the Delete Polygons window, select 'Delete'. | The polygon is permanently removed from the MPE display. Its entry is removed from the Delete Polygons window. | |
| 117. | In the Delete Polygons window, select 'Close'. | The Delete Polygons window closes. | |
| 118. | From the 'Polygons' pull-down menu, select 'Draw Polygons'. | The option is selected. | |
| 119. | Using single MB1 clicks, draw a polygon on the displayed MPE data field. Try to draw the polygon around one or more areas of precipitation on the MPE display. | A line connecting the polygon vertices defined by the MB1 click points is drawn on the MPE display. | |
| 120. | Perform a single MB3 click to close the polygon. | The displayed polygon outline is closed by a line connecting the last polygon vertex to the first polygon vertex. The Edit Precipitation window displays. | |
| 121. | On the Edit Precipitation window, set the 'Adjust Precipitation Value' to a value midway between the highest and lowest precipitation values contained within the polygon. For example, if the polygon encompasses precipitation amounts ranging from 0 to 0.50 inches, then set the slider bar to 0.25 inches. | The slider bar is set. | |
| 122. | On the Edit Precipitation window, click the 'Raise' button. | All values within the edit polygon drawn on the MPE display which are below the value selected on the Adjust Precipitation slider bar are raised to the slider bar value. All values within the edit polygon which are above the value set on the slider bar are left unchanged. | |
| 123. | Using single MB1 clicks, draw another polygon on the displayed MPE data field. Try to draw the polygon around one or more areas of precipitation on the MPE display. Try to draw this polygon so it does not overlap the previously drawn polygon. | A line connecting the polygon vertices defined by the MB1 click points is drawn on the MPE display. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 124. | Perform a single MB3 click to close the polygon. | The displayed polygon outline is closed by a line connecting the last polygon vertex to the first polygon vertex. The Edit Precipitation window displays. | |
| 125. | On the Edit Precipitation window, set the Adjust Precipitation Value slider bar to a value midway between the highest and lowest precipitation values contained within the polygon. For example, if the polygon encompasses precipitation amounts ranging from 0 to 0.50 inches, then set the slider bar to 0.25 inches. | The slider bar is set. | |
| 126. | On the Edit Precipitation window, click the 'Lower' button. | All of the values within the polygon which have a value higher than the value selected on the Adjust Precipitation Value slider bar are lowered to the slider bar value. All values within the polygon which have a value lower than the value on the slider bar are left unchanged. | |
| 127. | On the Edit Precipitation window, set the Adjust Precipitation Value slider bar to 0.50. Click the 'Scale' button. | All values within the previously drawn polygon are reduced by half (multiplied by 0.50). | |
| 128. | On the Edit Precipitation window in the Select Field to Substitute section, select an MPE field different from the one currently shown in the MPE display. Click the 'Substitute' button. | Precipitation data from the selected field are placed into the previously drawn polygon. | |
| 129. | On the Edit Precipitation window, select the 'Close' button. | The Edit Precipitation window closes. | |
| 130. | From the 'Climo' pull-down menu, select the 'Monthly Prism Precip' option. | PRISM data representing average precipitation for the current month display in the MPE display. | |
| 131. | From the 'Misc' pull-down menu, select the 'Display Bias Table' option. | The Edit Bias Table window displays. | |
| 132. | From the Edit Bias Table window, click a button corresponding to a radar site in the radar column. | A window appears listing the number of gage/radar pairs, the mean gage value, the mean radar value, and the resulting bias for each of 10 memory spans. | |
| 133. | In the Edit Bias Table window, for a radar site, modify the bias value by entering a new value in the text field located to the right of the radar id button. | The 'NO' label in the manually specified box should change to 'YES'. | |
| 134. | From the radar-specific memory span window, select 'Close'. | The radar-specific memory span window closes. | |
| 135. | From the 'Edit Bias' table, click the 'Close' button. | The Edit Bias table closes. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 136. | Select 'Review Hourly Radar' from the 'Misc' pull-down menu. | The Radar Sites window displays. It contains a list of all of the radars which contribute to the MPE analysis. | |
| 137. | Select a radar site from the Radar Sites window. Then select 'OK'. | The four paned Single Radar Site window displays. Clockwise from the upper left pane, it displays the Raw Radar, Radar Climatology, Radar Coverage Map, and the Mean Field Bias Corrected Radar for the selected radar site for the selected hour. | |
| 138. | From the Single Radar Site window 'Options' pull-down menu, select 'Edit Bias Value'. | The Edit Bias Value window appears. | |
| 139. | On the Edit Bias Value window, use the slider bar to adjust the bias value for the radar for which the Single Site Radar window was opened. Click the 'OK' button. | The Edit Bias Value window closes. | |
| 140. | On the Single Radar Site window 'Options' pull-down menu, select 'Ignore Radar'. | The 'Ignore Radar' option on the Single Radar Site window Options pull-down menu relabels to 'Unignore Radar'. | |
| 141. | On the Single Radar Site window 'Options' pull-down menu, select 'Unignore Radar'. | The 'Unignore Radar' option on the Single Radar Site window 'Options' pull-down menu relabels to 'Ignore Radar'. | |
| 142. | On the Single Radar Site window 'Options' pull-down menu, select 'Display Adaptable Param'. | The Adaptation Parameter Viewer displays. It shows the adaptation parameters for the selected radar site. | |
| 143. | On the Adaptation Parameter Viewer window, click the 'Close' button. | The Adaptation Parameter Viewer window closes. | |
| 144. | On the Single Radar Site window 'Options' pull-down menu, select 'Display Supplemental Data'. Note**: It is grayed out. | The Supplemental Data Viewer displays. This shows the supplemental data for the selected radar. | |
| 145. | On the Supplemental Data Viewer, select the 'Close' button. | The Supplemental Data Viewer closes. | |
| 146. | Select 'Close' from the 'Control' menu of the Single Radar Site window. | The Single Radar Site window closes. | |
| 147. | From the 'Misc' pull-down menu, select 'Time Lapse'. Then select '6 Hr' from the 'Time Lapse' submenu. | The currently displayed MPE field will time lapse over the past 6 hours worth of data. | |
| 148. | From the 'Misc' pull-down menu, select 'Time Lapse'. Then select 'End Loop' from the 'Time Lapse' submenu. Note**: It is grayed out. | The 6 hour time lapse ends. The MPE field from the original date and hour displays. | |
| 149. | From the 'Misc' pull-down menu, select 'Multi-Hour QPE'. | The Multi-Hour Precipitation Accumulation window displays. | |

| Step # | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 150. | From the Multi-Hour Precipitation window, select 'Accumulation Interval Setup' and set the duration to 24 hours. From the Accumulation Display Control, click the 'Show Data' button. | The MPE display shows an accumulation of the past 24 hours worth of Best QPE fields. | |
| 151. | From the Multi-Hour Accumulation window, select the 'Close' button. | The Multi-Hour Precipitation Accumulation window closes. | |
| 152. | Close the MPE Perspective. | The MPE Perspective closes. | |
| Test – MPE Output for Display in CAVE | | | |
| 153. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'MPE' from the dropdown menu if available. If not available, select 'Other...'. Then select 'MPE' from the Open Perspective dialog. | The MPE Perspective and MPE Choose Data Period window display in CAVE. | |
| 154. | In the Choose Data Period window, adjust the 'Hours' field and click 'Display MPE Data' button to check if there is data (image) shown for that hour. It is better to have data for the test. But if not, it is still ok. <i>Note: Write down the year/month/date/hour from the Choose Data Period for later validation.</i> | The data (image) for the selected hours displays. | |
| 155. | Under the 'Polygons' menu, select 'Draw Polygons'. | The polygon is selected. | |
| 156. | MB1 click on the black area of the screen repeatedly to draw a circle or oval shape. Then MB3 click to join the end of the shape. | The Edit Precipitation window displays. | |
| 157. | Adjust the precipitation value to the desired position by using the slider bar. Click on the 'Set' button. Then select the 'Close' button. | The new polygon (shape) drawn displays on the screen. | |
| 158. | Under the 'MPEControl Menu' in the main window, select 'Save Best Estimate Top'. | The polygon is saved. | |
| 159. | Navigate to the OHD xmrq files located at /awips/hydroapps/precip_proc/local/data/mpe/qpe. Look for the xmrq file with the date/time written in step 154 (e.g., xmrqmmddyyyyhhz) | The xmrq file should match. | |
| 160. | Navigate to the generated GRIB files in /awips/hydroapps/precip_proc/local/data/mpe/qpe_grib. Look for the grib file with the date/time written in step 154. (e.g., yyyyymmddhhz.grib) | The grib file should match. | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|---|-----------|
| 161. | Toggle to the D2D Perspective. | The D2D Perspective and associated main window opens. | |
| 162. | Click on the 'Scale' drop-down menu and select 'Region' or 'State'. | The selected scale displays. | |
| 163. | Under 'NCEP/Hydro' menu, go to the 'Hydro' section and select 'QPE >> 1 hour WFO Local MPE'. | The '1 hour WFO Local MPE' option is selected. | |
| 164. | Click on the icon '<' (Step Back) to the date/time written in step 154. | The polygon (shape/image) from step 158 displays. | |
| 165. | Close the MPE Perspective | The MPE Perspective closes. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case Skew-T 2.0

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System (AWIPS)

AWP.TE.SWCTR/TO10-0015

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 6 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO8 Test Case Skew-T 1.0

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Section 6 of the AWIPS D-2D User's Manual Build 8.1.
- Existing AWIPS 1 test procedures:
 - D2D_RA0B_1.4.1.1
 - Check_out_4.1.2_Skew-T_OB8.1
- The Silver Spring NWS AWIPS I test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case is to verify that local and model Skew-T displays load and are editable. Upgrades from comparison to Bufkit and N-Sharp are also demonstrated. The interface and function with the Meteo Library are demonstrated by inference.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The images and data will be displayed in CAVE.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 1. | In the D-2D Perspective, under the Upper Air dropdown menu, select an available RAOB to display a sounding and hodograph. | A Skew-T tab appears with the most recent sounding for the selected site displayed in the large pane. A map in the upper left corner indicating its geographic location. Sounding parameters are listed in the lower right quadrant of the display. | |
| 2. | Verify the Skew-T window displays: <ul style="list-style-type: none"> – upper air sounding data – meteorological indices and values (Note: this step verifies (by inference) the Skew-T calls on meteolib functions – an inset map with the sounding location plotted – a 24 hour temperature change chart – a Hodograph (Note: Not for model data) – isobars, isotherms, dry adiabats, moist adiabats, and saturation mixing ratio lines | The Skew-T window displays the upper air sounding data, the listed meteorological indices and values, an inset map with the plotted sounding location, a 24 hour temperature change chart, a Hodograph, and isobars, isotherms, dry adiabats, moist adiabats, and saturation mixing ratio lines. | |
| 3. | Select Mouse Button (MB) 2 on the Skew-T product ID in the product legend. | The Interactive Skew-T and Hodograph are now editable. 'Skew-T Controls' and 'Skew-T Parameters' windows open. Specific points appear on the Skew-T and Hodograph, which can be altered. | |
| 4. | The 'Skew-T Controls' and 'Skew-T Parameters' windows may be closed. To edit the Skew-T, press and hold MB1 on a point on the temperature curve and drag. | The selected point changes and the temperature line adjust to the new value. Note that the data points are constrained to maintain their original pressure, so they can only be moved horizontally. | |
| 5. | Select and hold MB3 on one of the points on the temperature line. Then select 'Delete Vertex' from the menu. | The point is deleted from the temperature and dew point lines. The temperature and dew point curves modify interpolating between the data points above and below the deleted point. | |
| 6. | Repeat steps 4 and 5 for the dew point line. | The dew point curve is edited. A point is deleted from the temperature and dew point lines. The temperature and dew point curves modify interpolating between the data points above and below the deleted point. | |
| 7. | Activate the sampling tool and hover the cursor on the Skew-T chart. Verify the following data from the original sounding is displayed: | The parcel data and graphical point data are displayed adjacent to the cursor. | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|--|-----------|
| | <p>Parcel Data</p> <ul style="list-style-type: none"> – Pressure (mb) – Height (m and ft) – Temperature (C and F) – Dew Point Temperature (C and F) – Wind direction (degrees) and wind speed (kts) – u (m/s) – v (m/s) – Theta (K) – Theta-e (K) – Mixing Ratio [w] (g/kg) <p>Graphical Point Data</p> <ul style="list-style-type: none"> – Pressure (mb) – Temperature (C and F) – Theta (K) – Theta-e (K) – Mixing Ratio [w] (g/kg) | | |
| 8. | Zoom into the Hodograph. Then select MB1 on a point in the Hodograph, and drag to a new location. | The Hodograph point is moved. | |
| 9. | Select and hold MB3 on one of the points on the Hodograph line. Then select 'Delete Vertex' from the menu. | The point is deleted from the Hodograph line. | |
| 10. | Close the Skew-T tab. | The Skew-T tab closes. The Map tab displays. | |
| 11. | Repeat steps 2-7 and 10 for a sounding from model data as requested via the Volume Browser. | The edits are successful (refer to the result column in steps 3-8 and 11). | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|-------------------|---|--------------|
| CAVE_TO8_015 | CAVE shall provide the capability to display a Skew-T product | |
| CAVE_TO8_015.1 | The Skew-T product shall contain Upper Air sounding data | |
| CAVE_TO8_015.2 | The Skew-T product shall contain a list of meteorological indices and associated values derived from the Upper Air sounding data | |
| CAVE_TO8_015.3 | The Skew-T product shall contain an inset map with the location of the plot origin | |
| CAVE_TO8_015.4 | The Skew-T product shall contain a 24 Hour Temperature Change chart | |
| CAVE_TO8_015.5 | CAVE shall allow the user to modify the Upper Air sounding | |
| CAVE_TO8_015.8 | CAVE shall allow the user to modify the temperature profile | |
| CAVE_TO8_015.8.1 | CAVE shall allow the user to modify the temperature profile using mouse button 1 | |
| CAVE_TO8_015.8.2 | The modified temperature point shall find its resting place on a horizontal axis along its original pressure level | |
| CAVE_TO8_015.8.7 | CAVE shall allow the user to remove a vertex point on the temperature profile using mouse button 3 | |
| CAVE_TO8_015.8.8 | The Skew-T temperature profile shall modify accordingly, interpolating between the point above and the point below a removed vertex point | |
| CAVE_TO8_015.9 | CAVE shall allow the user to modify the dew point temperature | |
| CAVE_TO8_015.9.1 | CAVE shall allow the user to modify the dew point temperature profile using mouse button 1 | |
| CAVE_TO8_015.9.2 | The modified dew point temperature point shall find its resting place on a horizontal axis along its original pressure level | |
| CAVE_TO8_015.9.7 | CAVE shall allow the user to remove a vertex point on the dew point temperature profile using mouse button 3 | |
| CAVE_TO8_015.9.8 | The Skew-T dew point temperature profile shall modify accordingly, interpolating between the point above and the point below a removed vertex point | |
| CAVE_TO8_015.12 | The Skew-T product shall contain a hodograph | |
| CAVE_TO8_015.13 | CAVE shall allow the user to modify the hodograph profile using the cursor | |
| CAVE_TO8_015.14.3 | CAVE shall allow the user to delete a point from the hodograph using mouse button 3 | |
| CAVE_TO8_015.16 | CAVE shall allow the user to sample the data on the Skew-T | |
| CAVE_TO8_015.16.1 | The sample data shall display the parcel data for the level on which the cursor lies | |
| CAVE_TO8_015.16.2 | The sample data shall display the graphical point data for the level on which the cursor lies | |
| AWIPS_TO8_029 | AWIPS shall contain a library of functions in the D2D meteolib baseline with APIs | |

Test Case Guardian (Alert Visualization)

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0016

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|--------------|----------------|-----------------------|
| Draft | 21 Nov. 2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | | <i>Page</i> |
|-----|--|-------------|
| 1.0 | SCOPE | 4 |
| 2.0 | APPLICABLE DOCUMENTS | 5 |
| | 2.1 Source Documents | 5 |
| | 2.2 Reference Documents | 5 |
| 3.0 | TEST CASE DESCRIPTION | 6 |
| | 3.1 Assumptions, Constraints and Preconditions | 6 |
| | 3.2 Recommended Hardware | 6 |
| | 3.3 Test Inputs | 6 |
| | 3.4 Test Outputs | 6 |
| 4.0 | TEST SCENARIO | 7 |
| 5.0 | REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 19 |

List of Figures

| | <i>Page</i> |
|--|-------------|
| Figure 1. Test Script For Alert Visualization (Test Step 52) | 18 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_Guardian_Basic_1; Baseline_Guardian_Config_2.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capability of the AWIPS system to communicate with the end user via Guardian and the capability of the AWIPS system to allow the end user to configure communication messages with Guardian. Test steps 105-117 demonstrate the “Do Not Disturb” enhancement developed during TO10.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Data has been ingested
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 1. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...': | The Alert Visualization configuration GUI appears. | |
| 2. | In the upper right of the configuration GUI are buttons for each of the three screens, select one (not the one you are on). | Alert Visualization moves to another screen. | |
| 3. | Observe the current configuration listed in the upper middle of the configuration GUI. | The top middle of the GUI displays the name of the workstation default configuration. | |
| 4. | At the top the GUI, MB1 click the 'Save As...' button. Enter ' <i>wx-delivered-76</i> ' in the text box and MB1 click 'Save'. | A dialog box appears stating that ' <i>delivered</i> ' as a reserved term. | |
| 5. | MB1 click 'OK'. | The dialog box closes. | |
| 6. | MB1 click the 'Save As...' button. Enter a unique name (e.g., 'Test1') and then MB1 click the 'Save' button. | The new configuration loads. The top middle of the GUI displays the name of the new configuration. | |
| 7. | In the Layout section of the configuration GUI, select Q4 from the pull-down menu. | The number of text lines changes to four: two on top and two on bottom, as displayed in the Message Text Layout: section. This displays on the Alert Visualization layout after closing the configuration dialog. | |
| 8. | MB1 click a category then MB1 click the layout configuration box in which the messages should be displayed. Repeat for all categories. | The categories display the cell number corresponding to the layout configuration boxes selected. | |
| 9. | In the Common Settings for all Sources/Priorities section of the configuration GUI, set the blink duration to '30' and the audio duration to '0' (perpetual). | The values are set. | |
| 10. | Select all check boxes in the Common Settings for all Sources/Priorities section. | All check boxes are selected. | |
| 11. | MB1 click 'Save and Close'. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 12. | Then wait up to one minute for a message to popup. When a message pops up, verify: -No Audio sounded when the message appeared -The Text Message contains the category, priority, and source key (e.g., 12:54 PM (5) WORKSTATION WORKSTATION: Alerts Took: 24 ms to process 181 messages) | Verified. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 13. | Close the Alert Visualization pop-up. Then MB3 click on the Alert Visualization icon. MB1 click on 'Configuration...' | The Alert Visualization Configuration GUI appears. | |
| 14. | Unselect all the check boxes in the Common Settings for all Sources/Priorities section. | All check boxes are unselected. | |
| 15. | Set the length of message log box to '2'. | The length of message log box is set. | |
| 16. | MB1 click the 'Save & Close' button. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 17. | Then wait several minutes for messages to popup. After several messages pops up, verify only 2 messages are listed in the log list. | Verified. | |
| 18. | MB1 click the 'Acknowledge All' button to close the Alert Visualization window. Then MB3 click on the Guardian (Alert Visualization going forward) icon. MB1 click on 'Configuration...' | The Alert Visualization Popup Message Dialog window closes. The Alert Visualization Configuration GUI appears. | |
| 19. | Set the length of message log box to '10'. | The length of message log box is set to '10'. | |
| 20. | MB1 click the 'Save & Close' button. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 21. | Then wait several minutes for messages to popup. After several messages pops up, verify 10 messages are listed in the log list. | Verified. | |
| 22. | Close the Alert Visualization text box. Then MB3 click on the Alert Visualization icon. MB1 click on 'Configuration...' | The Alert Visualization Configuration GUI appears. | |
| 23. | In the Sources section of the configuration GUI, observe that FFMP is highlighted in light blue. | FFMP is highlighted in light blue. | |
| 24. | MB3 click on 'FFMP', and select Omit Monitor, and with MB3 select SNOW. NOTE: If a warning dialog appears, MB1 click 'YES' to close. | FFMP highlight turns yellow and the FF icon is no longer visible on Alert Visualization, but SCAN, FOG, SAFESEAS, & SNOW are visible. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 25. | <p>MB3 click FFMP, and select 'Include Monitor'.</p> <p>Then MB3 click 'SNOW'.</p> <p>Check that FFMP, SCAN, FOG, SAFESEAS, & SNOW are present on an XT (Text) terminal.</p> <p>NOTE: If a warning dialog appears, MB1 click 'YES' to close.</p> | FFMP highlight turns light blue and the FF icon becomes visible on Alert Visualization along with SCAN, FOG, SAFESEAS, & SNOW. | |
| 26. | Create a new source by MB1 clicking on 'New' in the Sources section of the configuration GUI, entering DEL_TEST, and MB1 clicking 'Save'. | A new source called DEL_TEST is created. | |
| 27. | MB3 click on the 'DEL_TEST'. | The source is deleted. | |
| 28. | MB3 click on 'FFMP'. | Observe that delete is not an option. | |
| 29. | Observe the icons on Alert Visualization. | Aside from the Alert Visualization logo, there should be 5 small icons shown, about 20x30 pixels. | |
| 30. | Create a new source called GDN_TEST, if it does not already exist. | The GDN_TEST source is created. | |
| 31. | <p>With GDN_TEST selected, change the priority options in the Priorities section of the configuration GUI. Simply press in some of the options such as: text, blink text, popup, audio, & action.</p> <p>Hint: For popups, you may press in the button, click on the triangle, and add in the name of a bitmap located in /awips/fxa/data/.</p> <p>Hint: For an action, you must enter a path of a script. I suggest entering the following: /data/local/GDN_TEST_CFG/gdn_action.sh</p> <p>The script will simply output a test file on the workstation when called by Alert Visualization: /tmp/gdn_action.txt.</p> <p>The script is shown at the bottom of this test case.</p> | Options change. | |
| 32. | Enter the following in the Monitor Bitmap text box: error.xbm | Text is added | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 33. | Enter the following in the Monitor Executable text box: /data/local/GDN_TEST_CFG/gdn_monitor.sh The script is shown at the bottom of this test case. | Text is added | |
| 34. | Select on another source. | Message dialog will appear saying configuration was not saved. | |
| 35. | Select No to not continue | Message dialog is closed and configurations are preserved. | |
| 36. | Click Apply Changes, Save, Close. | Edits are saved. | |
| 37. | Double click the new icon that has appeared. It should be a light gray X surrounded by black. | NA | |
| 38. | In a terminal window type the following: <code>cat /tmp/gdn_monitor.txt</code> . | Text should appear and the time stamp in the text should match the current time. | |
| 39. | Open a terminal window by clicking the left mouse button on the KDE desktop and selecting terminal. | A terminal window opens. | |
| 40. | Ensure that one instance of Alert Visualization is running by issuing the following command: # ps -wef grep -i guard If you would like to check the status on all workstations (suggested) issue the following command. It is best run on DX1. It would better the test if most or all of the workstations were logged into KDE. ➤ cd /data/local/GDN_TEST_CFG ➤ ./gdn_proc.sh The script is listed at the bottom of this test case. | One instance of Alert Visualization is running per workstation per user logged into KDE. | |
| 41. | Ensure that the Alert Visualization application is viewed as a small, thin, and long application. By default it is usually located at the bottom of the middle monitor (:0.0). It should have launched automatically when KDE started. | Alert Visualization is viewed as a small, thin, and long application. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 42. | Ensure that Alert Visualization is always on top. Click and drag Alert Visualization and other windows and applications around to see if Alert Visualization remains on top. Use the left mouse button to click and drag other apps and right mouse button for Alert Visualization. | Alert Visualization remains on top. | |
| 43. | Ensure that there are tips available by clicking the left mouse button on the i icon next to the Alert Visualization logo. | A list of tips is displayed. | |
| 44. | Ensure that icons from SCAN, FOG, FFMP, SAFESEAS, & SNOW are displayed and that moving the mouse over them shows test. | SCAN, FOG, FFMP, SNOW & SAFESEAS are displayed and config screens can be launched. | |
| 45. | Double click on the FFMP (FF) icon with mouse button one. | Config GUI opens. | |
| 46. | Close the FFMP GUI. | Config GUI closes. | |
| 47. | While you are executing this test case, ensure that Alert Visualization receives messages from multiple sources. | Alert Visualization receives messages from multiple sources. | |
| 48. | Left click on the desk top & select the Start D2D from the list. | The D2D system launches. | |
| 49. | Produce an error message for just your workstation. Ensure that another workstation is logged into. Create an error message by finding a product that is unavailable in D2D and selecting it. Usually when the data inventory is unavailable the menu time ("green time") is shown as dashes. Another option is to select the One Time Request for the radar menu and then closing it using the 'X' at the upper right of the GUI. | A pop-up message is displayed on your workstation only. | |
| 50. | Load the test configuration: With mouse button one, press the Alert Visualization icon; select retrieve; select <i>willl_gdn_conf</i> ; and select retrieve. | Action completed with no errors. If <i>willl_gdn_conf</i> is not available, then on a terminal window: a. <code>cd /data/local/GDN_TEST_CFG</code> <code>cp willl_gdn_conf.gcf</code> <code>/data/fxa/workFiles/Alert Visualization/.</code> | |
| 51. | Before closing the configuration GUI, verify that in the top middle of the GUI the configuration is now set to: <i>willl_gdn_conf</i> . | New configuration is loaded. | |

| Step # | Action | Result | Pass/Fail |
|-----------------|---|---|-----------|
| 52. | <p>Use test script to test Alert Visualization: Open a terminal window and enter the following commands:</p> <ul style="list-style-type: none"> ➤ cd /data/local/GDN_TEST_CFG ➤ ./gdn_message.sh <p>The script is listed at the bottom of this test case. [See Fig. 1.]</p> | All steps of the test script are executed as expected. | |
| Blinking | | | |
| 53. | <p>Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...':</p> | The Alert Visualization configuration GUI appears. | |
| 54. | <p>In the Alert Visualization configuration GUI, assign 'Workstation' to cell 1 in the Layout section.</p> | Workstation is assigned to cell 1 | |
| 55. | <p>Assign all other categories to other cells or set to 'None'.</p> | All other categories are set to cells 2, 3, 4, or None. | |
| 56. | <p>Under the Sources & Priorities section, select 'Workstation'. Then select/check all checkboxes (Text, Blink, Popup, Audio, and Log).</p> | All checkboxes are selected. | |
| 57. | <p>Set the audio to each priority by MB1 clicking '...' and selecting a sound file.</p> | The sound files are assigned. | |
| 58. | <p>Verify the sound files were assigned by hovering over the associated check box.</p> | A line appears with the assigned sound file. | |
| 59. | <p>Select all other Sources and ensure the checkboxes for Priorities 3, 4, and 5 are unchecked.</p> | All checkboxes for Priorities 3, 4, and 5 are unchecked. | |
| 60. | <p>Select/check all Text Message checkboxes in the Common Settings section.</p> | The 'Show Priority', 'Show Source Key', and 'Show Category' checkboxes are selected. | |
| 61. | <p>Select/check the 'Expand Popup Information' option.</p> | The 'Expand Popup Information' option is selected. | |
| 62. | <p>Set the following:</p> <ul style="list-style-type: none"> – Length of Message Log to '30' – Blink Duration to '10' – Audio Duration to '10' | <p>The Length of Message Log is set to '30'. The Blink Duration is set to '10'. The Audio Duration to '10'.</p> | |
| 63. | <p>MB1 click 'Save and Close'. Then wait up to one minute for a message to popup.</p> | The Alert Visualization configuration GUI closes, saving the settings. | |

| Step # | Action | Result | Pass/Fail |
|----------------------|---|--|-----------|
| 64. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared. – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar. – The Text Message contains the category, priority, and source key (e.g., 12:54 PM (5) WORKSTATION WORKSTATION: Alerts Took: 24 ms to process 181 messages). | Verified. | |
| 65. | MB1 click 'Acknowledge All' in the popup window. | The popup window closes. | |
| Text Messages | | | |
| 66. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 67. | In the Alert Visualization configuration GUI, in the Common Settings section, select only the 'Show Priority' checkbox. | The 'Show Priority' checkbox is selected. | |
| 68. | MB1 click 'Save and Close'. Then wait up to one minute for a message to popup. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 69. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar – The Text Message contains only the priority (e.g., 12:54 PM (5) Alerts Took: 24 ms to process 181 messages) and not the source key or category. | Verified. | |
| 70. | MB1 click 'Acknowledge All' in the popup window. | The popup window closes. | |
| 71. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 72. | In the Alert Visualization configuration GUI, in the Common Settings section, select only the 'Show Source Key' checkbox. | The 'Show Source Key' checkbox is selected. | |
| 73. | MB1 click 'Save and Close'. Then wait up to one minute for a message to popup. | The Alert Visualization configuration GUI closes, saving the settings. | |

| Step # | Action | Result | Pass/Fail |
|--------|--|--|-----------|
| 74. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar – The Text Message contains only the source key (e.g., 12:54 PM WORKSTATION: Alerts Took: 24 ms to process 181 messages) and not the priority or category. | Verified. | |
| 75. | MB1 click 'Acknowledge All' in the popup window. | The popup window closes. | |
| 76. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 77. | In the Alert Visualization configuration GUI, in the Common Settings section, select only the 'Show Category' checkbox. | The 'Show Category' checkbox is selected. | |
| 78. | MB1 click 'Save and Close'. Then wait up to one minute for a message to popup. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 79. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar – The Text Message contains only the category (e.g., 12:54 PM WORKSTATION Alerts Took: 24 ms to process 181 messages) and not the priority or source key. | Verified. | |
| 80. | MB1 click 'Acknowledge All' in the popup window. | The popup window closes. | |
| 81. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 82. | In the Alert Visualization configuration GUI, in the Common Settings section, unselect all Text Message checkboxes. | No Text Message checkboxes are selected. | |
| 83. | MB1 click 'Save and Close'. Then wait up to one minute for a message to popup. | The Alert Visualization configuration GUI closes, saving the settings. | |

| Step # | Action | Result | Pass/Fail |
|-----------------------------|---|---|-----------|
| 84. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar – The Text Message does not contain the priority, source key, or category (e.g., 12:54 PM Alerts Took: 24 ms to process 181 messages). | Verified. | |
| 85. | MB1 click 'Acknowledge All' in the popup window. | The popup window closes. | |
| Foreground/Background Color | | | |
| 86. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 87. | Under the Sources section box in the Sources & Priorities section, select 'WORKSTATION'. | 'WORKSTATION' is selected. | |
| 88. | In the Source & Priorities section, MB1 click '...' under Priority 5 of the Foreground/Background. | The Alert Visualization Color Dialog window appears. | |
| 89. | Set the text color and background color. Then MB1 click the 'Apply Colors' button. | The Alert Visualization Color Dialog window closes. The 'MSG' block is colored to that set in the Alert Visualization Color Dialog window. | |
| 90. | Repeat the previous step for Priorities 0 through 4. | The Alert Visualization Color Dialog window closes. The 'MSG' block is colored to that set in the Alert Visualization Color Dialog window. | |
| 91. | MB1 click 'Save and Close'. Then wait up to one minute for a message to popup. | The Alert Visualization configuration GUI closes, saving the settings. | |

| Step # | Action | Result | Pass/Fail |
|---|---|--|-----------|
| 92. | When a message pops up, verify: <ul style="list-style-type: none"> – The Audio sounded when the message appeared – Cell one blinked for 10 seconds when the message appeared in the Alert Visualization bar – Cell one is colored to that set in the Alert Visualization Color Dialog window, and inverts the colors upon blinking – The Text Message does not contain the priority, source key, or category (e.g., 12:54 PM Alerts Took: 24 ms to process 181 messages). | Verified. | |
| Alert Visualization Bar Manipulation | | | |
| 93. | MB1 click and hold the crossed gold double end arrow symbol on the left side of the Alert Visualization bar, and drag it to a location away from its current position. | The Alert Visualization bar moves accordingly. | |
| 94. | MB1 click and hold the double ended gold arrow symbol on the right side of the Alert Visualization bar to expand or contract the Alert Visualization bar. | The Alert Visualization bar expands or contracts horizontally accordingly. | |
| Alert Visualization Logs | | | |
| 95. | With a message displayed in cell one, MB1 click the '^' button to the right of the cell one text window. | The 'Log list for: Workstation' window appears listing the log entries. | |
| 96. | Double MB1 click on an entry line. | A Details window opens that may or may not contain any information depending on the priority (e.g., Priority 5 returns a blank Details window, while a Priority 0 or 1 returns information). | |
| 97. | Close the Details window. | The Details window closes. | |
| 98. | MB1 click the 'Clear' button in the log list window. | All messages in the log list window are removed. | |
| 99. | MB1 click the 'Close' button on the log list window. | The log list window closes. | |
| Alert Visualization Popup Message Dialog | | | |
| 100. | On the Alert Visualization Popup Message Dialog window, MB1 click the 'Show Log' button. | The popup expands to display the log list of messages. | |
| 101. | Double MB1 click on an entry line. | A Details window opens that may or may not contain any information depending on the priority (e.g., Priority 5 returns a blank Details window, while a Priority 0 or 1 returns information). | |

| Step # | Action | Result | Pass/Fail |
|-------------------------------------|--|--|-----------|
| 102. | Close the Details window. | The Details window closes. | |
| 103. | Select/highlight a message by MB1 clicking on a message. Then MB1 click the 'Acknowledge Selected' button. | The message is removed from the log. | |
| 104. | MB1 click the 'Acknowledge All' button. | The Alert Visualization Popup Message Dialog window closes. | |
| Do Not Disturb Functionality | | | |
| 105. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Do Not Disturb'. | The Do Not Disturb functionality is activated. | |
| 106. | Wait up to one minute for a message to popup. – When a message pops up, verify: – The Alert Visualization (AV) symbol begins to blink, alternating with a red 'X' – A popup balloon appears with the number of unacknowledged messages – Messages continue to appear and blink in the Alerts Visualization bar | Verified. | |
| 107. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Do Not Disturb'. | The Do Not Disturb functionality is deactivated. The Alert Visualization Popup Message Dialog window appears. | |
| 108. | MB1 click the 'Show Log' button. | All unacknowledged messages appear. | |
| 109. | MB1 click 'Acknowledge All' button. | The Alert Visualization Popup Message Dialog window closes. | |
| 110. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |
| 111. | In the Layout section, select the 'System_Tray' option. Then MB1 click the 'Save & Close' button. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 112. | Wait up to one minute for a message to popup. When a message appears, verify: – Messages appear in the Alerts Visualization Popup Messages Dialog window – Messages appear in a popup balloon on or near the System Tray | Verified. | |
| 113. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Configuration...' | The Alert Visualization configuration GUI appears. | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|--|-----------|
| 114. | Unselect all popup checkboxes for all Sources and all Priorities. | All popup checkboxes are unselected. | |
| 115. | Ensure the System_Tray layout option is selected. Then MB1 click the 'Save & Close' button. | The Alert Visualization configuration GUI closes, saving the settings. | |
| 116. | Mouse Button (MB) 3 click on the Guardian (Alert Visualization going forward) icon. Then MB1 click on 'Do Not Disturb'. | The Do Not Disturb functionality is activated. | |
| 117. | Wait up to a minute. When a message appears, verify: <ul style="list-style-type: none"> – A popup balloon appears on or near the System Tray – No Alert Visualization Popup Message Dialog window appears – The Alert Visualization (AV) symbol remains static (no blinking 'X' appearing in alternating fashion) | Verified. | |
| End of Test | | | |

```

gdn_action.sh
#!/bin/bash
#
# This script was created to test Guardian (DCS 3244-3247).

echo "Guardian has called this script at `date -u` - Action Test"
> /tmp/gdn_action.txt

gdn_monitor.sh
#!/bin/bash
#
# This script was created to test Guardian (DCS 3244-3247).

echo "Guardian has called this script at `date -u` - Monitor Test"
> /tmp/gdn_monitor.txt

```

Figure 1: Test Script for Alert Visualization (test step 52)

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|----------|-------------|--------------|
| SYSRxxxx | TBD | |
| SYSRxxxx | | |
| SYSRxxxx | | |

DRAFT

Test Case Radar Graphics and Text Products

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0017

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 7 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates a subset of radar graphics products from the Graphics submenu. This test case also verifies the display of radar text products within the Text Workstation.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|--|---|-----------|
| 1. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Storm Track (STI)'. | The 'Storm Track (STI)' product displays in CAVE. | |
| 2. | Mouse Button (MB) 1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 3. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Hail Index (HI)'. | The 'Hail Index (HI)' product displays in CAVE. | |
| 4. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 5. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Tornado Vortex Sig (TVS)'. | The 'Tornado Vortex Sig (TVS)' product displays in CAVE. | |
| 6. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 7. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Latest TVS Rapid Update (TRU)'. | The 'Latest TVS Rapid Update (TRU)' product displays in CAVE. | |
| 8. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 9. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'All Tilts TRU'. | The 'All Tilts TRU' product displays in CAVE. | |
| 10. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 11. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Mesocyclone (MD)'. | The 'Mesocyclone (MD)' product displays in CAVE. | |
| 12. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 13. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Legacy Mesocyclone (M)'. | The 'Legacy Mesocyclone (M)' product displays in CAVE. | |
| 14. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 15. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Digital Mesocyclone (DMD)'. | The 'Digital Mesocyclone (DMD)' product displays in CAVE. | |
| 16. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 17. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Latest Meso Rapid Update (MRU)'. | The 'Latest Meso Rapid Update (MRU)' product displays in CAVE. | |
| 18. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 19. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'All Tilts MRU'. | The 'All Tilts MRU' product displays in CAVE. | |
| 20. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 21. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Comb Att Table (1km CZ)'. | The 'Comb Att Table (1km CZ)' product displays in CAVE. | |
| 22. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 23. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Comb Att Table (4km CZ)'. | The 'Comb Att Table (4km CZ)' product displays in CAVE. | |
| 24. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 25. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Svr Wx Prop (SWP)'. | The 'Svr Wx Prop (SWP)' product displays in CAVE. | |
| 26. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 27. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'VAD Wind Profile (VWP)'. | The 'VAD Wind Profile (VWP)' product displays in CAVE. | |
| 28. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 29. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'Vel Az Display (VAD)'. | The 'Vel Az Display (VAD)' product displays in CAVE. | |
| 30. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 31. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'NEXRAD Unit Status'. | The 'NEXRAD Unit Status' product displays in CAVE. | |
| 32. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 33. | Select 'koax' -> 'koax 4 Bit Products' -> 'koax 4bit Reflectivity' -> '0.5 Refl'. | The 0.5 Radar Reflectivity product displays in the main pane. | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|---|-----------|
| 34. | Select the Points toolbar button to display the points A-J in the main pane of the D-2D display. | The Points A-J display in the main pane. | |
| 35. | Modify the location of Point A to a position on a reflectivity echo. (Ground clutter may be used if no precipitation is displayed.) | The position of Point A is modified. | |
| 36. | From the menu bar on CAVE's D-2D display, select 'koax' -> 'koax Graphics' -> 'point A'. | The Cell Trends product for point A displays in CAVE. | |
| 37. | MB1 click the 'Clear' button on the toolbar. | The main pane in the D2D Perspective clears to a blank map. | |
| 38. | Open a text window by selecting 'Tools' -> 'Text Window...' | The Text Display Window opens. | |
| 39. | In the 'AFOS Cmd:' text box, enter 'OMAMDPOAX' and press the Enter key. | The 'OMAMDPOAX' product displays in the Text Window. | |
| 40. | MB1 click the 'Clear' button in the Text Window. | The Text Window clears. | |
| 41. | In the 'AFOS Cmd:' text box, enter 'OMAOHPOAX' and press the Enter key. | The 'OMAOHPOAX' product displays in the Text Window. | |
| 42. | MB1 click the 'Clear' button in the Text Window. | The Text Window clears. | |
| 43. | In the 'AFOS Cmd:' text box, enter 'OMASTPOAX' and press the Enter key. | The 'OMASTPOAX' product displays in the Text Window. | |
| 44. | MB1 click the 'Clear' button in the Text Window. | The Text Window clears. | |
| 45. | In the 'AFOS Cmd:' text box, enter 'OMATVSOAX' and press the Enter key. | The 'OMATVSOAX' product displays in the Text Window. | |
| 46. | MB1 click the 'Clear' button in the Text Window. | The Text Window clears. | |
| 47. | In the 'AFOS Cmd:' text box, enter 'OMAVWPOAX' and press the Enter key. | The 'OMAVWPOAX' product displays in the Text Window. | |
| 48. | MB1 click the 'Clear' button in the Text Window. | The Text Window clears. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case uEngine Command Line Interface

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0018

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 6 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the ability to request data via command line scripts.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 1. | Launch a terminal window. | Terminal window is at user prompt. | |
| 2. | ssh root@awips-int1 | You are prompted for password. | |
| 3. | Enter password to log in. (May need to su - awips to use cli) cd /awips/edex/opt/esb/tools/cli (May change when install is determined) | You are at the awips-int1 # sign prompt in the directory with the command line interfaces scripts. | |
| 4. | Launch a second terminal window. | Terminal window is at user prompt. | |
| 5. | ssh root@awips-int1 | You are prompted for password. | |
| 6. | Enter password to log in. cd /awips/edex/mule/logs (Directory path may change) | You are at the awips-int1 # sign prompt in the directory with the log files. | |
| 7. | ls -l | Verify the log file is listed. This window will be used to view the log entries. | |
| 8. | tail -f <log file> | The log file displays the entries. | |
| 9. | In the first window execute the following: .uengine -h | Prints a usage message. | |
| 10. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 11. | In the first window execute the following: .uengine -m runner -r python | Sets the execution mode to use the runner python. | |
| 12. | In the first window execute the following: .uengine -s MESSAGE "Hello from Omaha " > data/Hello World.txt | Message is written. The runner python that was set in the previous command line is used. | |
| 13. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 14. | In the first window execute the following: .uengine -m runner -r jsript | Sets the execution mode to use the runner jsript. | |
| 15. | In the first window execute the following: .uengine -s MESSAGE "Hello from Omaha " > data/Hello World.txt | Message is written. The runner jsript that was set in the previous command line is used. | |
| 16. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 17. | In the first window execute the following: .uengine -m maintain | Sets the execution mode to maintain. | |
| 18. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| The following options will not be initially implemented. | | | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|--|-----------|
| 19. | In the first window execute the following: ./uengine -o read | Maintenance operation to read. Need to add steps for add, delete, and update. | |
| 20. | In the first window execute the following: ./uengine -p AFOS PIL | Product Identifier. Need to add steps for Data URI. | |
| | Force an error condition. | | |
| 21. | In the first window execute the following: ./uengine | Creates an error and returns the error messages. | |
| 22. | In the second window view the log file for the error entries associated with the command executed in the previous step. | The log file shows the error entries for the command executed. | |
| 23. | <ctrl> c to exit the log file. | The log file is exited. | |
| 24. | Exit to log out and close the second window. | The second window is closed. | |
| 25. | Exit to log out and close the first window. | The first window is closed. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|---|--------------|
| SYSR | The AWIPS II Command Line Tool Suite shall include a command line interface to the uEngine script runner. | |
| | | |
| | | |

DRAFT

Test Case TextDB Command Line Interface

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0019

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 7 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case illustrates that the text database command line interface and options work in AWIPS II as it does in the legacy AWIPS I system; reading and writing data to the text database.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested .
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 1. | Launch a terminal window. | Terminal window is at user prompt. | |
| 2. | ssh root@awips-int1 | You are prompted for password. | |
| 3. | Enter password to log in. (May need to su - fxauser to use cli) cd /awips/edex/opt/esb/tools/cli (May change when install is determined) | You are at the awips-int1 # sign prompt in the directory with the command line interfaces scripts. | |
| 4. | Launch a second terminal window. | Terminal window is at user prompt. | |
| 5. | ssh root@awips-int1 | You are prompted for password. | |
| 6. | Enter password to log in. cd /awips/edex/mule/logs (Directory path may change) | You are at the awips-int1 # sign prompt in the directory with the log files. | |
| 7. | ls -l | Verify the log file is listed. This window will be used to view the log entries. | |
| 8. | tail -f <log file> | The log file displays the entries. | |
| 9. | In the first window execute the following: ./textdb -r AFOSCmd | Read data from the text database. | |
| 10. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 11. | Open the pgadmin database window and select the ??? database. | The database tables are displayed. | |
| 12. | Query the database | The data displayed matches the data displayed in the first terminal window. | |
| 13. | In the first window execute the following: ./textdb -rd AFOSCmd | Displays latest products with product count and product lengths. | |
| 14. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 15. | In the first window execute the following: ./textdb -rw wmoid (ex. SAUS43) | Read data from the text database using all or part of TTAAIL. | |
| 16. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 17. | In the first window execute the following: ./textdb -rs site (ex. KOAX) | Read data from the text database using all or part of CCCC. | |
| 18. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 19. | In the first window execute the following: ./textdb -rt ddhhmm | Read data from the text database using all or part of date/time group ddhhmm (day, hour, minute). | |
| 20. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 21. | In the first window execute the following: ./textdb -ri NNNXXX (ex. TEX T09 or 18A A11) | Read data from the text database using all or part of AWIPS ID NNNXXX. | |
| 22. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 23. | In the first window execute the following: ./textdb -rb bbb (ex. NOR) | Read data from the text database using bbb. | |
| 24. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 25. | In the first window execute the following: ./textdb -rh HH | Read data from the text database with special headers. | |
| 26. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 27. | In the first window execute the following: ./textdb -w productID | Write to the text database. | |
| 28. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 29. | Query the database | The productID in the first terminal window is stored in the database. | |
| 30. | In the first window execute the following: ./textdb -t productID {productID...} | Write time of last version(s). | |
| 31. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 32. | In the first window execute the following: ./textdb -tU productID {productID...} | Write time of last version(s). | |
| 33. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 34. | In the first window execute the following: ./textdb -A productID | Get all times for one productID. | |
| 35. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 36. | In the first window execute the following: ./textdb -AU productID | Get time for one productID. | |
| 37. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 38. | In the first window execute the following: ./textdb -v productID versions | Change the number of versions to keep in the database. | |
| 39. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |

| Step # | Action | Result | Pass/Fail |
|-------------|---|---|-----------|
| 40. | Query the database | The number of versions in the database has been changed. | |
| 41. | In the first window execute the following: ./textdb -s -a SS XXX CCC | Add another ID to the SS.NNN lookup list (state, [SS], XXX, and CCC are character sequences). | |
| 42. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 43. | Query the database | The addition of the state ID to the database is verified. | |
| 44. | In the first window execute the following: ./textdb -s -d SS XXX CCC | Delete an ID from the SS.NNN lookup list (state, [SS], XXX, and CCC are character sequences). | |
| 45. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 46. | Query the database | The deletion of the state ID to the database is verified. | |
| 47. | In the first window execute the following: ./textdb -s -r SS | Display current list for state in SS.NNN lookup list (state is a character sequence). | |
| 48. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 49. | Query the database | The listing of the state IDs in the database matches the listing in the first window. | |
| 50. | In the first window execute the following: ./textdb -ldad -a productID script | Add the productID and the script path to the watchWarn table for sending to LDAD. | |
| 51. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 52. | Query the database | The addition of the productID into the database is verified. | |
| 53. | In the first window execute the following: ./textdb -ldad -d productID script | Delete the productID and the script path to the watchWarn table for sending to LDAD. | |
| 54. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 55. | <ctrl> c to exit the log file. | The log file is exited. | |
| 56. | Exit to log out and close the window. | The window is closed. | |
| 57. | Query the database | The deletion of the productID from the database is verified. | |
| 58. | Exit the database and close the window. | The database is exited and closed. | |
| 59. | Exit to log out and close the first window. | The window is closed. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|--|--------------|
| SYSR | The AWIPS II Command Line Tool Suite shall include a command line interface to the textdb script runner. | |
| | | |
| | | |

DRAFT

Test Case HandleOUP Command Line Interface

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0020

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 5 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case illustrates that the handleOUP command line interface and options work in AWIPS II as it does in the legacy AWIPS I system.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.
- Pre-positioned data may be necessary. Transmission capability will be tested with the TO11 software delivery.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|-------------|--|--|-----------|
| | handleOUP.pl is a Perl script that is executed when a product is transmitted or sent. The script is called by other scripts. Its function is to send the product to the WAN, store the product in the database, and archive the product. | | |
| 1. | Launch a terminal window. | Terminal window is at user prompt. | |
| 2. | ssh root@<server> | You are prompted for password. | |
| 3. | Enter password to log in. (May need to su - awips to use cli) cd /awips/edex/opt/esb/tools/cli | You are at the <server> # sign prompt in the directory with the command line interfaces scripts. | |
| 4. | Launch a second terminal window. | Terminal window is at user prompt. | |
| 5. | ssh root@<server> | You are prompted for password. | |
| 6. | Enter password to log in. cd /awips/edex/mule/logs (Directory path may change) | You are at the <server> # sign prompt in the directory with the log files. | |
| 7. | In the first window execute the following: handleOUP -w <wmo special message type> <awips ID> <product pathname> | Executes handleOUP script with the option of wmo special message type (ex: AMD, COR, RTD). | |
| 8. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 9. | In the first window execute the following: handleOUP -m <awips ID> <product pathname> | Executes handleOUP script with the option of test mode. | |
| 10. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 11. | In the first window execute the following: handleOUP -r <AFOS routing code> <awips ID> <product pathname> | Executes handleOUP script with the option of AFOS routing code (ex: LOC, DEF, CEN, CES, CSW, EAS, SOU, WES, ALL, 000). | |
| 12. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 13. | In the first window execute the following: handleOUP -d <User supplied date/time stamp 'DDHHMM'> <awips ID> <product pathname> | Executes handleOUP script with the option user supplied date/time stamp. | |
| 14. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 15. | Transmit a product to a stubbed location using handleOUP CLI. | A product is sent to the directory specified in the command line. | |
| 16. | Close all terminal windows. | Windows are closed. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|---|--------------|
| SYSR | The AWIPS II Command Line Tool Suite shall include a command line interface to the handleOUP script runner. | 1-16 |
| | | |
| | | |

Test Case Subscription Capability
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0021

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 6 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case illustrates the AWIPS II subscription capability that replaces the AWIPS I database trigger capability; the test is accomplished via inspection of the file system and/or logs.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|--------|---|--|-----------|
| 1. | Launch a terminal window. | Terminal window is at user prompt. | |
| 2. | ssh root@awips-int1 | You are prompted for password. | |
| 3. | Enter password to log in. (May need to su - awips to use cli) cd /awips/edex/opt/esb/tools/cli (May change when install is determined) | You are at the awips-int1 # sign prompt in the directory with the command line interfaces scripts. | |
| 4. | Launch a second terminal window. | Terminal window is at user prompt. | |
| 5. | ssh root@awips-int1 | You are prompted for password. | |
| 6. | Enter password to log in. cd /awips/edex/mule/logs (Directory path may change) | You are at the awips-int1 # sign prompt in the directory with the log files. | |
| 7. | ls -l | Verify the log file is listed. This window will be used to view the log entries. | |
| 8. | tail -f <log file> | The log file displays the entries. | |
| 9. | In the first window execute the following: ./subscription -t timer -r jscrip -p <name> | Identifies the type of trigger (timer), the uEngine script (jscrip), and the pattern (P5 regex) of the trigger data to match. | |
| 10. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 11. | In the first window execute the following: ./subscription -t data -r python -p <name> | Identifies the type of trigger (data), the uEngine script (python), and the pattern (P5 regex) of the trigger data to match. | |
| 12. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 13. | In the first window execute the following: ./subscription -t manual -r python -p <name> | Identifies the type of trigger (manual), the uEngine script (python), and the pattern (P5 regex) of the trigger data to match. | |
| 14. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 15. | In the first window execute the following: ./subscription -o read | Requests a listing of all subscriptions. | |
| 16. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 17. | In the first window execute the following: ./subscription -r python -o add -t timer -p "<name>" | Adds the subscription <name> using the python uEngine and a timer trigger. | |
| 18. | In the second window view the log file for the entries associated with the command | The log file shows the entries for the command executed. | |

| Step # | Action | Result | Pass/Fail |
|-------------|--|--|-----------|
| | executed in the previous step. | | |
| 19. | In the first window execute the following: ./subscription -r python -o update -t manual -p "<name>" | Updates the subscription <name> using the python uEngine and changing the trigger to manual. | |
| 20. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 21. | In the first window execute the following: ./subscription -r python -o delete -p "<name>" | Deletes the subscription <name>. | |
| 22. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 23. | In the first window execute the following: ./subscription -r python -o add -t timer -p "0.+.+.+." -s MESSAGE "Hello from Omaha " > data/Hello World.txt | The subscription 0.+.+.+ is added using the python runner, with a timer trigger, and identifies a substitution to be performed within the script prior to execution. | |
| 24. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 25. | In the first window execute the following: ./subscription -r system -f <path/name> | Identifies the external script <path/name> to be executed using the system runner. | |
| 26. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| 27. | In the first window execute the following: ./subscription -r system -f <path/name> -c argument(s) | Identifies the argument(s) to pass to the external script <path/name> that is executed using the system runner. | |
| 28. | In the second window view the log file for the entries associated with the command executed in the previous step. | The log file shows the entries for the command executed. | |
| | Force an error condition. | | |
| 29. | In the first window execute the following: ./subscription -o read -p "/obs/./MTAR/."+ | Creates an error and returns the error message "The directory MTAR does not exist". | |
| 30. | In the second window view the log file for the error entries associated with the command executed in the previous step. | The log file shows the error entries for the command executed. | |
| 31. | <ctrl> c to exit the log file. | The log file is exited. | |
| 32. | exit to log out and close the second window. | The second window is closed. | |
| 33. | exit to log out and close the first window. | The first window is closed. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|--|--------------|
| SYSR | The AWIPS II Command Line Tool Suite shall include a command line interface to the subscription script runner. | |
| | | |
| | | |
| | | |

DRAFT

Test Case Hydro Configuration Controls

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0022

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 5 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case verifies the management of the Hydro token fields using localization.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX, and pgAdmin III are running.
- Data has been ingested .
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|-------------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'MPE' from the dropdown menu if available. If not available, select 'Other...'. Then select 'MPE' from the Open Perspective dialog. | The MPE Perspective and MPE Choose Data Period window display in CAVE. | |
| 2. | MB1 click on the 'Projections' menu and select 'Flat Lat/Lon'. | The region extending from the Central and Southern High Plains east to the Central and Southern Mississippi River Valley displays on a flat projection. | |
| 3. | MB1 click on the 'Projections' menu and select 'Polar Stereographic'. | The region extending from the Central and Southern Rocky Mountains east to the southern Great Lakes and points south displays on a Polar Stereographic projection. | |
| 4. | Open a terminal and navigate to the Apps_default file (awips/caveData/common/site/OAX/hydro). Edit the Apps_default file by modifying the hv_center lat/lon values. Then save the changes. | The modified hv_center lat/lon values are saved. | |
| 5. | Close the MPE Perspective. | The MPE Perspective and MPE Choose Data Period window close. | |
| 6. | MB1 click on the Perspectives icon and select 'MPE' from the dropdown menu if available. If not available, select 'Other...'. Then select 'MPE' from the Open Perspective dialog. | The MPE Perspective and MPE Choose Data Period window display in CAVE. | |
| 7. | MB1 click on the 'Projections' menu and select 'Flat Lat/Lon'. | The region displays centered on the modified lat/lon center point on a flat projection. | |
| End of Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

Test Case SOA Plug-Ins 3.0

for

Contract DG133W-05-CQ-1067

Advanced Weather Interactive Processing System

Operations & Maintenance

AWP.TE.SWCTR/TO10-0023

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 TO8 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 20 |
| 6.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 23 |
| 7.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 24 |

1.0 SCOPE

See the TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO8 Test Case SOA_Plug-Ins 1.0.
- TO9 Test Case SOA_Plug-Ins 2.0.
- FCM-S2-1994 (Redbook Graphics).

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Existing AWIPS 1 and AWIPS 2 test procedures.
- The AWIPS D-2D User's Manual Build 8.1.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case primarily demonstrates the capability of Service Oriented Architecture (SOA) plug-ins delivered during TO10. It builds on the TO8 and TO9 test cases and includes the test procedures from TO8 and TO9. Plug-ins to be delivered and tested during TO10 can be found beginning with Step 120.

The capability to ingest, store and display Red Book Vector Products will also be tested.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully.
- AWIPS test driver installed and functional.
- CAVE, EDEX and pgAdmin III are running.
- An internet connection is available.
- Live data flow containing the data types to be tested. Canned data can be substituted if the live data flow does not contain the data required to test a specific plug-in.
- The system has been running for at least 48 hours.
- The correct display of the data infers that the functionality of decode, ingest and storage is working correctly.
- Data decode, ingest, and storage validation accomplished during the Preliminary Delivery Test (PDT); results available in the PDT report.
- Localization previously set.
- TO10 testing begins at step 120. Regression testing of steps 1-119 occurred prior to DT. Therefore, capability tested and delivered during TO8 (Steps 1-71) and TO9 (Steps 72-119) remain intact and will not be executed during the TO10 DT.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The images and data will be displayed in CAVE for Redbook products. The AWIPS test driver will be used to display the ingested plug-in data.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|--------------------------|--|---|-----------|
| 1. | From the test workstation open CAVE. | CAVE successfully launches. The 5-D panel (4 smaller panels on the left and one larger main panel) displays. | |
| 2. | Zoom so that a CONUS-sized area displays centered on approximately Kansas City. | The main panel displays an area centered on the CONUS that includes some of Mexico and Canada. | |
| DISPLAY LIGHTNING | | | |
| 3. | From the CAVE menu bar click Mouse Button (MB) 1 'Obs' and then 'Lightning' (located under Hazards). | A menu displays that contains the following 5 options: 1hr Lgtng Plot, 15min Lgtng Plot, 15min Pos/Neg Lgtng Plot, 5min Lgtng Plot, and 1min Lgtng Seq. | |
| 4. | Select 1hr Lgtng Plot. | A lightning plot containing the previous 1 hour lightning strikes displays on the main panel. | |
| 5. | Select 'Clear' from the menu bar. | The loaded lightning display is removed. | |
| 6. | Select '15min Lgtng Plot'. | A lightning plot containing the previous 15 minutes of lightning strikes displays on the main panel. | |
| 7. | Select 'Clear' from the menu bar. | The loaded lightning display is removed. | |
| 8. | Select '15min Pos/Neg Lgtng Plot'. | A display of positive and negative strikes for the past 15 minutes displays. | |
| 9. | Select 'Clear' from the menu bar. | The loaded lightning display is removed. | |
| 10. | Select '5min Lgtng Plot'. | A lightning plot containing the previous 5 minutes of lightning strikes displays on the main panel. The DTG of the display should be within the past 5 minutes (depending on data receipt). | |
| 11. | Select 'Clear' from the menu bar. | The loaded lightning display is removed. | |
| 12. | Select '1min Lgtng Seq'. | Lightning strikes in one minute intervals for the past 5 minutes displays. The DTG for the display should be within the past 5 minutes (depending on data receipt). | |
| 13. | Select 'Clear' from the menu bar. | The loaded lightning display is removed. | |
| DISPLAY SATELLITE | | | |
| 14. | From the Satellite menu use MB1 and select 'IR Window'. | An IR image displays. IR satellite imagery can be displayed through the menu bar. | |
| 15. | Select 'Clear' from the menu bar. | Satellite images are removed. | |
| 16. | From the Satellite menu use MB1 and select 'Visible'. | A visible image displays. Visible satellite imagery can be displayed through the menu bar. | |
| 17. | Select 'Clear' from the menu bar. | Satellite images are removed. | |

| Step | Action | Result | Pass/Fail |
|--------------|--|---|-----------|
| 18. | From the Satellite menu use MB1 and select 'Water Vapor'. | A water vapor image displays. Water vapor satellite imagery can be displayed through the menu bar. | |
| 19. | Select 'Clear' from the menu bar. | Satellite images are removed. | |
| DISPLAY GRIB | | | |
| 20. | Open the Volume Browser by MB1 'Volume', 'Browser'. | The Volume Browser display GUI appears. | |
| 21. | Display parameters from the latest ECMWF model run by selecting 'ECMWF-HiRes' for the grid. For the Fields select temperature and height. For Planes select '500mb'. Load the selections. Note: Other available parameters can be substituted. | Contoured 500mb level temperature and height fields from the latest available ECMWF model run displays. ECMWF grib data can be displayed. | |
| 22. | 1. Select Clear from the menu bar. 2. In the Volume Browser select 'Edit', 'Clear All'. | 1. Gridded display is removed from the main pane. 2. Volume Browser entries are removed. | |
| 23. | Display parameters from the latest NAM model run by selecting an available NAM model for the grid. For the Fields select 'Forcing', 'Omega'. For Planes select '700mb'. Load the selection. Note: Other available parameters can be substituted. | Contoured 700mb level omega fields (vertical velocity) from the latest available NAM model run displays. NAM grib data can be displayed. | |
| 24. | 1. Select Clear from the tool bar. 2. In the Volume Browser select 'Edit', 'Clear All'. | 1. Gridded display is removed from the main pane. 2. Volume Browser entries are removed. | |
| 25. | Display parameters from the latest GFS model run by selecting 'GFS40' for the grid. For the Fields select 'Moist' and 'RH'. For Planes select 'Surface' (under Misc). Load the selection. Note: Other available parameters can be substituted. | Contoured fields of surface RH from the latest available GFS-40 model run displays. GFS grib data can be displayed. | |
| 26. | 1. Select 'Clear' from the menu bar. 2. In the Volume Browser select 'Edit', 'Clear All'. | 1. Gridded display is removed from the main pane. 2. Volume Browser entries are removed. | |
| 27. | Display parameters from the latest RUC model run by selecting an available RUC model for the grid. For the Fields select Temperature and Height. For the Planes select '350mb'. Load the selection. | Contoured 350mb temperature and height contours from the latest available RUC model display. RUC grib data can be displayed. | |
| 28. | 1. Select 'Clear' from the menu bar. 2. In the Volume Browser select 'Edit', 'Clear All'. | 1. Gridded display is removed from the main pane. 2. Volume Browser entries are removed. | |
| 29. | Close the Volume Browser. Select 'Volume' from the menu bar. | A drop down menu labeled "Volume" appears. A listing of bundled (families) of grib model data displays. | |

| Step | Action | Result | Pass/Fail |
|---------------------|---|---|-----------|
| 30. | From 'Volume' on the menu bar select 'ECMWF' located under Families. | A bundled set of ECMWF parameters displays. ECMWF grib data can be displayed from the Volume drop-down list. | |
| 31. | Select 'Clear' from the menu bar. | Gridded display is removed from the main pane. | |
| 32. | From 'Volume' select 'NAM40' located under Families. | A bundled set of NAM 40 parameters displays. NAM 40 grib data can be displayed from the Volume drop-down list. | |
| 33. | Select 'Clear' from the menu bar. | Gridded display is removed from the main pane. | |
| 34. | Select 'GFS40' located under Families. | A bundled set of GFS parameters displays. GFS grib data can be displayed from the Volume drop-down list. | |
| 35. | Select 'Clear' from the menu bar. | Gridded display is removed from the main pane. | |
| 36. | Select 'RUC' located under Families. | A bundled set of RUC-80 parameters displays. RUC grib data can be displayed from the Volume drop-down list. | |
| 37. | Select 'Clear' from the menu bar. | Gridded display is removed from the main pane. | |
| DISPLAY RAOB | | | |
| 38. | Select 'Upper Air' from the menu bar. Under the RAOB section select Omaha, NE (KOAX). | The latest RAOB for Omaha, NE, displays. A hodograph and 24 hour temperature change graph also appear (the latter not active). Note: Derived parameters will not display. | |
| 39. | Close the skew-T tab. Under 'Upper Air' select 'UA Plots', and '700hPa' located under RAOB. | A plot display over the US for 700hPa from the latest RAOB data appears. | DR #823 |
| 40. | Clear the display. Select the 'Points' icon from the menu bar. Approximately center point A over Chicago, IL. | A pre-determined set of points appear, normally lettered beginning with A. Point A is moved and centered over Chicago. | |
| 41. | Open the Volume Browser by MB1 'Volume', 'Browser'. | The Volume Browser display GUI appears. | |
| 42. | Select 'Sounding' from the Volume Browser tool bar. | Volume Browser is set to sounding mode. | |
| 43. | From the volume browser select the following: Grid-GFS40; Sounding (under Thermo); Points-A. Select 'Load'. | A sounding based on gridded data for Point A displays. It contains a hodograph and 24-hr temperature change (both not active). Values for various parameters available in the data base also display. Finally, the asterisk in the map is centered over Chicago, where point A was moved. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| DISPLAY AIRCRAFT | | | |
| Because the display of aircraft data has not been incorporated into CAVE, a test driver will be used to demonstrate the aircraft plug-in exists. | | | |
| 44. | Close the Skew-T display. Bring up the test driver in a web browser by going to: http://awips-int1:8080/uEngineWeb/ . | Test driver displays. | |
| 45. | Select 'ASCII Data'. Open Request/Response Message. Edit the Request window entry to display the following script: include("PIREPRequest.js"); var dataRequest = new PIREPRequest(); dataRequest.setCount(10); dataRequest.execute(); Select 'Request Product'. | The last 10 PIREP reports are returned. Aircraft plug-in exists and is operational. | |
| 46. | Rerun the above step with data from the following script: Include("AIREPrequest.js"); var dataRequest = new AIREPRequest(); dataRequest.setCount(10); dataRequest.execute(); | The last 10 AIREP reports are returned. Aircraft plug-in exists and is operational. | |
| MDCRS plots will be delivered in TO 9. Therefore, the next two steps cannot be executed. | | | |
| 47. | Next, Under 'Aircraft' select 'MDCRS plots'. | A display by flight levels in 5000 foot increments appears for available MDCRS plots. | |
| 48. | Select '250-300 hft'. | A display of available MDCRS plots between FL 250 – 300 appear. | |
| DISPLAY MARITIME | | | |
| 49. | Ensure a cleared, CONUS map is selected as the display area. From the menu bar select 'Obs'. Under the Maritime category select 'Fixed Buoys'. | The latest observations from fixed buoys displays. | |
| 50. | Clear the display. Under 'Obs' select 'Moving Maritime'. | The latest observations from ships and floating buoys displays. | |
| 51. | Clear the display. Under 'Obs' select 'MAROB'. | The latest MAROB data displays | |
| DISPLAY RADAR | | | |
| 52. | Clear the display. From the tool bar select 'Radar', 'kdv n', 'kdv n 4 Bit Products', 'kdv n 4 bit four panel'. | A listing of available four panel radar displays appears. | |

| Step | Action | Result | Pass/Fail |
|----------------------|---|---|-----------|
| 53. | Select the 0.5/1.5/2.4/3.4 Z/SRM panels. | A four panel radar display appears in the main panel. The displays are for 0.5, 1.5, 2.4, and 3.4 tilts. Note: not all panels may load if data is not available. Another station may be selected. | |
| 54. | Close the 4-panel display. Select 'kmpx' under Radar. Select 'kmpx 4 Bit Products', 'Comp Ref 4bit (CZ), | A composite reflectivity radar image for Minneapolis displays. | |
| 55. | Clear the display and repeat above step for 'Storm Total Precip'. Note: STP may not be available, depending on the weather occurring at the site. | A display of storm total precip displays. | |
| 56. | Clear the display and select under Radar 'kfsd', 'kfsd Derived', 'Echo Tops (ET)'. | A display of the echo tops for Sioux Falls displays. | |
| 57. | Clear the display and under the koax localization select 'koax 4 Bit Products', 'koax 4bit Reflectivity', '1.5 Refl'. | The latest radar image, 1.5 tilt, for koax localization displays. | |
| 58. | Repeat for '2.4 Refl'. | The latest radar image, 2.4 tilt, for koax localization displays. | |
| 59. | Repeat for '3.4 Refl'. | The latest radar image, 3.4 tilt, for koax localization displays. | |
| DISPLAY TAF and TEXT | | | |
| 60. | From the menu bar select 'Tools', 'Text Window'. | A text display window opens. | |
| 61. | In the AFOS Cmd: enter 'OMATAFOMA'. Return. | A terminal area forecast (TAF) for the selected station displays. AWIPS II contains a TAF plug-in that allows for the storage and retrieval of TAF data. | |
| 62. | Clear the display. In the text window, AFOS Cmd: enter 'OMAAFDOMA'. Return. | A text bulletin displays. Text products can be displayed; a text plug-in exists. | |
| DISPLAY METAR | | | |
| 63. | Clear the display. In the AFOS Cmd: enter 'OMAMTROMA'. | A series of raw metar observations for Nebraska displays. Raw METAR observations can be retrieved and displayed. | |
| 64. | Close the text window. Ensure a "clear" map centered on the CONUS is displayed in the main panel. Select 'Obs' from the CAVE menu bar. | A drop down menu bar displays providing a list of observation types that can be displayed. | |
| 65. | Select 'Surface Plot'. | The latest available decoded and ingested observations are displayed over the CONUS. | |
| 66. | Clear the display. Under 'Obs', select 'Other Plots', 'Surface Synoptic Plots'. Note: Loop and/or zoom as necessary. | The latest available surface plots from synoptic formatted observations displays. CAVE contains a synoptic plug-in. | |

| Step | Action | Result | Pass/Fail |
|---|---|---|-----------|
| 67. | Open a pgAdmin III session. Select the int1 DB. Under metadata open 'Schemas', 'awips', 'Tables'. | A listing of the database tables displays. | |
| 68. | Using MB3 click on 'obs'. | The DB Property and associated Value for obs displays. | |
| 69. | Perform a SQL query by selecting the 'View the data in the selected object.' Icon located in the menu bar containing icons. | A display of the metadata stored in the observation database displays. | |
| 70. | Examine the column headers. Look for the following headers: autostationtype, sealevelpress, mintemp24hr, maxtemp24hr, precip1hour, precip6hour, and presschange3hour. | These are all examples of columns that contain values found in the remarks section of METAR observations. | |
| 71. | Scroll down through the columns. When remarks are reported, values will be found in these columns. Open the observation in the "message" column to confirm the value is found in the remarks section, RMK. | METAR remarks are decoded and stored in the AWIPS database. | |
| End of TO8 Test | | | |
| Begin TO9 Test | | | |
| DISPLAY PROFILER DATA DECODED FROM BUFR | | | |
| 72. | To determine if profiler data is being ingested and stored open pgAdmin. Run the following SQL query: select * from prodata; | A listing of ingested profiler data appears. This data has been decoded from BUFR and stored. | |
| 73. | Select and annotate two stations from the stationid character column. Selected Station ids: _____ | Profiler station id selected. | |
| 74. | Open the AWIPS test driver. This will be used to query the database and view the selected two profiler data. http://awips-int1:8080/uEngineWeb/ | The AWIPS Test Driver Interface Connected to AWIPS-int1 opens. | |
| 75. | Open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XXXXX with one of the two station numbers selected above. include("ProfilerRequest.js"); var dataRequest = new ProfilerRequest(); dataRequest.addParameter("stationId", "XXXXX"); dataRequest.execute(); | A Request/Response message is entered. | |

| Step | Action | Result | Pass/Fail |
|--|---|--|-----------|
| 76. | Select "Request Product". | Profiler data for the selected station are retrieved from the database and displayed. Profiler data are being stored in the DB. | |
| 77. | Repeat steps 75 and 76 for the second point selected. | Profiler data for the selected station are retrieved from the database and displayed. Profiler data are being stored in the DB. | |
| DISPLAY MODEL SOUNDING DATA DECODED FROM BUFR | | | |
| 78. | To determine if model sounding data are being ingested and stored open pgAdmin run the following SQL query: select * from modelsounding; | A listing of all model sounding data that has been ingested appears. These data have been decoded from BUFR and stored. | DR #1425 |
| 79. | Scroll down. Under "GFS" reporttype select and record two sets of latitudes and longitudes. Selected Lat/Longs: _____ | Two data points are chosen from the GFS model that will be used to retrieve data. | |
| 80. | If not already displayed, open the AWIPS test driver. This will be used to query the database and view the selected two profiler data. http://awips-int1:8080/uEngineWeb/ | The AWIPS Test Driver Interface Connected to AWIPS-int1 opens. | |
| 81. | Open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XX.XX and YYY.YY with one of the two data points selected above. include("ModelSoundingRequest.js"); var dataRequest = new ModelSoundingRequest(); dataRequest.addParameter("reportType","GFS"); dataRequest.addParameter ("latitude","XX.XX"); dataRequest.addParameter ("longitude","-YYY.YY"); dataRequest.execute(); | A Request/Response message is entered. | |
| 82. | Select "Request Product". | GFS data for the entered data point displays. GFS model sounding data are being decoded and ingested into the AWIPS II database. | |
| 83. | Repeat steps 81 and 82 for the second point selected. | GFS data for the entered data point displays. GFS model sounding data are being decoded and ingested into the AWIPS II database. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 84. | The next several steps repeat the above model sounding test steps but use the ETA model. To determine if model sounding data for the ETA model are being ingested and stored open pgAdmin, run the following SQL query: select * from modelsounding; | A listing of all model sounding data that has been ingested appears. | |
| 85. | Scroll down. Under "ETA" reporttype select and record two sets of latitudes and longitudes. Selected Lat/Longs: _____ | Two data points are chosen from the ETA model that will be used to retrieve data. | |
| 86. | In the test browser, open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XX.XX and YYY.YY with one of the two data points selected above. include("ModelSoundingRequest.js"); var dataRequest = new ModelSoundingRequest(); dataRequest.addParameter("reportType","ETA"); dataRequest.addParameter("latitude","XX.XX"); dataRequest.addParameter("longitude","-YYY.YY"); dataRequest.execute(); | A Request/Response message for ETA data is entered. | |
| 87. | Select "Request Product". | ETA data for the entered data point displays. ETA model sounding data are being decoded and ingested into the AWIPS II database. | |
| 88. | Repeat steps 86 and 87 for the second point selected. | ETA data for the entered datapoint displays. ETA model sounding data are being decoded and ingested into the AWIPS II database. | |
| DISPLAY SATELLITE SOUNDING DATA (GOES and POES) DECODED FROM BUFR | | | |
| 89. | To determine if satellite sounding data from GOES satellites are being ingested and stored open pgAdmin, run the following SQL query: select * from goessounding; | A listing of all satellite sounding data from GOES satellites that has been ingested appears. | |
| 90. | Scroll down. Select and record two sets of latitudes and longitudes. Selected Lat/Longs: _____ | Two data points are chosen from the GOES satellite soundings that will be used to retrieve data. Note the wmoheader column and that GOES file headers fall under the JUTX* WMO header. | |

| Step | Action | Result | Pass/Fail |
|------|---|---|-----------|
| 91. | If not already displayed, open the AWIPS test driver. This will be used to query the database and view the satellite sounding data. http://awips-int1:8080/uEngineWeb/ | The AWIPS Test Driver Interface Connected to AWIPS-int1 opens. | |
| 92. | Open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XX.XX and YYY.YY with one of the two data points selected above. include("GOESSoundingRequest.js"); var dataRequest = new GOESSoundingRequest(); dataRequest.addParameter ("latitude", "XX.XX"); dataRequest.addParameter ("longitude", "- YYY.YY"); dataRequest.execute(); | A Request/Response message for GOES Satellite data is entered. | |
| 93. | Select "Request Product". | GOES Satellite sounding data ingested from BUFR format for the entered data point displays. GOES Satellite sounding data are being decoded and ingested into the AWIPS II database. | |
| 94. | Repeat steps 92 and 93 for the second point selected. | GOES Satellite sounding data ingested from BUFR format for the entered data point displays. GOES Satellite sounding data are being decoded and ingested into the AWIPS II database. | |
| 95. | To determine if satellite sounding data from POES satellites are being ingested and stored open pgAdmin, run the following SQL query: select * from poessounding; | A listing of all satellite sounding data from POES satellites that has been ingested appears. Note: May need to manually ingest POES data. DR deals with storing POES data in a clustered environment. | DR #1425 |
| 96. | Scroll down. Select and record two sets of latitudes and longitudes. Selected Lat/Longs: _____ | Two data points are chosen from the POES satellite soundings that will be used to retrieve data. Note the wmoheader column and that POES file headers fall under the IUTX* WMO header. | |
| 97. | If not already displayed, open the AWIPS test driver. This will be used to query the database and view the satellite sounding data. http://awips-int1:8080/uEngineWeb/ | The AWIPS Test Driver Interface Connected to AWIPS-int1 opens. | |

| Step | Action | Result | Pass/Fail |
|--|--|--|-----------|
| 98. | <p>Open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XX.XX and YYY.YY with one of the two data points selected above.</p> <pre>include("POESSoundingRequest.js"); var dataRequest = new POESSoundingRequest(); dataRequest.addParameter ("latitude","XX.XX"); dataRequest.addParameter ("longitude","- YYY.YY"); dataRequest.execute();</pre> | A Request/Response message for POES Satellite data is entered. | |
| 99. | Select "Request Product". | POES Satellite sounding data ingested from BUFR format for the entered datapoint displays. POES Satellite sounding data are being decoded and ingested into the AWIPS II database. | |
| 100. | Repeat steps 98 and 99 for the second point selected. | POES Satellite sounding data ingested from BUFR format for the entered datapoint displays. POES Satellite sounding data are being decoded and ingested into the AWIPS II database. | |
| DISPLAY MODEL OUTPUT STATISTICS (MOS) DECODED FROM BUFR | | | |
| 101. | <p>To determine if profiler data is being ingested and stored open pgAdmin. Run the following SQL query:</p> <pre>select * from bufrmos;</pre> | A listing of ingested mos data appears. | |
| 102. | <p>Select and annotate two stations from the stationid character column. Selected Station ids: _____</p> | MOS station id selected. | |
| 103. | <p>Open the AWIPS test driver. This will be used to query the database and view the selected two profiler data.</p> <p>http://awips-int1:8080/uEngineWeb/</p> | The AWIPS Test Driver Interface Connected to AWIPS-int1 opens. | |
| 104. | <p>Open the Request/Response Message and enter the following query (first delete the request in the "Request:" window). Replace the XXXXX with one of the two station numbers selected above.</p> <pre>include("BUFRMOSRequest.js"); var dataRequest = new BUFRMOSRequest(); dataRequest.addParameter("stationId","XXXXX"); dataRequest.execute();</pre> | A Request/Response message is entered. | |

| Step | Action | Result | Pass/Fail |
|--|--|---|-----------|
| 105. | Select "Request Product". | Data for the MOS station entered for the stationed displays. BUFR formatted MOS data are being decoded and ingested into the AWIPS II database. | |
| 106. | Repeat steps 104 and 105 for the second point selected. | Data for the MOS station entered for the stationed displays. BUFR formatted MOS data are being decoded and ingested into the AWIPS II database. | |
| RED BOOK PRODUCTS. THE NCEP/HYDRO DROPDOWN MENU IN CAVE CONTAINS SELECTIONS TO DISPLAY RED BOOK PRODUCTS. A RANDOM SAMPLING WILL BE TESTED. | | | |
| 107. | Open CAVE. Under the NCEP/HYDRO menu drop down select "SPC Convective Outlooks", "Day 1 Convective Outlook". | The Day 1 Convective Outlooks displays. Compare to SPC, http://www.spc.noaa.gov/ . Areal coverage should be approximately the same for both areas. | |
| 108. | Clear display. Repeat for the Day 3 Convective Outlook. | The Day 3 Convective Outlook displays. Compare to SPC, http://www.spc.noaa.gov/ . Areal coverage should be approximately the same for both areas. | |
| 109. | Clear display. Still in CAVE, under the NCEP/HYDRO menu drop down select "Fire Weather", "Fire Wx Outlook – Day 2". | The Day 2 Fire Weather Outlook displays. Compare to SPC, http://www.spc.noaa.gov/ , Fire Wx Forecasts. Areal coverage should be approximately the same for both. | |
| 110. | Still in CAVE, under the NCEP/HYDRO menu drop down select "Precip & Stability", "Radar Summary". | The latest available radar contours of intensity displays. Compare to same display on AWIPS I. | |
| 111. | Clear display. Still in CAVE, under the NCEP/HYDRO menu drop down select "Temps and Weather" located under NCO and then "Sfc Geo Wind Plot". | The latest available surface geostrophic wind plot displays. Compare to same display on AWIPS I. | |
| 112. | Clear display. Still in CAVE, under the NCEP/HYDRO menu drop down select "Threat Chart", "Soil/Wildfire Fcst". | The Weekly Drought Monitor displays. Compare to same display on AWIPS I. | |
| RISK REDUCTION. As a risk reduction for TO10, preliminary development work for hydrology started in TO9 will be demonstrated in the following steps. A formal risk reduction demonstration will be presented as part of TO10. | | | |
| 113. | Open a terminal and log into the mule logs directory (/awips/edex/mule/logs). Perform an ls on the directory. | A listing of the mule logs displays. User can access the mule logs. | |
| 114. | Perform the following in-line command: cat <Latest log> grep IngestSrv-shef grep -v "0 records" grep records Substitute the latest log file for <Latest log> | A series of ingest logs for SHEF data appears. It shows that SHEF data is being ingested into the DB. | |
| 115. | To show that SHEF plug-in has been created and data are being stored, Open pgAdmin III. | The pgAdmin III application opens. | |

| Step | Action | Result | Pass/Fail |
|----------------------|---|--|-----------|
| 116. | In pgAdmin III under Databases select "awips-db", "hd_ob81oax", "Schemas", "public", and "Tables". | A listing of the SHEF tables contained in the database appears. | |
| 117. | Using the right mouse button highlight "height". Select "View Data" and "View All Roles". | A listing of the SHEF data for the table selected displays and is current. SHEF data are being stored. | |
| 118. | Repeat the above two steps for the table containing the parameter "rawpp". | A listing of the SHEF data for the table selected displays and is current. SHEF data are being stored. | |
| 119. | Repeat steps 116 and 117 for the table containing the parameter "curpp". | A listing of the SHEF data for the table selected displays and is current. SHEF data are being stored. | |
| End of TO9 Test | | | |
| Begin TO10 Test | | | |
| 30 Hour TAF - Ingest | | | |
| 120. | To determine if 30 hour TAF data is being ingested and stored, open pgAdmin III. Select the database 'metadata' and 'awips'. | The database is opened. | |
| 121. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from taf where stationid in ('KMKE', 'KBWI', 'KBOS'); | A listing of selected ingested TAF data appears. | |
| 122. | Run the following SQL query: select datauri from taf where stationid = 'KMKE'; cntrl C the datauri to copy into the next SQL query: select * from taf_change_groups where parentid like '<cntrl V datauri from previous query>' order by sequenceid; | TAF data for the selected station are displayed. TAF data are being stored in the DB. | |
| 123. | View the changegroup field for the date/times of each group. | The TAF is for 30 hours and the date/times are in the 30-hr format. | |
| 124. | Repeat steps 122 and 123 for stationid 'KBOS'. | The 30 hour TAF for a second station is displayed. | |
| METAR to SHEF (IHFS) | | | |
| 125. | Open a pgAdmin III session. Select the int1 DB. Under 'hd_ob83krf' open 'Schemas', 'awips', 'Tables'. | A listing of the 'hd_ob83krf' database tables displays. | |
| 126. | Using MB3 click on 'latestobsvalue' table and select 'View Data'. | The entries in the latestobsvalue table displays. | |
| 127. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |

| Step | Action | Result | Pass/Fail |
|--------------------------------|--|---|-----------|
| 128. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from latestobsvalue where product_id like '%METAR' order by lid asc; | The latest observations from the METAR reporting stations are displayed grouped by location. | |
| 129. | Select a station with several rows. Record the values in the 'lid', 'pe', 'ts', 'obstime', and 'value' columns. | lid: _____ pe : _____ ts: _____ obstime: _____ value: _____ | |
| 130. | In the pgAdmin III int1 DB session, select 'metadata' and open 'Schemas', 'awips', 'Tables'. | A listing of the 'metadata' database tables displays. | |
| 131. | Using MB3 click on 'obs' table and select 'View Data'. | The entries in the 'obs' table displays. | |
| 132. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 133. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from obs where stationid like '<%lid from previous steps>'; | The observation data from the METAR reporting station are displayed. | |
| 134. | Compare the values to the corresponding values recorded above. | Data from METAR observations are stored in the SHEF and metadata databases. | |
| Synoptic to SHEF (IHFS) | | | |
| 135. | Open a pgAdmin III session. Select the int1 DB. Under 'hd_ob83krf' open 'Schemas', 'awips', 'Tables'. | A listing of the 'hd_ob83krf' database tables displays. | |
| 136. | Using MB3 click on 'latestobsvalue' table and select 'View Data'. | The entries in the latestobsvalue table displays. | |
| 137. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 138. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from latestobsvalue where product_id like '%Synoptic' order by lid asc; | The latest observations from the Synoptic reporting stations are displayed grouped by location. | |
| 139. | Select a station with several rows. Record the values in the 'lid', 'pe', 'ts', 'obstime', and 'value' columns. | lid: _____ pe : _____ ts: _____ obstime: _____ value: _____ | |
| 140. | In the pgAdmin III int1 DB session, select 'metadata' and open 'Schemas', 'awips', 'Tables'. | A listing of the 'metadata' database tables displays. | |

| Step | Action | Result | Pass/Fail |
|--------------|--|--|-----------|
| 141. | Using MB3 click on 'obs' table and select 'View Data'. | The entries in the 'obs' table displays. | |
| 142. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 143. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from obs where stationid like '<%lid from previous steps>'; | The observation data from the Synoptic reporting station are displayed. | |
| 144. | Compare the values to the corresponding values recorded above. | Data from Synoptic observations are stored in the SHEF and metadata databases. | |
| SHEF to IHFS | | | |
| 145. | Open a pgAdmin III session. Select the int1 DB. Under 'hd_ob83krf' open 'Schemas', 'awips', 'Tables'. | A listing of the 'hd_ob83krf' database tables displays. | |
| 146. | Using MB3 click on 'latestobsvalue' table and select 'View Data'. | The entries in the latestobsvalue table displays. | |
| 147. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 148. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from latestobsvalue where product_id like '<select a SHEF product>' order by lid asc; | The latest data from the SHEF observations are displayed grouped by location. | |
| 149. | Select a station with several rows. Record the values in the 'lid', 'pe', 'ts', 'obstime', and 'value' columns. | lid: _____ pe : _____ ts: _____ obstime: _____ value: _____ | |
| 150. | In the pgAdmin III int1 DB session, select 'metadata' and open 'Schemas', 'awips', 'Tables'. | A listing of the 'metadata' database tables displays. | |
| 151. | Using MB3 click on 'obs' table and select 'View Data'. | The entries in the 'obs' table displays. | |
| 152. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 153. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from obs where stationid like '<%lid from previous steps>'; | The data from the SHEF observation are displayed. | |
| 154. | Compare the values to the corresponding values recorded above. | Data from SHEF observations are stored in the IHFS database. | |

| Step | Action | Result | Pass/Fail |
|------------------------------------|--|---|-----------|
| Precipitation Processing (to IHFS) | | | |
| 155. | Open a pgAdmin III session. Select the int1 DB. Under 'hd_ob83krf' open 'Schemas', 'awips', 'Tables'. | A listing of the 'hd_ob83krf' database tables displays. | |
| 156. | Using MB3 click on 'latestobsvalue' table and select 'View Data'. | The entries in the latestobsvalue table displays. | |
| 157. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 158. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from latestobsvalue where product_id like '<select a SHEF product>' order by lid asc; | The latest data from the SHEF observations are displayed grouped by location. | |
| 159. | Select a station with the Physical Element (PE) value of 'PP'. Record the values in the 'lid', 'ts', 'obstime', and 'value' columns. | lid: _____ ts: _____ obstime: _____ value: _____ | |
| 160. | In the pgAdmin III int1 DB session, select 'metadata' and open 'Schemas', 'awips', Tables'. | A listing of the 'metadata' database tables displays. | |
| 161. | Using MB3 click on 'obs' table and select 'View Data'. | The entries in the 'obs' table displays. | |
| 162. | Scroll down the entries and verify the date/times are current. | Current data is stored. | |
| 163. | Open the "Execute arbitrary SQL queries" window and run the following SQL query: select * from obs where stationid like '<%lid from previous steps>'; | The data from the SHEF observation are displayed. | |
| 164. | Compare the values to the corresponding values recorded above. | Precipitation Data from SHEF observations are stored in the IHFS database. | |
| 165. | Open the Hydro Perspective. | The Hydro screen is displayed. | |
| 166. | On the map, select the location used above. On the menu bar, select LiveData, Station Reporting Status/ Latest Observations. | The latest observations for the selected site are displayed. | |
| 167. | Verify the Precipitation (PP) value corresponds to the value in the database tables. | Values are the same. | |
| 168. | Close all windows. | Windows are closed. | |
| File Purger | | | |
| 169. | Open a terminal window. | The terminal window opens. | |
| 170. | Navigate to the log files and verify the IHFS purge process has been successfully completed. | Verified. | |
| 171. | Open pgAdmin and navigate to the IHFS tables. | The IHFS tables are available. | |
| 172. | Verify there is no data older than the set purge time. | Verified. | |

| Step | Action | Result | Pass/Fail |
|------------------|---|-----------|-----------|
| 173. | In the terminal window, navigate to the Precipitation File system and verify the purge has run. | Verified. | |
| End of TO10 Test | | | |

DRAFT

5.0 TO8 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|-----------------|--|---------------|
| CAVE_TO8_18.22 | CAVE shall display the Fixed Buoys plot product | 49 |
| CAVE_TO8_18.23 | CAVE shall display the Moving Maritime plot product | 50 |
| CAVE_TO8_18.24 | CAVE shall display the MAROB station plot product | 51 |
| ADE_TO8_024 | AWIPS shall contain Plug-Ins that decode and store data and metadata | 3-46 49-72 |
| ADE_TO8_024.1 | AWIPS shall contain a bin Lightning Plug-in | 3-13 |
| ADE_TO8_024.1.1 | The bin-Lightning Plug-in shall decode lightning metadata | 3-13 |
| ADE_TO8_024.1.2 | The bin-Lightning Plug-in shall store lightning metadata in the metadata repository | 3-13 |
| ADE_TO8_024.1.3 | CAVE shall display lightning data | 3-13 |
| CAVE_TO8_016.1 | CAVE shall display 1 hour binary lightning plots | 4 |
| CAVE_TO8_016.2 | CAVE shall display 15 minute binary lightning plots | 6 |
| CAVE_TO8_016.3 | CAVE shall display 15 minute positive/negative binary lightning plots | 8 |
| CAVE_TO8_016.4 | CAVE shall display 5 minute binary lightning plots | 10 |
| CAVE_TO8_016.5 | CAVE shall display 1 minute binary lightning sequence | 12 |
| ADE_TO8_024.2 | AWIPS shall contain a GINI Satellite Plug-in | 14-19 |
| ADE_TO8_024.2.1 | The GINI Satellite Plug-in shall decode GINI Satellite metadata | 14-19 |
| ADE_TO8_024.2.2 | The GINI Satellite Plug-in shall store GINI Satellite metadata in the metadata repository | 14-19 |
| ADE_TO8_024.2.3 | CAVE shall display GINI Satellite data | 14-19 |
| ADE_TO8_024.3 | AWIPS shall contain a Grib Plug-in | 20-37 |
| ADE_TO8_024.3.1 | The Grib Plug-in shall decode Grib metadata | 20-37 |
| ADE_TO8_024.3.2 | The Grib Plug-in shall store Grib metadata in the metadata repository | 20-37 |
| ADE_TO8_024.3.3 | CAVE shall display decoded Grib data | 20-37 |
| ADE_TO8_024.4 | The Grib Plug-in shall decode grib data necessary for the correct operation of the AWIPS II system | 20-37 |
| ADE_TO8_024.4.1 | The Grib Plug-in shall decode ECMWF data | 20-37 |
| ADE_TO8_024.4.2 | The Grib Plug-in shall decode NAM data | 20-37 |
| ADE_TO8_024.4.3 | The Grib Plug-in shall decode GFS data | 20-37 |
| ADE_TO8_024.4.4 | The Grib Plug-in shall decode RUC data | 20-37 |
| ADE_TO8_024.5 | AWIPS shall contain a RAOB (BUFR) Plug-in | 38-43 |
| ADE_TO8_024.5.1 | The RAOB (BUFR) Plug-in shall decode RAOB metadata | 38-43 |
| ADE_TO8_024.5.2 | The RAOB (BUFR) Plug-in shall store RAOB metadata in the metadata repository | 38-43 |
| ADE_TO8_024.5.3 | CAVE shall display RAOB data | 38-43 |
| ADE_TO8_024.6 | AWIPS shall contain a Text Plug-in | 62 |
| ADE_TO8_024.6.1 | The Text Plug-in shall decode text data | 62 |
| ADE_TO8_024.7 | AWIPS shall contain an Aircraft Plug-in | 44-46 |
| ADE_TO8_024.7.1 | The Aircraft Plug-in shall decode Aircraft metadata | 44-46 |

| Number | Description | Test Step(s) |
|-------------------|---|--------------|
| ADE_TO8_024.7.1.1 | The Aircraft Plug-in shall decode AIREP Aircraft metadata | 44-46 |
| ADE_TO8_024.7.1.2 | The Aircraft Plug-in shall decode RECCO Aircraft metadata | 47-48 |
| ADE_TO8_024.7.1.3 | The Aircraft Plug-in shall decode PIREP Aircraft metadata | 44-46 |
| ADE_TO8_024.7.2 | The Aircraft Plug-in shall store Aircraft metadata in the metadata repository | 44-46 |
| ADE_TO8_024.7.2.1 | The Aircraft Plug-in shall store AIREP Aircraft metadata in the metadata repository | 44-46 |
| ADE_TO8_024.7.2.2 | The Aircraft Plug-in shall store RECCO Aircraft metadata in the metadata repository | 47-48 |
| ADE_TO8_024.7.2.3 | The Aircraft Plug-in shall store PIREP Aircraft metadata in the metadata repository | 44-46 |
| ADE_TO8_024.7.3 | CAVE shall display Aircraft data | 44-46 |
| ADE_TO8_024.7.3.1 | CAVE shall display AIREP Aircraft data | 44-46 |
| ADE_TO8_024.7.3.2 | CAVE shall display RECCO Aircraft data | 47-48 |
| ADE_TO8_024.7.3.3 | CAVE shall display PIREP Aircraft data | 44-46 |
| ADE_TO8_024.8 | AWIPS shall contain a Synoptic Plug-in | 66 |
| ADE_TO8_024.8.1 | The Synoptic Plug-in shall decode Synoptic metadata | 66 |
| ADE_TO8_024.9 | AWIPS shall contain a Maritime Plug-in | 49-51 |
| ADE_TO8_024.9.1 | The Maritime Plug-in shall decode Maritime metadata | 49-51 |
| ADE_TO8_024.9.1.1 | The Maritime Plug-in shall decode ship synoptic Maritime metadata | 49-51 |
| ADE_TO8_024.9.1.2 | The Maritime Plug-in shall decode buoy synoptic Maritime metadata | 49-51 |
| ADE_TO8_024.9.1.3 | The Maritime Plug-in shall decode CMAN synoptic Maritime metadata | 49-51 |
| ADE_TO8_024.9.1.4 | The Maritime Plug-in shall decode MAROB Maritime metadata | 49-51 |
| ADE_TO8_024.9.2 | The Maritime Plug-in shall store Maritime metadata in the metadata repository | 49-51 |
| ADE_TO8_024.9.2.1 | The Maritime Plug-in shall store ship synoptic Maritime metadata in the metadata repository | 49-51 |
| ADE_TO8_024.9.2.2 | The Maritime Plug-in shall store buoy synoptic Maritime metadata in the metadata repository | 49-51 |
| ADE_TO8_024.9.2.3 | The Maritime Plug-in shall store CMAN synoptic Maritime metadata in the metadata repository | 49-51 |
| ADE_TO8_024.9.2.4 | The Maritime Plug-in shall store MAROB Maritime metadata in the metadata repository | 49-51 |
| ADE_TO8_024.9.3 | CAVE shall display Maritime data | 49-51 |
| ADE_TO8_024.9.3.1 | CAVE shall display ship synoptic Maritime data | 49-51 |
| ADE_TO8_024.9.3.2 | CAVE shall display buoy synoptic Maritime data | 49-51 |
| ADE_TO8_024.9.3.3 | CAVE shall display CMAN synoptic Maritime data | 49-51 |
| ADE_TO8_024.9.3.4 | CAVE shall display MAROB Maritime data | 49-51 |
| ADE_TO8_024.10 | AWIPS shall contain a Radar Plug-in | 52-59 |
| ADE_TO8_024.10.1 | The Radar Plug-in shall decode Radar metadata | 52-59 |
| ADE_TO8_024.10.2 | The Radar Plug-in shall store Radar metadata in the metadata repository | 52-59 |

| Number | Description | Test Step(s) |
|------------------|---|--------------|
| ADE_TO8_024.10.3 | CAVE shall display Radar data | 52-59 |
| ADE_TO8_024.11 | AWIPS shall contain a TAF Plug-in | 60-61 |
| ADE_TO8_024.11.1 | The TAF Plug-in shall decode TAF metadata | 60-61 |
| ADE_TO8_024.11.2 | The TAF Plug-in shall store TAF metadata in the metadata repository | 60-61 |
| ADE_TO8_024.12 | AWIPS shall contain a METAR Plug-in | 63-65, 67-71 |
| ADE_TO8_024.12.1 | The METAR Plug-in shall decode METAR metadata | 63-65, 67-71 |
| ADE_TO8_024.12.2 | The METAR Plug-in shall store METAR metadata in the metadata repository | 63-65, 67-71 |
| ADE_TO8_024.12.3 | CAVE shall display METAR data | 63-65, 67-71 |
| AWIPS_T08_030.4 | The AWIPS system shall ingest METAR (WMO FM-15) observation data | 63-65, 67-71 |
| AWIPS_T08_030.5 | The AWIPS system shall ingest SPECI (WMO FM-16) observation data | 63-65, 67-71 |
| AWIPS_T08_030.6 | Refine the ADE 1.0 Metar plug-in by extending decoding into the remarks | 63-65, 67-71 |
| AWIPS_T08_031.1 | AWIPS shall ingest binary lightning data | 3-13 |
| AWIPS_T08_031.2 | AWIPS shall decode binary lightning data | 3-13 |
| AWIPS_T08_031.3 | AWIPS shall store binary lightning data | 3-13 |

6.0 TO9 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|----------|--|--------------|
| SYSR2074 | The AWIPS system shall implement Redbook Vector Rendering. | 107-112 |
| SYSR2087 | The AWIPS system shall implement the BUFR Decoder for Profiler Data. | 72-77 |
| SYSR2088 | The AWIPS system shall implement the BUFR Decoder for Model Soundings. | 78-88 |
| SYSR2089 | The AWIPS system shall implement the BUFR Decoder for Satellite Soundings. | 89-100 |
| SYSR2090 | The AWIPS system shall implement (ingest and storage) the Red Book Vector Products for products viewable from D2D menus. | 107-112 |

7.0 TO10 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |
| SYSR | | |

DRAFT

Test Case Stability 3.0
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)

AWP.TE.SWCTR/TO10-0024

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 5 |

1.0 SCOPE

See Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The AWIPS D-2D User's Manual Build 8.1.
- The Silver Spring NWS AWIPS 1 test bed application.
- Release OB8.2 of the Weather Event Simulator (WES).
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the stability of the software by running continuously with a KOAX filtered SBN live data flow while monitoring system resources for usage and log files for critical errors. This test case also involves running CAVE periodically checking for retrieval of current data. This test case is verified at the local Omaha test site on the test hardware prior to or during PDT. The test results are recorded in the Test Report. Stability issues exposed during the test, if any, are analyzed and required corrections determined. Corrections that cannot be applied prior to Delivery Testing are reported. As is the case with other tests, critical defects that prevent testing and evaluation of TO10 delivery functionality will be corrected prior to acceptance of the delivery. Non-critical defects (those for which a reasonable work around can be provided, or which does not prevent subsequent testing) will be corrected during TO11 or a subsequent Task Order as appropriate.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully on the test cluster and the test workstations
- EDEX is running on both nodes of the cluster
- Live data from a SBN data feed with filtering for KOAX
- Monitoring cron for system resources running
- Mule and activemq log files configured to persist through the entire test interval

3.2 Recommended Hardware

See Software Test Plan.

3.3 Test Inputs

Test inputs are defined by the SBN acquisition patterns which will be set to KOAX. A copy of the file defining the acquisitions patterns will be included in the test report.

3.4 Test Outputs

- Copy of SBN data acquisition patterns
- System resources will be logged and stored
 - Linux “uptime” logged on each node
 - Daily “ps -ef|grep java” logged on each node with timestamps
 - Daily “ls -lR” of hdf5 tree logged with timestamp
 - Daily file count of the “processing” directory logged with timestamps
 - Daily JMX snapshots of mule and activemq heap memory
 - Default SysStat system resource monitoring logged
- Mule Log files will be stored
- ActiveMQ Log files will be stored
- Issue analysis report, if required.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|--------------|--|--|-----------|
| 1. | Start and let EDEX run without interruption for 14 days. | EDEX continues running for 14 days | |
| 2. | Run CAVE daily on a workstation to display satellite, radar, and model data. | CAVE displays current satellite, radar, and model data | |
| 3. | After the 14 day test period examine the system resources and log files to verify EDEX and CAVE are still running. | Mule logs indicate data is being ingested. System resources are still available | |
| 4. | Collect logs and monitoring data. | Logs and monitoring data become part of the test report. | |
| End of test. | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------------|--|--------------|
| CAVE_TO8_040 | AWIPS II shall ingest data continuously for 15 days without requiring a restart. | ALL |

Test Case Rate of Change Checker
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0025

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer Date

Approved By:

Program Manager Date

Mission Assurance Quality Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|--|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION | 3 |
| 3.1 Assumptions, Constraints and Preconditions | 3 |
| 3.2 Recommended Hardware | 3 |
| 3.3 Test Inputs | 3 |
| 3.4 Test Outputs | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM) | 5 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_HYDRO_WHFS_Hydroview (OB8.3); Baseline_HYDRO_WHFS_Hydroview_OB8.1; Baseline_HYDRO_PointData.Control; Checkout_4.4.2_Hydroview_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS I test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates that the Rate of Change (ROC) Checker successfully computes the rate of change for a specified time series of observational data. The ROC value is checked against three ROC thresholds: QC, alarm, and alert.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE, EDEX and pgAdmin III are running.
- No data for the selected site to be tested has been ingested or is purged.
- Four files of canned river stage data are available to be ingested; this data shall allow the user to test the three ROC thresholds.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

| Step # | Action | Result | Pass/Fail |
|-----------------------|--|--|-----------|
| 1. | In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog. | The Hydro Perspective displays in CAVE. | |
| 2. | For a pre-selected river gage, ingest a file containing river stage data to set the 'base' river stage. | The river stage data file is ingested. | |
| 3. | Ingest a second file with data well above the base river stage set in step 2. | The file is thrown out as the QC checker identifies the data as exceeding a threshold. | |
| 4. | Ingest a third file with data above the base river stage set in step 2 that is within tolerance to alert the user with an advisory message. | An alert message appears with an advisory message regarding the change in the river stage. | |
| 5. | Close the message window. | The message window closes. | |
| 6. | Ingest a fourth file with data above the base river stage set in step 2 that is within tolerance to alarm the user with a warning message. | An alarm message appears with a warning message regarding the change in the river stage. | |
| 7. | Close the message window. | The message window closes. | |
| 8. | MB3 click and hold on the Hydro Perspective tab and select 'Close'. | The Hydro Perspective closes. | |
| End of Hydroview Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------|-------------|--------------|
| SYSR | TBD | |

DRAFT

Test Case Volume Browser 2.0

for

Contract DG133W-05-CQ-1067

**Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance**

AWP.TE.SWCTR/TO10-0026

Prepared for:

U.S. Department of Commerce
NOAA/NWS Acquisition Management Division
SSMC2, Room 11220
1325 East-West Highway
Silver Spring, MD 20910

Prepared by:

Raytheon Company
STC Office
6825 Pine Street
Omaha, NE 68106

21 November 2008

This document includes data that shall not be duplicated, used, or disclosed – in whole or in part – outside the Government for any purpose other than to the extent provided in contract DG133W-05-CQ-1067. However, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

HARD COPY UNCONTROLLED

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

Change History

| Revision | Date | Affected Pages | Explanation of Change |
|----------|-------------|----------------|-----------------------|
| Draft | 21 Nov.2008 | ALL | Initial Draft |

DRAFT

Table of Contents

| | <i>Page</i> |
|---|-------------|
| 1.0 SCOPE | 1 |
| 2.0 APPLICABLE DOCUMENTS | 2 |
| 2.1 Source Documents | 2 |
| 2.2 Reference Documents | 2 |
| 3.0 TEST CASE DESCRIPTION..... | 3 |
| 3.1 Assumptions, Constraints and Preconditions..... | 3 |
| 3.2 Recommended Hardware..... | 3 |
| 3.3 Test Inputs..... | 3 |
| 3.4 Test Outputs..... | 3 |
| 4.0 TEST SCENARIO | 4 |
| 5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)..... | 11 |

1.0 SCOPE

See TO10 Software Test Plan.

DRAFT

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- TO8 Test Case Volume Browser 1.0

2.2 Reference Documents

- Legacy NWS Test Cases:
 - D2D_Prod_Load_1.4.1.22
 - Baseline_D2D_VB_Plan_1.4.1.2
 - Baseline_D2D_VB_Time_1.4.1.9_V2
 - Baseline_D2D_VB_T-Z_1.4.1.6
 - D2D_VB_XvsZ_1.4.1.7
 - D2D_VB_Xsect_1.4.1.4
 - Baseline_D2D_VB_Sound_1.4.1.8_V2
 - ECMWF Medium Range_DCS3377-OB8.1
- TO10 Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- Section 3 of the AWIPS D-2D User's Manual Build 8.1
 - Release OB8.3 of the Weather Event Simulator (WES)
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

This test case demonstrates the capability of CAVE to display a representative sample of plan view, time series, time-height, variable versus height, cross section and sounding model products from available numerical models. The capability to recall radar products through the Volume Browser is introduced in TO10. A representative sample of products is demonstrated in the following test procedures.

3.1 Assumptions, Constraints and Preconditions

- TO10 software has been installed successfully
- CAVE, EDEX and pgAdmin III are running
- Data has been ingested
- The test for TO10 begins at step 42
 - Depending on the status of the ORPG prototyping in TO10 (TO11 delivery) some radar functionality from the volume browser may not be available.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan, Section 2.2.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases.

3.4 Test Outputs

The images and data will be displayed in CAVE.

4.0 TEST SCENARIO

| Step | Action | Result | Pass/Fail |
|-------------------|--|---|--------------------|
| Start of TO8 Test | | | |
| Plan View | | | |
| 1. | In CAVE, click 'Volume' -> 'Browser...' | The Volume Browser opens. | |
| 2. | In the Volume Browser select 'Plan view' from the pull-down menu if not already selected. | The options within the Volume Browser change when 'Plan view' is selected. | |
| 3. | Using 'Time' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select 'Surface'. Then click the 'Load' button. | The gridded data appears displaying the contours of the gridded product. | |
| 4. | Verify the full model run is displayed by increasing the frame count to 64 and looping the gridded data. | The data loops chronologically through the model run. | |
| 5. | Clear the CAVE display. | The display in CAVE clears. | |
| Cross Section | | | |
| 6. | From the Volume Browser 'Tools' menu, select 'Baselines'. | The Interactive Baselines appear. | |
| 7. | Choose a baseline that is to be used to make the cross section and edit the baseline accordingly (if desired). Record the line ID letter ____ | Line and/or vertex moves to desired location. | |
| 8. | From the Volume menu, select 'Browser' if the Volume Browser is not already open. | The Volume Browser window opens. | |
| 9. | In the Volume Browser select 'Cross-section' from the pull-down menu labeled 'Plan View'. | The options within the Volume Browser change. | |
| 10. | Using 'Time' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen baseline. Then click the 'Load' button. | The cross section appears displaying the contours of the gridded product. | DR #811 DR #866 |
| 11. | Verify the full model run is displayed by increasing the frame count to 64 and looping the gridded data. | The data loops chronologically through the model run. | |
| 12. | Stop the loop. | The loop stops. | |
| 13. | Zoom into the cross section. | The user is able to zoom into the cross section. | |
| 14. | Close the Cross Section tab. | The Cross Section tab closes. CAVE returns to the map within the 'Maps' tab with the baselines displayed. | |

| Step | Action | Result | Pass/Fail |
|----------------------------|---|--|-------------------------------|
| 15. | In the Volume Browser, using 'Space' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select 'All Lat' under the 'Lat' menu. Then click the 'Load' button. | The cross section appears displaying the contours of the gridded product. | |
| 16. | Verify the full model run is displayed by looping the gridded data. | The data loops chronologically through space. | |
| 17. | Close the Cross Section tab. Then clear the CAVE display. | The Cross Section tab closes. CAVE displays a blank map within the 'Map' tab. | |
| Time Height | | | |
| 18. | From the Volume Browser 'Tools' menu, select 'Points'. | The Interactive Points appear. | |
| 19. | Choose a point that is to be used to make the Time height plot. Edit the point if necessary. Record the point's ID letter: ____ | Point moves to desired location. | |
| 20. | In the Volume Browser, select 'Time height' from the pull-down menu. | The options within the Volume Browser change. | |
| 21. | In the Volume Browser, using 'left' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button. | The Time height product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the right and the latest valid time on the left. | DR #811 DR #866 |
| 22. | Close the Time Height tab. | The Time Height tab closes. CAVE returns to the map within the 'Map' tab with the Points displayed. | |
| 23. | In the Volume Browser, using 'right' and 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button. | The Time height product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the left and the latest valid time on the right. | DR #811 DR #866 DR #867 |
| 24. | Close the Time Height tab. Clear the display within CAVE. | The Time Height tab closes. CAVE displays a blank map within the 'Map' tab. | |
| Variable vs. Height | | | |
| 25. | On the CAVE toolbar select the Points button. | The Interactive Points appear. | |
| 26. | Choose a point that is to be used to make the variable versus height plot. Edit the point if necessary. Record the point's ID letter: ____ | Point moves to desired location. | DR #810 |

| Step | Action | Result | Pass/Fail |
|--------------------|---|--|--------------------|
| 27. | In the Volume Browser, select 'Var vs Hgt' from the pull-down menu. | The options within the Volume Browser change. | |
| 28. | In the Volume Browser, using 'Log 1050-150' (in the menu bar of the Volume Browser), select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select the chosen point. Then click the 'Load' button. | The Variable vs. Height product appears displaying a graph of the variable with respect to height. | DR #811 DR #866 |
| 29. | View all the frames (model forecast times) by using the arrow keys on the keyboard or toolbar. | The variable will display as a line increasing or decreasing with height. | |
| 30. | Close the Var vs Hgt tab. Clear the display within CAVE. | The Var vs Hgt tab closes. CAVE displays a blank map within the 'Map' tab. | |
| Sounding | | | |
| 31. | On the CAVE toolbar select the Points button. | The Interactive Points appear. | |
| 32. | Choose a point that is to be used to make the sounding plot. Edit the point if necessary. Record the point's ID letter: ____ | Point moves to desired location. | |
| 33. | In the Volume Browser, select 'Sounding' from the pull-down menu. | The options within the Volume Browser change. | |
| 34. | In the Volume Browser, select an available grid product under the 'Sources' section. Select 'Sounding' in the 'Fields' section under the 'Thermo' dropdown menu. Under the 'Planes' section, select the chosen point. Then click the 'Load' button. | The Sounding product appears displaying a Skew-T for the selected point. | DR #866 |
| 35. | View all the frames (model forecast times) by using the arrow keys on the keyboard or toolbar. | Each Sounding displays. | DR #826 |
| 36. | Close the Skew-T tab. Clear the display within CAVE. | The Skew-T tab closes. CAVE displays a blank map within the 'Map' tab. | |
| Time Series | | | |
| 37. | On the CAVE toolbar select the Points button. | The Interactive Points appear. | |
| 38. | Choose a point that is to be used to make the Time height plot. Edit the point if necessary. Record the point's ID letter: ____ | Point moves to desired location. | |
| 39. | In the Volume Browser, select 'Time series' from the pull-down menu. | The options within the Volume Browser change. | |
| 40. | In the Volume Browser, using the selected point, select an available grid product under the 'Sources' and 'Fields' sections. Under the 'Planes' section, select 'Surface' from the 'Misc' dropdown menu. Then click the 'Load' button. | The Time series product appears displaying the variable with respect to time. CAVE displays the data with the initialized model time (0HR) on the left and the latest valid time on the right. | DR #866 DR #867 |

| Step | Action | Result | Pass/Fail |
|-----------------------|---|--|-----------|
| 41. | Close the Time Series tab. Clear the display within CAVE. Close the Volume Browser. | The Time Series tab closes. CAVE displays a blank map within the 'Map' tab. The Volume Browser closes. | |
| End of TO8 Test | | | |
| Start of TO10 Test | | | |
| 42. | In CAVE, MB1 click 'Volume' -> 'Browser...'. . | The Volume Browser opens. | |
| Reflectivity | | | |
| 43. | In the Volume Browser, select the following: Sources: Radar Fields: Reflectivity Planes: 0.5 km AGL | The 0.5 km AGL Reflectivity data displays in the main pane. | |
| 44. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 45. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Radial Velocity | | | |
| 46. | In the Volume Browser, select the following: Sources: Radar Fields: Radial Velocity Planes: 0.5 km AGL | The 0.5 km AGL Radial Velocity data displays in the main pane. | |
| 47. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 48. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Tilt Angle | | | |
| 49. | In the Volume Browser, select the following: Sources: NAM 40 Fields: Tilt Angle Planes: 0.5 deg | The 0.5 deg NAM Tilt Angle data displays in the main pane. | |
| 50. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 51. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Col. Max Reflectivity | | | |
| 52. | In the Volume Browser, select the following: Sources: Radar Fields: Col Max Refl Planes: Layer | The Layer Col Max Reflectivity data displays in the main pane. | |
| 53. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 54. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |

| Step | Action | Result | Pass/Fail |
|--------------------|---|---|-----------|
| Spectrum Width | | | |
| 55. | In the Volume Browser, select the following: Sources: Radar Fields: Spectrum Width Planes:0.5 km AGL | The 0.5 km AGL Spectrum Width data displays in the main pane. | |
| 56. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 57. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Diff. Reflectivity | | | |
| 58. | In the Volume Browser, select the following: Sources: Radar Fields: Diff Refl Planes:0.5 km AGL | The 0.5 km AGL Diff. Reflectivity data displays in the main pane. | |
| 59. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 60. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Corr. Coefficient | | | |
| 61. | In the Volume Browser, select the following: Sources: Radar Fields: Corr Coeff Planes: 0.5 km AGL | The 0.5 km AGL Corr. Coefficient data displays in the main pane. | |
| 62. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 63. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Spec. Diff. Phase | | | |
| 64. | In the Volume Browser, select the following: Sources: Radar Fields: Spec Diff Phase Planes: 0.5 km AGL | The 0.5 km AGL Spec. Diff. Phase data displays in the main pane. | |
| 65. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 66. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Hydrometeor Class | | | |
| 67. | In the Volume Browser, select the following: Sources: Radar Fields: Hydrometeor Class Planes: 0.5 km AGL | The 0.5 km AGL Hydrometeor Class data displays in the main pane. | |
| 68. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 69. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |

| Step | Action | Result | Pass/Fail |
|---------------------------|---|---|-----------|
| Feature Strength | | | |
| 70. | In the Volume Browser, select the following: Sources: DMD Fields: Feature Strength Planes: Layer | The Layer DMD Feature Strength data displays in the main pane. | |
| 71. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 72. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Feature Diameter | | | |
| 73. | In the Volume Browser, select the following: Sources: DMD Fields: Feature Diameter Planes: Layer | The Layer DMD Feature Diameter data displays in the main pane. | |
| 74. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 75. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Shear Magnitude | | | |
| 76. | In the Volume Browser, select the following: Sources: NAM40 Fields: Shear Mag Planes: 850mb | The NAM40 850mb Shear Magnitude data displays in the main pane. | |
| 77. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 78. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Gate to Gate Shear | | | |
| 79. | In the Volume Browser, select the following: Sources: DMD Fields: Gate2Gate Shr Planes: Lo Layer | The Lo Layer DMD Gate to Gate Shear data displays in the main pane. | |
| 80. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 81. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| Feature Motion | | | |
| 82. | In the Volume Browser, select the following: Sources: NAM Bufr Fields: Feat Mot Planes: Surface | The NAM Bufr Surface Feature Motion data displays in the main pane. | |
| 83. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 84. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |

| Step | Action | Result | Pass/Fail |
|------------------|---|--|-----------|
| Divergence | | | |
| 85. | In the Volume Browser, select the following: Sources: NAM40 Fields: Divergence Planes: 850mb | The NAM40 850mb Divergence data displays in the main pane. | |
| 86. | MB1 click the 'Clear' button on the CAVE toolbar. | The main display clears. | |
| 87. | In the Volume Browser select 'Edit', 'Clear all'. | The prior Volume Browser selections are cleared. | |
| End of TO10 Test | | | |

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

| Number | Description | Test Step(s) |
|--------------------|---|---------------------|
| CAVE_TO8_002 | CAVE shall contain a Volume Browser with the look and feel, and functionality of the current AWIPS 1 Volume Browser | ALL |
| CAVE_TO8_002.10 | The Volume Browser shall allow the user to select items displayed within the Volume Browser | 4 |
| CAVE_TO8_002.12 | The Volume Browser shall allow the user to display Baselines in CAVE using MB1 | 7 |
| CAVE_TO8_002.13 | The Volume Browser shall allow the user to display Points in CAVE using MB1 | 19 |
| CAVE_TO8_002.15 | The Volume Browser shall allow the user to select settings | 3,10,21,28,34,40 |
| CAVE_TO8_002.15.1 | The Volume Browser shall allow the user to select the Plan view option using MB1 | 3 |
| CAVE_TO8_002.15.2 | The Volume Browser shall allow the user to select the Cross Section option using MB1 | 10 |
| CAVE_TO8_002.15.3 | The Volume Browser shall allow the user to select the Time height option using MB1 | 21 |
| CAVE_TO8_002.15.4 | The Volume Browser shall allow the user to select the Var vs Hgt option using MB1 | 28 |
| CAVE_TO8_002.15.5 | The Volume Browser shall allow the user to select the Sounding option using MB1 | 34 |
| CAVE_TO8_002.15.6 | The Volume Browser shall allow the user to select the Time series option using MB1 | 40 |
| CAVE_TO8_002.16 | The Volume Browser shall allow the user to display data within the Volume Browser | 4,11,22,24,29,35,41 |
| CAVE_TO8_002.16.1 | The Volume Browser shall display data in the Plan View setting with reference to Time | 4 |
| CAVE_TO8_002.16.3 | The Volume Browser shall display data in the Cross Section setting with reference to Time | 11 |
| CAVE_TO8_002.16.4 | The Volume Browser shall display data in the Cross Section setting with reference to Space | 16 |
| CAVE_TO8_002.16.6 | The Volume Browser shall display data in the Time Height setting | 22,24 |
| CAVE_TO8_002.16.8 | The Volume Browser shall display Time Series data | 41 |
| CAVE_TO8_002.16.10 | The Volume Browser shall display Sounding data | 35 |
| CAVE_TO8_002.16.11 | The Volume Browser shall display Variable vs Height data | 29 |
| CAVE_TO8_002.17 | The Volume Browser shall allow the user to display data in CAVE | 4,11,22,24,29,35,41 |

| Number | Description | Test Step(s) |
|-------------------|---|---------------------|
| CAVE_TO8_002.17.1 | CAVE shall display Plan View data with reference to Time as requested through the Volume Browser | 4 |
| CAVE_TO8_002.17.3 | CAVE shall display data in Cross Sections with reference to Time as requested through the Volume Browser | 11 |
| CAVE_TO8_002.17.4 | CAVE shall display data in Cross Sections with reference to Space as requested through the Volume Browser | 16 |
| CAVE_TO8_002.17.5 | CAVE shall display Time Height data chronologically from right to left as requested through the Volume Browser | 22 |
| CAVE_TO8_002.17.6 | CAVE shall display Time Height data chronologically from left to right as requested through the Volume Browser | 24 |
| CAVE_TO8_002.17.7 | CAVE shall display Time Series data as requested through the Volume Browser | 41 |
| CAVE_TO8_002.17.8 | CAVE shall display Sounding data as requested through the Volume Browser | 35 |
| CAVE_TO8_002.17.9 | CAVE shall display Variable vs. Height data as requested through the Volume Browser | 29 |
| CAVE_TO8_002.23 | The Volume Browser window shall have the capability to remain open after the selected products in the Product Selection List are loaded | 4,11,22,24,29,35,41 |
| CAVE_TO8_006 | CAVE shall provide the capability to display cross-sections | 11 |
| CAVE_TO8_006.1 | Cross-sections shall be accessible through the volume browser, Plan View default tab | 10 |
| CAVE_TO8_006.2 | Cross-section shall allow the user to view gridded data as vertical slices along specific baselines | 11 |
| CAVE_TO8_006.6 | Cross-sections shall display gridded model data | 11 |
| CAVE_TO8_006.7 | The user shall be able to view a time-height cross section of a full run of gridded model data for a specific location | 22 |
| CAVE_TO8_006.7.1 | Generation of Time-height cross-section displays shall be available through the Points submenu | 22 |
| CAVE_TO8_006.8 | The user shall be able to zoom into the cross section | 14 |