

Test Case Weather Forecast Office (WFO)

Generated Products

**for the
AWIPS
Contract
DG133W-05-CQ-1067**

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

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Submitted By:

Test Engineer

Date

Approved By:

Program Manager

Date

Mission Assurance Quality

Date

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Revision History

Revision	Date	Affected Pages	Explanation of Change
1.0	20 June 2008	ALL	Initial Draft
2.0	8 August 2008	7-10	Redlines per PDT
3.0	4 September 2008	ALL	Redlines per DT

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Table of Contents

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.....	7
3.4.1	GFE GUIs Tested.....	7
4.0	TEST SCENARIO	8
5.0	REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM).....	13

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

1.0 SCOPE

See Software Test Plan.

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None

2.2 Reference Documents

- Section 3.1.3 of the AWIPS D-2D User's Manual Build 8.1
- Software Test Plan for the Advanced Weather Information Processing System Project, Contract #DG133W-05-CQ-1067, August 2008
- The Silver Spring NWS AWIPS 1 test bed application
- Release OB8.1 and OB8.2 of the Weather Event Simulator (WES)
- Rational RequisitePro

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

3.0 TEST CASE DESCRIPTION

This test case lists WFO products that are ready to be demonstrated during TO9. Appendix C of the Software Test Plan (STP) contains the spreadsheet listing the NWS products that will be demonstrated during TO9 testing. The remainder of the NWS products not tested during TO9 will be tested in future Task Orders.

3.1 Assumptions, Constraints and Preconditions

- TO9 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. (Refer to steps 1-2 in test case Smart Tools_Procedures.)
- Canned text data has been saved within the Text Editor.
- 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 Software Test Plan.

3.3 Test Inputs

Section 4.0 below contains the test procedures for this test case. Sections 2.2 – 2.9 of the Software Test Plan contain general test inputs applicable to all TO9 test cases.

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.

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

- Save Forecast
- Product Generation Script

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

4.0 TEST SCENARIO

Step	Action	Result	Pass/Fail
GFE Products			
Td Product			
1.	In the GFE Grid Manager, select a Td grid.	The Td grid displays in the spatial editor.	
2.	Edit the Td grid using the Pencil Tool or Draw Edit Area Tool.	The grid is modified (m). The grid block in the Grid Manager becomes locked as indicated by the green block color.	
3.	MB1 click the 'Save Forecast' button in the tool bar.	The Save Forecast dialog appears.	
4.	Select the Td product and MB1 click 'Save Forecast'.	The forecast is saved. The green block returns to gray.	
5.	MB1 click 'Products' -> 'Scripts...'	The Product Generation Scripts dialog appears.	
6.	MB1 click 'Send Grids to NDFD...'. Then MB1 click the 'Run/Dismiss' button.	The grids are sent to NDFD, as indicated in the status bar.	
7.	From a Web Browser, verify the updated grids were sent to NDFD by inspecting the product for the modifications made to the grid.	The grids were sent to NDFD and modifications were verified.	
Wind Gust Product			
8.	Repeat steps 1 – 7 for the WindGust product.	The grids are sent to NDFD, as indicated in the status bar.	
Heat Index Product			
9.	Repeat steps 1 – 7 for the HeatIndex product.	The grids are sent to NDFD, as indicated in the status bar.	
Wind Chill Product			
10.	Repeat steps 1 – 7 for the WindChill product.	The grids are sent to NDFD, as indicated in the status bar.	
12-Hour Probability of Precipitation Product			
11.	Repeat steps 1 – 7 for the PoP product.	The grids are sent to NDFD, as indicated in the status bar.	
Maximum Temperature Product			
12.	Repeat steps 1 – 7 for the MaxT product.	The grids are sent to NDFD, as indicated in the status bar.	
Minimum Temperature Product			
13.	Repeat steps 1 – 7 for the MinT product.	The grids are sent to NDFD, as indicated in the status bar.	
Relative Humidity Product			
14.	Repeat steps 1 – 7 for the RH product.	The grids are sent to NDFD, as indicated in the status bar.	
Sky Cover Product			
15.	Repeat steps 1 – 7 for the Sky product.	The grids are sent to NDFD, as indicated in the status bar.	
Temperature Product			
16.	Repeat steps 1 – 7 for the T product.	The grids are sent to NDFD, as indicated in the status bar.	

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.

Step	Action	Result	Pass/Fail
GFE Products			
Td Product			
Wind Speed and Direction Product			
17	Repeat steps 1 – 7 for the Wind product.	The grids are sent to NDFD, as indicated in the status bar.	
Weather Product			
18	Repeat steps 1 – 7 for the Wx product.	The grids are sent to NDFD, as indicated in the status bar.	
Text Products			
ICE – St. Lawrence Freeze Up Outlook (Buffalo) Product			
19	Under the CAVE menu, MB1 click on ‘New’ and select ‘Text Workstation’.	A ‘Text Workstation’ control window and ‘Text 1’ window open.	
20	Select the AFOS Browser button in the Text 1 window.	The Text 1 Browser window opens.	
21	In the Text 1 Browser window, select: Origin: East Class: Marine	The selections in the Node section change accordingly.	
22	In the Text 1 AFOS Browser window, select the ‘BUF’ Node and ‘ICE’ Ctgy.	The selected Node and Ctgy become highlighted. Selections appear in the Designator and Display sections. The Node-Ctgy combination appears in the AFOS Cmd: command line in the Text 1 window and ‘ALL:’ appears in the DISPLAY section.	
23	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
24	MB1 click ‘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.	
25	MB1 click the ‘Enter Editor’ button.	The Header Block window appears.	
26	Modify the items in the Header Block if necessary. Then MB1 click the ‘Enter’ button.	The ICEBUF product is put into edit mode.	
27	Modify the text product accordingly. Then MB1 click the ‘Save’ button, followed by the ‘Cancel’ button. In the Confirm Cancel window, MB1 click ‘Yes’.	The changes are saved. A Confirm Cancel window opens. A Confirm Cancel window closes. The text product exits out of the edit mode.	
28	MB1 click the ‘Clear’ button.	The text product is removed from the text window.	
29	Recall the BUFICEFBO product.	The modified/saved BUFICEFBO product displays.	
30	MB1 click the ‘Clear’ button.	The text product is removed from the text window.	
Earthquake Reports Product			
31	In the Text 1 Browser window, select: Origin: Central Class: Table/Summaries	The selections in the Node section change accordingly.	
32	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘EQR’ Ctgy.	The OMAEQRLBF product was returned, modified, saved, and recalled.	

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Step	Action	Result	Pass/Fail
GFE Products			
Td Product			
National Fire Danger Rating System Fire Weather Observations Product			
33	In the Text 1 Browser window, select: Origin: Central Class: Fire Wx Air Poll.	The selections in the Node section change accordingly.	
34	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘FWO’ Ctgry.	The OMAFWOOMA product was returned, modified, saved, and recalled.	
Rangeland Fire Danger Product			
35	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘RFD’ Ctgry.	The OMARFDOAX product was returned, modified, saved, and recalled.	
National Fire Danger Rating System Forecast Receipt Verification Product			
36	In the Text 1 Browser window, select: Origin: West Class: Fire Wx Air Poll.	The selections in the Node section change accordingly.	
37	Repeat steps 22 – 30 for the ‘NMC’ Node and the ‘FWN’ Ctgry.	The NMCFWNABQ product was returned, modified, saved, and recalled.	
Smoke Management Forecast Product			
38	Repeat steps 22 – 30 for the ‘DEN’ Node and the ‘SMF’ Ctgry.	The DENSMFGJT product was returned, modified, saved, and recalled.	
Hazardous Weather Outlook Product			
39	In the Text 1 Browser window, select: Origin: Central Class: Public	The selections in the Node section change accordingly.	
40	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘HWO’ Ctgry.	The OMAHWOAX product was returned, modified, saved, and recalled.	
Recreation Report Product			
41	Repeat steps 22 – 30 for the ‘BIS’ Node and the ‘REC’ Ctgry.	The BISRECBIS product was returned, modified, saved, and recalled.	
Regional Weather Summary Product			
42	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘RWS’ Ctgry.	The OMARWSOAX product was returned, modified, saved, and recalled.	
Area Forecast Discussion Product			
43	Repeat steps 22 – 30 for the ‘OMA’ Node and the ‘AFD’ Ctgry.	The OMAAFDOAX product was returned, modified, saved, and recalled.	
Post Tropical Cyclone Reports Product			
44	In the Text 1 Browser window, select: Origin: West Class: Public	The selections in the Node section change accordingly.	
45	Repeat steps 22 – 30 for the ‘GUM’ Node and the ‘PSH’ Ctgry.	The GUMPSHGUM product was returned, modified, saved, and recalled.	
Satellite Interpretation Message Product			
46	Repeat steps 22 – 30 for the ‘GUM’ Node and the ‘SIM’ Ctgry.	The GUMSIMGUM product was returned, modified, saved, and recalled.	

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Step	Action	Result	Pass/Fail
GFE Products			
Td Product			
Tropical Cyclone Public Advisories Product			
47	In the Text 1 Browser window, select: Origin: International Class: Hurricane/Tropical	The selections in the Node section change accordingly.	
48	Repeat steps 22 – 30 for the ‘WHX’ Node and the ‘TCP’ Ctgy.	The WHXTCPWHX product was returned, modified, saved, and recalled.	
ADR Administrative Product			
49	In the Text 1 Browser window, select: Origin: Central Class: Administrative	The selections in the Node section change accordingly.	
50	Repeat steps 22 – 30 for the ‘CHI’ Node and the ‘ADR’ Ctgy.	The CHIADRILX product was returned, modified, saved, and recalled.	
ADM Administrative Product			
51	Repeat steps 22 – 30 for the ‘MKC’ Node and the ‘ADM’ Ctgy.	The MKCADMKRF product was returned, modified, saved, and recalled.	
ADA Administrative Product			
52	Repeat steps 22 – 30 for the ‘OKC’ Node and the ‘ADA’ Ctgy.	The OKCADAOUN product was returned, modified, saved, and recalled.	
Agricultural Product			
53	In the Text 1 Browser window, select: Origin: West Class: Hydrology	The selections in the Node section change accordingly.	
54	Repeat steps 22 – 30 for the ‘HFO’ Node and the ‘AGF’ Ctgy.	The HFOAGFHFO product was returned, modified, saved, and recalled.	
Incident Meteorologist Status Report Product			
55	In the Text 1 Browser window, select: Origin: West Class: Fire Wx Air Poll.	The selections in the Node section change accordingly.	
56	Repeat steps 22 – 30 for the ‘BOI’ Node and the ‘FWA’ Ctgy.	The BOIFWABOI product was returned, modified, saved, and recalled.	
TCSCP – Dvorak Product			
57	In the Text 1 Browser window, select: Origin: West Class: Hurricane/Tropical	The selections in the Node section change accordingly.	
58	Repeat steps 22 – 30 for the ‘HFO’ Node and the ‘TCS’ Ctgy.	The HFOTCSHFO product was returned, modified, saved, and recalled.	
Aviation Products			
AWW Product			
59	In the Text 1 Browser window, select: Origin: Central Class: Aviation	The selections in the Node section change accordingly.	

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Step	Action	Result	Pass/Fail
GFE Products			
Td Product			
60	Repeat steps 22 – 30 for the ‘OKC’ Node and the ‘AWW’ Ctgy.	The OKCAWWOKC product was returned, modified, saved, and recalled.	
VFT Product			
61	In the Text 1 Browser window, select: Origin: West Class: Aviation	The selections in the Node section change accordingly.	
62	Repeat steps 22 – 30 for the ‘GTF’ Node and the ‘VFT’ Ctgy.	The GTFVFTBYZ product was returned, modified, saved, and recalled.	
MIS Product			
63	In the Text 1 Browser window, select: Origin: Central Class: Miscellaneous	The selections in the Node section change accordingly.	
64	Repeat steps 22 – 30 for the ‘CHI’ Node and the ‘MIS’ Ctgy.	The CHIMISLOT product was returned, modified, saved, and recalled.	
CWA Product			
65	Close the Text Editor window.	The Text Editor window closes.	
66	In CAVE, MB1 click on ‘Maps’ -> ‘CWAs’ to display the CWA boundaries.	The CWA boundaries display in CAVE.	
67	MB1 click the ‘Clear’ button.	The CWA boundaries are removed from the CAVE display.	
	End of test.		

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR2119	The AWIPS GFESuite shall implement the GFE Text Products.	19-66
SYSR2936	The AWIPS System shall create the AWW product as produced by the Aviation Services AVNFPS Application.	60
SYSR2938	The AWIPS System shall create the CWA (@CWSU's) product as produced by the Aviation Services AVNFPS Application.	66
SYSR2939	The AWIPS System shall create the MIS (@CWSU's) product as produced by the Aviation Services AVNFPS Application.	64
SYSR2940	The AWIPS System shall create the VFT product as produced by the Aviation Services AVNFPS Application.	62
SYSR2984	The AWIPS System shall create the ICE - St. Lawrence Freeze Up Outlook. Buffalo Only	29
SYSR3001	The AWIPS System shall create the Gridded Dew Point Temperature product as produced by the Public and Fire Weather Services GFE Application.	7
SYSR3002	The AWIPS System shall create the Gridded Wind Gust product as produced by the Public and Fire Weather Services GFE Application.	8
SYSR3003	The AWIPS System shall create the Gridded Apparent Temperature product as produced by the Public and Fire Weather Services GFE Application.	9, 10
SYSR3007	The AWIPS System shall create the Gridded 12-hour Probability of Precipitation product as produced by the Public and Fire Weather Services GFE Application.	11
SYSR3008	The AWIPS System shall create the Gridded Maximum Temperature product as produced by the Public and Fire Weather Services GFE Application.	12
SYSR3009	The AWIPS System shall create the Gridded Minimum Temperature product as produced by the Public and Fire Weather Services GFE Application.	13
SYSR3010	The AWIPS System shall create the Gridded Relative Humidity product as produced by the Public and Fire Weather Services GFE Application.	14
SYSR3011	The AWIPS System shall create the Gridded Sky Cover product as produced by the Public and Fire Weather Services GFE Application.	15
SYSR3012	The AWIPS System shall create the Gridded Temperature product as produced by the Public and Fire Weather Services GFE Application.	16

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.

Number	Description	Test Step(s)
SYSR3013	The AWIPS System shall create the Gridded Wind Speed and Direction product as produced by the Public and Fire Weather Services GFE Application.	17
SYSR3014	The AWIPS System shall create the Gridded Weather product as produced by the Public and Fire Weather Services GFE Application.	18
SYSR3042	The AWIPS System shall create the FWA - Incident Meteorologist Status Report product as produced by the Public and Fire Weather Services Text Editor Application.	59
SYSR3043	The AWIPS System shall create the EQR - Earthquake Reports product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	32
SYSR3045	The AWIPS System shall create the FWN - National Fire Danger Rating System Forecast Receipt Verification product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	37
SYSR3046	The AWIPS System shall create the FWO - National Fire Danger Rating System Fire Weather Observations product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	34
SYSR3047	The AWIPS System shall create the HWO - Hazardous Weather Outlook product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	40
SYSR3048	The AWIPS System shall create the REC - Recreation Report product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	41
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.	35
SYSR3050	The AWIPS System shall create the RWS - Weather Summary product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	42
SYSR3051	The AWIPS System shall create the SMF - Smoke Management Forecast product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	38
SYSR3052	The AWIPS System shall create the ADR, ADM, and ADA Administrative Message product as produced by the Public and Fire Weather Services Text Workstation Editor Application.	50, 51, 52

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*

Number	Description	Test Step(s)
SYSR3053	The AWIPS System shall create the AFD - Area Forecast Discussion product as produced by the Public and Fire Weather Services Text Workstation Editor, Application.	43
SYSR3086	The AWIPS System shall create the AGF - Precipitation Forecast for specific areas of Hawaii product as produced by the Tropical Services Text Workstation Editor Application.	54
SYSR3087	The AWIPS System shall create the PSH - Post-Tropical Cyclone Reports product as produced by the Tropical Services Text Workstation Editor Application.	45
SYSR3088	The AWIPS System shall create the SIM - Satellite Interpretation Message, Only issued from WFOs Guam and Honolulu product as produced by the Tropical Services Text Workstation Editor Application.	46
SYSR3089	The AWIPS System shall create the TCP - Tropical Cyclone Public Advisories - Only issued from WFO Guam product as produced by the Tropical Services Text Workstation Editor Application.	48
SYSR3090	The AWIPS System shall create the TCSCP - Dvorak fixes for the Central Pacific product as produced by the Tropical Services Text Workstation Editor Application.	58

HARDCOPY UNCONTROLLED

*Contract DG133W-05-CQ-1067; Test Case Weather Forecast Office (WFO) Generated Products
Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.*