

# **Test Case AvnFPS Initial Configuration**

**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; AvnFPS Initial Configuration*

*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 AvnFPS Initial Configuration*

*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	27 June 2008	ALL	Initial Draft
2.0	8 August 2008	6, 8, 9	Redlines per PDT
3.0	4 September 2008	14	Redlines per DT

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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.....	6
4.0	TEST SCENARIO .....	7
5.0	REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM).....	15

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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 AvnFPS Initial Configuration*

*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**

- Legacy NWS Test Case: Baseline\_AvnFPS\_Initial Configuration\_OB8.1.
- 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.
- Rational RequisitePro.

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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**

Test case verifies the capability of adding new TAF(s), new forecaster and other configurations to AvnFPS without any errors.

#### **3.1 Assumptions, Constraints and Preconditions**

- TO9 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 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.

#### **3.4 Test Outputs**

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

- AvnFPS Menu
- AvnFPS Monitor
- AvnFPS Loader

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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
<b>Configuration GUIs</b>			
1.	From the CAVE menu bar, Mouse Button (MB) 1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Setup...'	The AvnFPS Setup window appears.	
2.	MB1 click the 'Text Editor' button. Verify the AvnFPS Text Editor window appears.	The AvnFPS Text Editor window appears.	
3.	Close the AvnFPS Text Editor window. Then MB1 click the 'Monitoring Rules' button. Verify the AvnFPS Monitoring Rules window appears.	The AvnFPS Text Editor window closes. The AvnFPS Monitoring Rules window appears.	
4.	Close the AvnFPS Monitoring Rules window. Then MB1 click the 'TAF Site Info' button. Verify the AvnFPS TAF Site Info Editor window appears.	The AvnFPS Monitoring Rules window closes. The AvnFPS TAF Site Info Editor window appears.	
5.	Close the AvnFPS TAF Site Info Editor window. Then MB1 click the 'TAF Products' button. Verify the AvnFPS TAF Products Configuration window appears.	The AvnFPS TAF Site Info Editor window closes. The AvnFPS TAF Products Configuration window appears.	
6.	Close the AvnFPS TAF Products Configuration window. Then MB1 click the 'Triggers' button. Verify the AvnFPS Trigger Editor window appears.	The AvnFPS TAF Products Configuration window closes. The AvnFPS Trigger Editor window appears.	
7.	Close the AvnFPS Trigger Editor window. Then close the AvnFPS Setup window.	The AvnFPS Trigger Editor and AvnFPS Setup windows close.	
8.	From the CAVE menu bar, MB1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...'	The AvnFPS Menu window appears.	
9.	Select a user, then MB1 click the 'TAFs' button.	The AvnFPS Monitor window opens.	
10.	Verify 'KBOS' is not present in the AvnFPS Monitor window. Then, from the AvnFPS Monitor window, MB1 click the 'Backup' button.	'KBOS' is not present in the AvnFPS Monitor window. The AvnFPS Backup window opens.	
11.	MB1 click an available product under the Select Product(s) section (other than the product already displayed). Then MB1 click 'OK'.	The sites within the TAF Monitor window are replaced by sites represented in the selected product.	
12.	Close the AvnFPS Backup window.	The AvnFPS Backup window closes.	

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration

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

Add New TAF(s)			
Step #	Action	Result	Pass/Fail
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 aviationStationConfig.xml file, adding 'KBOS' as a new TAF site. Then save the changes to the configuration file.	The new TAF site in the aviationStationConfig.xml file is saved.	
15.	Close the AvnFPS Monitor and AvnFPS Menu windows. Then repeat steps 8 – 9. Verify 'KBOS' was added to the AvnFPS Monitor window.	The AvnFPS Monitor window closes. The AvnFPS Menu window closes. The AvnFPS Menu window appears. The AvnFPS Monitor window opens. 'KBOS' appears in the AvnFPS Monitor window.	
16.	To make a default template for site entered above select Make button.	The corner of the status bar on the bottom of the screen is blinking indicating that the template file is created.	
17.	Edit the aviation [redacted] Config.xml file, editing the TAF template (for 06Z, 12Z, 18Z, or 00Z). (E.g., a 06Z template for XXXX is XXXX DD0600Z DD0606 =) Then save the changes to the configuration file.	The edited TAF template in the aviation [redacted] Config.xml file is saved.	
18.	Close the AvnFPS Monitor and AvnFPS Menu windows. Then repeat steps 8 – 9. Then MB1 click the 'TAF Editor' button in the AvnFPS Monitor window.	The AvnFPS Monitor and AvnFPS Menu windows close. The AvnFPS Menu and AvnFPS Monitor windows appear. The AvnFPS TAF Editor window opens.	
19.	In the AvnFPS TAF Editor window, MB1 click the 'Load' button.	The AvnFPS Loader window displays.	
20.	In the AvnFPS Loader window, select 'Valley_Tafs'. Verify all Sites are highlighted. Then set the Initialize from: section to 'Template'. With the Forecast Type set to 'Routine', MB1 click the 'OK' button.	The edited template for the Valley_Tafs displays in the TAF Editor window.	

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration

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
21.	To edit the TAF Product Definitions, edit the aviationTafSiteConfig.xml file by entering a new product name (e.g. Boston_Tafs (KBOS, KPVD, KBDL, KBAF, KORH)). Then save the changes to the configuration file.	The new product name in the aviationTafSiteConfig.xml file is saved.	
22.	Close all AvnFPS related windows. Then restart AvnFPS by repeating steps 8 – 9. Then MB1 click the ‘Load’ button. Verify the added product name appeared in the AvnFPS Loader window.	The AvnFPS Loader window opens. The added TAF product name is present in the AvnFPS Loader window.	
23.	Enter site ids KBFI on the Idents label text box. Then MB1 click the ‘Enter’ key.	The TAF site id entered displays in the Idents list.	
24.	Enter the parameter in the Work PIL text box as ‘SEWWRKTAF’	The PIL is entered.	
25.	MB1 click on the ‘Save’ button.	The file is saved.	
26.	MB1 click the ‘Verify’ button to check whether all necessary files exist.	The message ‘Verify succeeded’ appears on the status bar.	
27.	Close all AvnFPS related windows. Then restart AvnFPS by repeating steps 8 – 9.	The AvnFPS Menu and AvnFPS Monitor windows close. The AvnFPS Menu and AvnFPS Monitor windows appear.	
28.	Verify the ‘KBFI’ TAF site is present.	The AvnFPS Monitor window opens. Note the ‘KBFI’ TAF site is present.	
29.	To delete a site, edit the aviationStationConfig.xml file, deleting TAF site ‘KBOS’. Then save the changes to the configuration file.	The ‘KBOS’ TAF site is deleted and the aviationStationConfig.xml file is saved.	
30.	Close all AvnFPS related windows. Then repeat steps 8 – 9.	The AvnFPS Menu and AvnFPS Monitor windows close. The AvnFPS Menu and AvnFPS Monitor windows appear.	
31.	Verify the ‘KBOS’ TAF site is not present in the AvnFPS Monitor window.	The ‘KBOS’ TAF site is not present in the AvnFPS Monitor window.	

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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
32.	In the AvnFPS Monitor window, MB1 click on 'TAF Editor'. MB1 click the 'Load' button.	The AvnFPS TAF Editor dialog opens. The AvnFPS Loader window displays.	
33.	In the AvnFPS Loader window, verify the 'Boston_Tafs' product is present.	The Boston_Tafs product is present.	
34.	To delete a product, edit the aviationTafSiteConfig.xml file by deleting the product name (Boston_Tafs). Then save the changes to the configuration file.	The product name is deleted and the aviationTafSiteConfig.xml file is saved.	
35.	Close all AvnFPS related windows. Then repeat steps 8 – 9. In the AvnFPS Monitor window, MB1 click on 'TAF Editor'. MB1 click the 'Load' button. Then verify the 'Boston_Tafs' product is not present.	The AvnFPS Menu and AvnFPS Monitor windows close. The AvnFPS Menu and AvnFPS Monitor windows appear. The AvnFPS TAF Editor dialog opens. The AvnFPS Loader window displays. The Boston_Tafs product is not present.	
36.	To mark a product as the default, select the product on the Products list and MB1 click the 'Default' button.	This designates the selected product as a default product.	
37.	Close the terminal window and all AvnFPS related windows.	The terminal window and all AvnFPS related windows close.	
<b>Edit &amp; Add New TWEB Route Info</b>			
38.	Edit TWEB Route information, from the AvnFPS Setup GUI, select TWEB Route Info button.	An empty TWEB Route Info Editor window displays.	
39.	To add TWEB route data, fill in the following fields:  Route text box = 368 WMO = FRUS41 KBFI AFOS = SEWTWB368 METARS = KBFI,KBLLI,KSEA (no space in between each id entered) TAFS = KBFI,KBLLI,KSEA (no space in between each id entered)	Route, WMO, AFOS, METARS, and TAFS fields are filled in.	
40.	Click on Save button Note: Both values for METAR and TAFS are the same for each route listed in the product.	TWEB route data is saved and a message 'updated etc/twbs/xxx/info.cfg' is displayed on the bottom status bar. Note: xxx is the route id number.	

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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
41.	Select Make button in the Templates area to create TWEB template for the route id 368 entered in step 40.	Basic template file is created.	
42.	Repeat step 40 – 42 for route id number ‘357 (KBLI) and 361 (KSEA)’ with the correct site id in the WMO field and route id number in the AFOS field respectively.		
43.	Close the TWEB Route Info GUI.	Window closes.	
44.	Editing TWEB Product Definitions, from the AvnFPS Setup GUI, select TWEB Products button.	The AvnFPS TWEB Product Configuration GUI opens.	
45.	To add a product, highlight an existing product on the Products text box, enter a new product name and press ‘Enter’ key.	The product name entered appears on the Products box. An error message displays that the product cannot read product XXXX (XXXX is a site id). This is ok as it is being created.	
46.	Enter these Route IDs (368, 357, and 361) in the text window under the Idents label one at a time and press ‘Enter’ key for each route id entered.	The Route IDs entered are appeared on the Idents box.	
47.	Enter the parameter in the Work PIL text box as ‘SEWWRKTWB’	PIL ‘SEWWRKTWB’ is entered	
48.	Click Save button.	A new product definition file is saved.	
49.	Click Verify button to check whether all necessary files exist.	Message ‘Verify succeeded’ appears on the status bar.	
50.	To delete a route, select a route id entered from step 47 and press the Delete button.	The deleted route id is disappeared from the Idents list.	
51.	To delete a product, select product on the Products list and press the Delete button.	A confirmation dialog displays.	
52.	Click OK to delete the selected product.	The deleted product is disappeared from the product list.	
53.	Click Save button to update product definition file.	The product definition file is saved.	
54.	To mark a product as the default, select the product on the Products list and press the Default button.	This will designate the selected product as default product.	
55.	Close the AvnFPS TWEB Product Configuration window.	The AvnFPS TWEB Product Configuration window closes.	

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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
<b>Add New Forecaster</b>			
56.	From the CAVE menu bar, MB1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...'	The AvnFPS Menu window appears.	
57.	Verify there is no 'Test1' user listed.	The user 'Test1' is not present.	
58.	Open a terminal and navigate to the aviation configuration file (e.g., /cave/etc/aviation).	A terminal opens. The aviation configuration file is present.	
59.	Edit the aviationForecasterConfig.xml file, adding 'Test1' as a new forecaster. Then save the changes to the configuration file.	The new forecaster in the aviationForecasterConfig.xml file is saved.	
60.	Close the AvnFPS Menu window.	The AvnFPS Menu window closes.	
61.	Repeat step 56 and verify the added forecaster appeared in the AvnFPS Menu window.	The added forecaster is present in the AvnFPS Menu window.	
62.	Close the terminal window.	The terminal window closes.	
<b>Set the Monitoring Rules to activate the vis &amp; sky (grid) and llws fields</b>			
63.	From the AvnFPS Menu window, select a forecaster and MB1 click the 'TAFs' button. Note the coloring of the wind (wnd) boxes under the METAR section on the main display of the AvnFPS Monitor (most should be colored green and/or yellow).	The AvnFPS Monitor displays. The wind (wnd) boxes under the METAR section are colored green and/or yellow.	
64.	Open a terminal and navigate to the aviation configuration file (e.g., /cave/etc/aviation).	A terminal opens. The aviation configuration file is present.	
65.	Edit the 'MetarWind' section (e.g. 5deg/4kt) in the aviationMonitoringRules.xml file. Then save the changes to the configuration file.	The changes in the aviationMonitoringRules.xml file are saved.	
66.	Close all AvnFPS related windows, including the terminal containing the configuration file.	All AvnFPS related windows close.	
67.	From the CAVE menu bar, MB1 click 'CAVE' -> 'New' -> 'Aviation' -> 'AvnFPS Menu...'	The AvnFPS Menu window appears.	

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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
68.	Select a forecaster and MB1 click the 'TAFs' button. Note the change in the coloring of the wind (wnd) boxes under the METAR section on the main display of the AvnFPS Monitor (most should be colored purple depending on the current differences between the METAR and TAF).	The AvnFPS Monitor displays. The wind (wnd) boxes under the METAR section are colored differently (likely purple).	
69.	From the AvnFPS Monitor dialog, MB1 click 'Options' -> 'Setup...'. Then MB1 click on 'Monitoring Rules'. Select the 'grids' tab and select the 'FFDelta' button under Available Methods.	The AvnFPS Setup window appears. The AvnFPS Monitoring Criteria GUI appears. The FFDelta rule is selected.	
70.	Select the 'Add' button.	The FFDelta entry is added and appears in the middle section of the screen.	
71.	Select the 'VsbyCatDelta' button under the Available Methods.	VsbyCatDelta is selected.	
72.	MB1 click the 'Add' button.	The VsbyCatDelta entry is added and appears in the middle section of the screen.	
73.	Select the 'Save' button and close the Monitoring Criteria window.	The Monitoring Criteria window closes and returns to the AvnFPS Setup main GUI.	
74.	Under the AvnFPS Setup GUI, select 'TAF Site Info'.	The TAF Site Info Editor window displays.	
75.	Enter Site id (e.g. KBOS) and MB1 click the 'Update' button. Note: If step 73 has already been done, then exit the application (end of test).	Most of the text fields are filled in by default.	
76.	Enter the following text fields: Radar Cutoff = 0 Profiler Cutoff = 0 Radars = KBOX Profilers = OKOM6	Radar Cutoff, Profiler Cutoff, Radars and Profilers text fields are entered.	
77.	MB1 click the 'Save' button.	Site info is saved to: /awips/adapt/avnfps/3.4/etc/tafs/XXXX/info.cfg Note: XXXX is a site id.	
78.	In the TAF Site Info Editor window, MB1 click on the 'Close' button.	The TAF Site Info Editor window closes.	

HARDCOPY UNCONTROLLED

Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration

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
79.	From the AvnFPS Setup window, select 'File' -> 'Quit' under the AvnFPS Setup GUI.	The AvnFPS Setup window closes.	
80.	Close all remaining AvnFPS related windows.	All AvnFPS related windows close.	
81.	In order for the changes to reflect HAVE THE ENVIRONMENT TEAM RESTART THE AVNFPS SERVER.		
	End of test.		

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

*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)
SYSR2073.20	AvnFPS TAF Monitor Window's Observation/Guidance Status shall utilize or extend CAVE's Alerting Mechanism in order to effect change to the color of a displayed weather element based on rules and the contents of weather products, such as the current METAR observation and the current TAF, that are compared against those rules.	63-68
SYSR2073.22	CAVE's Alerting Mechanism shall display an alert for AvnFPS TAF Monitor Window's Observation/Guidance Status' METAR weather sub-element Wind if the current TAF and the current METAR contain discrepancies in wind speed, wind direction, and, if configured, runway cross- and head- wind components.	63-68
SYSR2073.41	AvnFPS TAF Monitor Window's Option pulldown's Setup selection shall provide the capability to configure forecaster preferences.	69
SYSR2073.133	AvnFPS shall provide Site Backup capability via the TAF Monitor's Backup Button.	11
SYSR2073.134	The Backup Button shall invoke the product selection dialog.	10
SYSR2073.157	The aviation plug-in shall provide the operator the capability to configure the names of the forecasters	59-61
SYSR2073.158	The aviation plug-in shall provide the operator the capability to configure the ICAO sites of interest to the locally configured site.	21-22

*HARDCOPY UNCONTROLLED*

*Contract DG133W-05-CQ-1067; Test Case AvnFPS Initial Configuration*

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