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Weather and Radar Processor (WARP) Operational Capabilities Test (OCT) Plan

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Christopher Malitsky

January 1996

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16. Abstract

This Operational Capabilities Test (OCT) Plan defines the test and evaluation processes which will be used to determine if a vendor's proposed system will meet Weather and Radar Processor (WARP) Stage 0 requirements. This plan identifies OCT test strategy, requirements, conduct, and evaluation. It also presents the test roles and responsibilities of FAA and vendor organizations involved in the OCT.

The WARP Stage 0 requirements tested during the OCT are included in this plan.

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EXECUTIVE SUMMARY

This Weather and Radar Processor (WARP) Operational Capabilities Test (OCT) Plan lays the foundation for pre-contract award testing of vendor proposed systems. This plan defines OCT test strategy, requirements, conduct, and evaluation. Requirements tested during the OCT will be exclusively Stage 0 requirements. The system proposed by the vendors will be Non-Developmental Item (NDI) systems. The OCT will be a part of the WARP technical evaluation of each vendor's WARP proposal.

1. INTRODUCTION.

1.1 PURPOSE.

The Weather and Radar Processor (WARP) Operational Capabilities Test (OCT) Plan describes the Test and Evaluation (T&E) processes which will be used to determine if a vendor's proposed system meets WARP Stage 0 requirements. This plan identifies and describes the OCT test strategy, test requirements, test conduct, and test evaluation. It also presents the test roles and responsibilities of the Federal Aviation Administration (FAA) and vendor organizations involved in the OCT.

System requirements that are subject to OCT verification are presented in a Verification Requirements Traceability Matrix (VRTM) which is further explained in appendix A.

1.2 OCT SCHEDULE/LOCATION.

The WARP OCT will be held at the offeror's site in accordance with the schedule outlined in Section L of the WARP Request for Proposal (RFP).

2. REFERENCES.

a. FAA-E-2898	Weather and Radar Processor System Specification.
b. DTFA01-94-R-41302	Weather and Radar Processor System Request for Proposal.

3. TEST PHILOSOPHY.

The WARP OCT will be conducted as part of the technical evaluation of each offeror's proposal in response to the WARP RFP. The intent of the OCT is to evaluate whether or not the offeror's system meets selected WARP Stage 0 requirements. These requirements are identified in the VRTM, appendix A, and are specified in the WARP System Specification, FAA-E-2898 and attachment J-5 to the WARP RFP. The OCT will be performed by the offeror's personnel in accordance with detailed test procedures developed by the offeror and the generic test procedures provided by the FAA (RFP, Section L, attachment L-2). The FAA will formally direct and witness the OCT and will perform the data reduction and analysis, using data and results collected at the OCT to determine if the proposed system meets the offeror's claimed capabilities and the requirements of the solicitation.

The FAA will require the offeror to use live data from the offeror's data sources for the test of selected WARP Stage 0 capabilities during the OCT. During OCT conduct, the offeror will be tasked to produce paper color hard copies of selected products. Verification of data sources and their associated products; i.e., Radar, Satellite, Alphanumeric and Graphic products will be made via product comparison using existing sources of weather data and associated products approved by the FAA. Product verification will determine if the offeror's products are presenting correct weather information. Products will undergo additional visual analyses to determine if associated product display characteristics, as described by the WARP Specification are also met.

The capability of the offeror's system to meet the selected WARP Stage 0 requirements will be systematically scored as part of the Technical Proposal Evaluation. The OCT is validating Stage 0 requirements assigned to the tests. Each step in the OCT procedures verifies one or more WARP Stage 0 requirements and each requirement verified will be evaluated on a "pass/fail" basis. A requirement receives a passing score if the FAA determines that the requirement was successfully verified by all tests assigned to the requirement. Section M of the WARP RFP provides additional details on the evaluation of each offeror's OCT and the relationship of the OCT to the evaluation of the offeror's Technical Proposal.

4. OCT TEST AND EVALUATION APPROACH.

Analysis, demonstration, test, and limited inspection will be used to evaluate how well the offeror proposed system capabilities meet the Stage 0 requirements specified in FAA-E-2898.

4.1 TEST APPROACH.

The OCT will address selected Stage 0 WARP requirements using offeror's data sources with the resultant products/data verified with the corresponding data from FAA sources. The OCT will verify 19 major WARP system functional areas as specified in the following paragraphs.

4.1.1 WSR-88D Radar Products.

The OCT will verify Stage 0 radar product requirements in sections 3.2.1.1.1.1.1 and 3.2.1.1.2.1.1.1 of the WARP specification by selecting WSR-88D radar products for times and sites to be specified at the time of the OCT by the FAA. The vendor shall be capable of displaying high resolution radar

mosaic products for the Area Control Facility (ACF) area of coverage as specified in appendix B. Verification will be done via a comparison analysis of vendor product outputs with the same WSR-88D products for the same times obtained by the FAA from approved sources.

4.1.2 Satellite Products.

The OCT will verify Stage 0 satellite product requirements in sections 3.2.1.1.1.1.2 and 3.2.1.1.2.1.1.2 of the WARP specification by selecting satellite products to be specified at the time of the OCT. The vendor shall be capable of displaying high resolution satellite image products for the Intermediate Area (IA) coverage as specified in appendix B. Verification will be done via a comparison analysis of vendor product outputs with the same satellite products for the same times obtained by the FAA from approved sources.

4.1.3 Lightning Products.

The OCT will verify Stage 0 lightning product requirements in sections 3.2.1.1.1.1.3 and 3.2.1.1.2.1.3.2 of the WARP specification by selecting lightning products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same lightning products for the same times obtained by the FAA from approved sources.

4.1.4 Received Alphanumeric Products.

The OCT will verify Stage 0 alphanumeric products requirements in sections 3.2.1.1.1.1.4 and 3.2.1.1.2.1.2 of the WARP specification by selecting alphanumeric products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same alphanumeric products for the same times obtained by the FAA from approved sources.

4.1.5 NWS Graphic Products.

The OCT will verify Stage 0 National Weather Service (NWS) graphic products requirements in sections 3.2.1.1.1.1.6 and 3.2.1.1.2.1.3.1 of the WARP specification by selecting NWS graphic products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same NWS graphic products for the same times obtained by the FAA from approved sources.

4.1.6 Watch/Warning/Advisory (W/W/A) Products.

The OCT will verify Stage 0 W/W/A products requirements in section 3.2.1.1.2.1.3.3 of the WARP specification by selecting W/W/A products to be specified at the time of the OCT. Verification of product outputs will be done via analysis of the W/W/A products generated by the offeror's proposed system and the associated alphanumeric products.

4.1.7 Plot Products.

The OCT will verify Stage 0 plot product requirements in section 3.2.1.1.2.1.3.4 of the WARP specification by selecting plot products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same plot products for the same times obtained by the FAA from approved sources.

4.1.8 Thermodynamic Products.

The OCT will verify Stage 0 thermodynamic products requirements in section 3.2.1.1.2.1.3.5 of the WARP specification by selecting thermodynamic products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same thermodynamic products for the same times obtained by the FAA from approved sources.

4.1.9 Contour Analysis Products.

The OCT will verify Stage 0 contour analysis products requirements in section 3.2.1.1.2.1.3.7 of the WARP specification by selecting contour analysis products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same contour products for the same times obtained by the FAA from approved sources.

4.1.10 Streamline Analysis Products.

The OCT will verify Stage 0 streamline analysis products requirements in section 3.2.1.1.2.1.3.8 of the WARP specification by selecting streamline analysis products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same streamline analysis products for the same times obtained by the FAA from approved sources.

4.1.11 Vertical Cross-section Analysis Products.

The OCT will verify Stage 0 vertical cross-section products requirements in section 3.2.1.1.2.1.3.9 of the WARP specification by selecting vertical cross-section analysis products to be specified at the time of the OCT. Verification will be done via a comparison analysis of vendor product outputs with the same vertical cross-section products for the same times obtained by the FAA from approved sources.

4.1.12 Alarm/Alert Capabilities.

The OCT will verify Stage 0 alarm/alert requirements in section 3.2.1.1.3 of the WARP specification by establishing alarms/alerts criteria at OCT time for the following: (1) product alarm/alert and (2) weather alarm/alert. Verification will be done via analysis of the alarm/alert messages generated and the products and conditions that caused the alarm/alert messages to be generated.

4.1.13 WARP Monitoring and Control Capabilities.

The OCT will verify Stage 0 monitoring and control requirements in section 3.2.1.1.5 of the WARP specification by exercising the offeror's proposed WARP system to perform system control operations and system housekeeping functions.

4.1.14 Computer-Human-Interface (CHI).

The OCT will verify Stage 0 CHI requirements in sections 3.2.1.1.2.2, 3.2.1.1.2.3, and 3.3.7.2 of the WARP specification by performing the CHI functions on a selected set of products to be specified at the time of the OCT. Verification will be done via demonstration of the required CHI capabilities, as well as an analysis of vendor CHI efficiency via measurement of the number of inputs required to display products and via analysis of the proposed system's windowing schema.

4.1.15 Retention.

The OCT will verify Stage 0 retention requirements in section 3.2.1.1.4.2 of the WARP specification by analyzing which products during the OCT are being retained and analyzing the mass storage capability of the offeror's proposed WARP Stage 0 system with respect to the total WARP retention requirements.

4.1.16 Archiving.

The OCT will verify Stage 0 archiving requirements in section 3.2.1.1.4.3 of the WARP specification by analysis to determine which products are archived during the OCT and to determine if sufficient storage media is present to meet archiving requirements.

4.1.17 Performance.

The OCT will verify Stage 0 system performance requirements in section 3.2.1.1.3.4 of the WARP specification by measuring system performance under system load conditions. System loading will be established by using product sequencing capability on the briefing terminals and by conducting radar and satellite animation on two meteorologist workstation product display terminals. Verification will be done using a stopwatch to measure response times.

4.1.18 Adaptive Operation Requirements.

The OCT will verify Stage 0 adaptation requirements in appendix D of the WARP specification by analyzing all of the proposed WARP Stage 0 system's defaults and evaluating the offeror's system adaptation to the area of coverage provided by the FAA at the time of the OCT.

4.1.19 System Characteristics.

The OCT will verify Stage 0 system characteristics requirements in sections 3.2.4 and 3.3.7.3 of the WARP specification by inspection of the offeror's proposed hardware configuration. The OCT will also verify that the system hardware presented by the offeror at OCT is the exact configuration that was described in the offeror's technical proposal.

4.2 EVALUATION METHODS.

4.2.1 Inspection.

Inspection will be used to evaluate the capabilities by visual examination of the item, reviewing descriptive documentation, and comparing the appropriate characteristics with predetermined or referenced standard to determine compliance with requirements, without use of special laboratory equipment or procedures.

4.2.2 Analysis.

Analysis is validation by technical/mathematical evaluation or simulation using mathematical representation (i.e., mathematical models, algorithms, equations), charts, graphs, circuit diagrams, data reduction/recording, and representative data to prove that specified requirements are met. Representative data may include data collected from previous or other equipment and system verification. The OCT will use products/data from FAA data sources (e.g., MWP I, NEXRAD PUP, etc.) to validate products/data received from the offeror's data source(s).

4.2.3 Demonstration.

Demonstration is an uninstrumented test, where evaluation of the capabilities will be determined from observation alone.

4.2.4 Test.

Test is validation, through systematic exercising of an item under all appropriate conditions, along with collection, analysis, and evaluation of quantitative data for predetermined performance characteristics. Acceptability is determined by the comparison of the data with pre-established quantitative requirements and occurrences.

5. VERIFICATION REQUIREMENTS.

All requirements to be evaluated during the OCT are contained in the VRTM, appendix A. Appendix A lists the set of WARP Stage 0 requirements by specification paragraph number, paragraph title, and how the requirement will have to be verified. The requirements have been chosen by the FAA to determine the technical capability of the proposed Commercial-Off-The-Shelf/ Non-Developmental Item (COTS/NDI) WARP Stage 0 system to provide the WARP Stage 0 requirements specified in FAA-E-2898 as modified by Specification Addendum 1. The VRTM identifies those requirements that are modified or replaced by requirements presented by addendum 1.

6. ORGANIZATION ROLES AND RESPONSIBILITIES.

6.1 TEST PERSONNEL FUNCTIONS.

6.1.1 FAA Participation.

FAA participation in the OCT evaluations will include personnel from the FAA and selected support contractor organizations. These organizations support the FAA Project Office. The responsibility for source selection remains with the government.

a. Technical Evaluation Team (TET) Leader. The TET Leader is responsible for planning, scheduling, and managing the OCT. The TET Leader is responsible for ensuring that the test conduct follows the OCT Plan, the OCT Generic Procedures, and the offeror's detailed test procedures. The TET Leader approves the offeror's detailed test procedures prior to the start of the OCT, and shall have the authority to approve/disapprove offeror's redlines to FAA-approved procedures. If a problem is encountered during the test, the TET Leader has the authority to approve the course of action needed to correct the problem, to terminate portions of the test, or to reschedule portions of the test. At the end of each test case, the TET Leader, along with the offeror OCT director, shall sign the OCT data sheet associated with each test.

b. Technical Evaluation Team (TET). The WARP TET members are official FAA representatives that witness the test. They are responsible for ensuring that the test procedures are being followed by the offeror test operator(s). TET members assist the TET Leader by recording test activities and observations on OCT certification sheets. The TET shall also collect from the vendor all data/products needed for later analysis. The TET is also responsible for performing data reduction and analysis after OCT conduct to determine the pass/fail verification of assigned system requirements.

6.1.2 Offeror Participation.

The offeror shall be responsible for conducting the OCT and shall provide the necessary personnel, facilities, and procedures as described in this document and the RFP to accomplish the requirements of the OCT.

a. Offeror OCT Director. The OCT Director responsibilities include: conducting the OCT Readiness Review, coordinating all test activities, and performing all OCT tests, in accordance with established test plans and procedures. If a problem is encountered during the test, the OCT director, with concurrence from the TET Leader, determines the course of action needed to resolve the problem. At the end of each test case, the OCT director, along with the TET Leader, shall sign the OCT data sheet associated with each test.

b. Offeror Test Operator(s). Test operators are responsible for manning the test positions during a particular test. They execute the test by following the test procedures and recording all test results.

7. OCT CONDUCT AND GROUND RULES.

The OCT shall be conducted in accordance with the following guidelines:

a. The OCT shall be limited to 3 business days. A maximum of 10 hours of tests shall be conducted per day for a total of 30 hours. OCT conduct will not exceed 30 hours.

b. Each offeror shall be prepared to perform all of the tests identified in both this plan and the generic test procedures. However, the FAA may choose to perform only a portion of the tests identified at each OCT. The specific tests that will be performed at the OCT will be identified by the FAA prior to the start of the OCT. Additionally, at the discretion of the TET Leader, the FAA may waive the conduct of any test and the evaluation of associated system requirements if appropriate weather conditions that are required by the test are not present. The FAA will ensure that all offerors have performed identical OCT procedures and will take the appropriate measures to ensure that only those OCT steps that have been required of all offerors will be evaluated.

c. Prior to the start of the OCT, an OCT Readiness Review shall be conducted(1) to allow the vendor to present proposed redlined changes to the previously FAA-approved detailed OCT procedures, (2) have the vendors present the schedule of demonstrations for the OCT, (3) to allow the vendor to present any other items of importance related to the conduct of the OCT, and (4) to allow the FAA to identify specific tests that will be performed during the OCT. The OCT Readiness Review should take no longer than 4 hours and will not be included in the allocated 30 hours of test. OCT conduct will begin immediately after the OCT Readiness Review.

d. Appendix B provides the definition of the ACF area of interest, associated with the display of ACF mosaics, and the definition of the satellite Intermediate coverage area, which is associated with the display of high resolution satellite images.

e. It is not required that the database of the vendor's system shall be clear of any weather information prior to the start of the OCT, since the TET will evaluate only those products that are acquired by the offeror's proposed system as specified by the test procedures.

f. The TET Leader will have the authority for all OCT issues. All communications between the FAA and offeror during the OCT will be through the TET Leader.

g. FAA representatives will not operate the offeror's system or enter into discussion with the offeror personnel during breaks.

h. No contact between the TET and offeror personnel, shall be permitted before or after the OCT.

i. During the OCT, only OCT material shall be presented. Other briefings or discussions shall not be permitted.

j. The offeror shall test only the applicable WARP Stage 0 requirements LISTED in the VRTM, or a subset of these requirements as directed by the FAA.

k. The OCT TET Leader will allow each vendor a maximum of two retries of any OCT test step. In the event of a complete system failure caused by factors outside the offeror's control (e.g., power failure), the OCT shall be rescheduled at the direction/discretion of the TET Leader. Failures outside the control of the offeror shall not be considered in the scoring of the OCT.

l. The offeror may run the OCT in any order desired except for #15 (Retention) and #16 (Archiving). These tests shall be the last two tests of the OCT, since it is necessary for the proposed system to acquire, during the course of the OCT, the data/products that are needed to perform these tests.

m. The offeror will power up, initialize, and bring their proposed system to an operational state at the start of the OCT. The system shall remain in the operational state throughout the entire 3-day period allocated for the OCT, including the overnight time period of each test day.

8. OPERATING AND CONTROL DOCUMENTATION.

The documentation described in this section will be used to conduct and report the results of the OCT of the WARP system.

8.1 OPERATIONAL CAPABILITIES TEST PROCEDURES.

The offeror shall prepare detailed OCT procedures for submission to the FAA as part of the WARP Technical Proposal. These detailed procedures shall specify the step-by-step actions required to conduct the OCT. The procedures shall be in sufficient detail to include all test actions, sequence of

actions, and the proper responses to the actions. Test events shall be described in the order in which they are planned to occur, with dependency of any one event on another so indicated. Test responses/outputs shall be indicated. Additionally, the offeror shall map each test step of their detailed procedures to the corresponding test step(s) of the WARP OCT Generic Procedures (RFP, Section L, attachment L-2). The FAA will designate the actual products/data to be used/tested at the time of the OCT.

The offeror shall provide a description of the system/subsystems to be tested and include a description of the major functions of each subsystem in their detailed procedures. The offeror shall also provide a block diagram along with a functional description of each interface connected to their system. Interface descriptions shall include any facility interfaces, data interfaces, operator interface, and any interfaces required to validate WARP Stage 0 requirements during the OCT.

The Offeror's proposed detailed procedures will be reviewed by the FAA to determine if they are in compliance with FAA requirements as stated in this section.

Prior to start of the OCT at the offeror's facility, the offeror shall provide any required redline changes to their detailed procedures to the TET Leader at the OCT Readiness Review for evaluation. The TET Leader will determine acceptability of the redline changes and make the decision to proceed or not proceed with the OCT in accordance with the redlined OCT procedures. The FAA will assess all OCT redline changes to ensure that all offerors have performed identical OCT procedures and that only those procedures required of all offerors will be evaluated and scored.

8.2 OCT CERTIFICATION SHEET.

An OCT certification sheet (figure 1) will be used to document the observed events of test conduct for each required OCT procedure. This certification sheet will contain the procedure title/number, and the descriptions of notable test conduct events and observed variances of the test. The TET will complete the certification sheet pertaining to test conduct observations including relevant details about observed problems such as operator input error, software/hardware errors, or incorrect test procedure execution. The completed certification sheets will provide a chronological record of relevant events of the OCT conduct.

All OCT certification sheets will be signed at the time the procedure is executed by the FAA TET Leader and the offeror's OCT Director to indicate concurrence with the execution of the procedures. Signing the OCT certification sheets indicates that

WARP OCT Certification SHEET

OFFEROR: _____

TEST NUMBER AND TITLE: _____

COMPLETION DATE: _____ TIME: _____

TEST CONDUCT OBSERVATIONS:

PROCEDURE VARIANCE NOTED? ____ Y ____ N

VARIANCE:

COMMENTS:

FAA TET
LEADER: _____ DATE: _____

OFFEROR OCT
DIRECTOR: _____ DATE: _____

FIGURE 1. OCT CERTIFICATION SHEET

the person signing their name observed the execution of the test and does not imply that the test results were satisfactory. The original of the completed certification sheets along with a copy of the applicable procedure will be preserved by the FAA as permanent record of the OCT. A copy of the OCT certification sheets generated during the OCT of the offeror's system, properly authenticated by the TET Leader and Offeror's OCT Director, will be provided to the offeror upon request.

The FAA will treat the OCT certification sheets generated during each OCT as source selection sensitive. Members of the TET will not discuss the results on any OCT with any offeror, and will actively guard OCT information from disclosure, except for providing an offeror with the certification sheets from their OCT.

9. TEST SUPPORT REQUIREMENTS.

The offeror shall provide the necessary equipment (computer(s), terminal(s), modem(s), printer(s), etc.) to satisfactorily conduct all phases of the WARP OCT. The offeror's system used in the OCT must be in the configuration which the offeror has described for Stage 0 deployment in the technical proposal response to this solicitation.

10. TEST REPORT.

The FAA TET will issue an OCT report for each offeror's OCT. This report will be part of the overall Technical Proposal Evaluation. The OCT report will:

a. Summarize the results of the OCT and identify the environment in which the OCT was conducted.

b. Identify any variances from the approved WARP OCT Plan and Procedures and specify the reason for each variance.

c. Provide the pass/fail score of each WARP system requirement listed in appendix A. Identify capabilities or combinations of capabilities that were not sufficiently tested and explain the reasons.

d. Provide an overall evaluation of each tested capability as determined from the evaluation criteria prescribed in Section M of the RFP.

The WARP OCT Report will be used by the FAA in the technical proposal evaluation process. The WARP OCT Report will not be available to the offerors.

11. WARP OCT EVENTS.

a. Offeror receives the OCT Plan and the Generic Procedures documents with the RFP.

b. Offeror submits detailed procedures to the FAA with Technical Proposal.

c. FAA completes review cycle of offeror's detailed procedures and provides comments to offeror.

d. Offeror submits corrected detailed procedures.

e. FAA conducts an OCT Readiness Review at OCT site.

f. Conduct OCT.

g. FAA completes OCT evaluation and generates the WARP OCT Report.

12. ACRONYMS AND ABBREVIATIONS.

ACF	Area Control Facility
ATCSCC	Air Traffic Control System Command Center
CHI	Computer-Human-Interface
COTS/NDI	Commercial-Off-The-Shelf/ Non-Developmental Item
FAA	Federal Aviation Administration
IA	Intermediate Area
LRU	Line Replace Unit
METAR	Aviation Routine Weather Report
Max	Maximum
Min	Minimum
NMC	National Meteorological Center
NWS	National Weather Service
OCT	Operational Capabilities Test
RFP	Request For Proposal
RMS	Remote Monitoring System
SPECI	Special
T&E	Test & Evaluation
TET	Technical Evaluation Team
TRR	Test Readiness Review
VIP	Video Integrating Processor
VRTM	Verification Requirement Traceability Matrix
WARP	Weather and Radar Processor
WMO	World Meteorological Organization
WSR-88D	Weather Surveillance Radar 1988 Dopplar
W/W/A	Watch/Warning/Advisory

Appendix A

Verification Requirement Traceability Matrix (VRTM)

Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.	System requirements	N/A
3.1	Definition	N/A
3.1.1	ACF WARP System	N/A
3.1.2	ATCSCC WARP System	N/A
3.2	Characteristics	Title
3.2.1	Performance characteristics	Title
3.2.1.1	Operational state	L
3.2.1.1.1	Acquisition mode	L
3.2.1.1.1.1	Products	Title
3.2.1.1.1.1.1	Radar products	Title
3.2.1.1.1.1.1.1	ACF area[1]	A,D
3.2.1.1.1.1.1.1.1	Area of coverage[1]	A,D
3.2.1.1.1.1.1.2	National Radar Mosaic	A,D
3.2.1.1.1.1.2	Satellite products[1]	A,D
3.2.1.1.1.1.2.1	Areas of coverage[1]	A,D
3.2.1.1.1.1.3	Lightning products	A,D
3.2.1.1.1.1.3.1	Areas of coverage	A,D
3.2.1.1.1.1.4	Alphanumeric products	A,D
3.2.1.1.1.1.4.1	Areas of coverage	A,D
3.2.1.1.1.1.5	Gridded products	A,D
3.2.1.1.1.1.5.1	Areas of coverage	A,D
3.2.1.1.1.1.6	Graphic products	A,D
3.2.1.1.1.2	Sources	N/A

[1]Modified or superseded requirement for Stage 0.

N/A=Not applicable; NT= Not Tested; L=verified by a lower level requirement; A=analysis; D=demonstration; T=test; I=inspection

Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.1.3	Performance	A,T
3.2.1.1.2	Product generation/display mode	L
3.2.1.1.2.1	Products	Title
3.2.1.1.2.1.1	Imagery products	Title
3.2.1.1.2.1.1.1	Radar products	Title
3.2.1.1.2.1.1.1.1	ACF mosaics[1]	A,D
3.2.1.1.2.1.1.1.1.1	Mosaic update[1]	A,D
3.2.1.1.2.1.1.1.1.2	Multiple coverage[1]	A,D
3.2.1.1.2.1.1.1.1.3	Point product multiple coverage	N/A
3.2.1.1.2.1.1.1.1.4	Clutter suppression	A
3.2.1.1.2.1.1.1.1.5	Resolution	A,D
3.2.1.1.2.1.1.1.2	National mosaic	A,D
3.2.1.1.2.1.1.1.3	Display characteristics[1]	L
3.2.1.1.2.1.1.1.3(a)	DELETED	
3.2.1.1.2.1.1.1.3(b)	WSR-88D product resolution	A,D
3.2.1.1.2.1.1.1.3C	DELETED	
3.2.1.1.2.1.1.1.3(d)	ACF mosaic Projection	A,D
3.2.1.1.2.1.1.1.3(e)	National mosaic projection	A,D
3.2.1.1.2.1.1.1.3(f)	DELETED	
3.2.1.1.2.1.1.1.3(g)	WSR-88D product projection	A,D
3.2.1.1.2.1.1.1.3(h)	Display full areal extent	A,D
3.2.1.1.2.1.1.1.3(I)	Color assignment	A,D
3.2.1.1.2.1.1.1.3(j)	DELETED	
3.2.1.1.2.1.1.1.3(k)	National mosaic 6 VIP levels	A,D

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.1.1.1.3(l)	ACF mosaic 6 VIP levels	A,D
3.2.1.1.2.1.1.2	Satellite products	Title
3.2.1.1.2.1.1.2.1	Areas of coverage[1]	A,D
3.2.1.1.2.1.1.2.2	Display characteristics[1]	L
3.2.1.1.2.1.1.2.2(a)	Radiometric resolution	A,D
3.2.1.1.2.1.1.2.2(b)	Projections	A,D
3.2.1.1.2.1.1.2.2C	Product display	A,D
3.2.1.1.2.1.1.2.2(d)	Image enhancement	A,D
3.2.1.1.2.1.1.2.2(e)	User-specified enhancement	A,D
3.2.1.1.2.1.1.2.2(f)	Enhancement curve storage and retrieval	A,D
3.2.1.1.2.1.1.2.2(g)	Display updates	A,D
3.2.1.1.2.1.2	Alphanumeric products	Title
3.2.1.1.2.1.2.1	Display products[1]	A,D
3.2.1.1.2.1.2.2	Coverage area selection	A,D
3.2.1.1.2.1.2.3	Display Characteristics	L
3.2.1.1.2.1.2.3(a)	Requested product and associated corrections	A,D
3.2.1.1.2.1.2.3(b)	METAR and SPECI Products	NT
3.2.1.1.2.1.2.4	Manually generated alphanumeric products	D
3.2.1.1.2.1.3	Graphic products	Title
3.2.1.1.2.1.3.1	NWS graphic products	D
3.2.1.1.2.1.3.2	Lightning products	Title
3.2.1.1.2.1.3.2.1	National lightning product	A,D
3.2.1.1.2.1.3.2.2	Alaskan lightning product	NT
3.2.1.1.2.1.3.2.3	Display characteristics[1]	L

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.1.3.2.3(a)	Age of each stroke	A,D
3.2.1.1.2.1.3.2.3(b)	Polarity of each stroke	A,D
3.2.1.1.2.1.3.2.3C	Latitude/longitude location	A,D
3.2.1.1.2.1.3.2.3(d)	Warp system projection	A,D
3.2.1.1.2.1.3.2.3(e)	DELETED	
3.2.1.1.2.1.3.2.3(g)	Product display areal extent	A,D
3.2.1.1.2.1.3.2.4	Coverage area selection	A,D
3.2.1.1.2.1.3.3	Watch, warning and advisory (W/W/A) products[1]	A,D
3.2.1.1.2.1.3.3.1	Coverage area selection	A,D
3.2.1.1.2.1.3.3.2	Display characteristics[1]	L
3.2.1.1.2.1.3.3.2(a)	Projection	A,D
3.2.1.1.2.1.3.3.2(b)	DELETED	
3.2.1.1.2.1.3.3.2C	Display full areal extent	A,D
3.2.1.1.2.1.3.3.2(d)	Unique ID	A,D
3.2.1.1.2.1.3.3.2(e)	DELETED	
3.2.1.1.2.1.3.3.2(f)	Polygon overlap delineation	A,D
3.2.1.1.2.1.3.3.2(g)	W/W/A Products for Alaskan ACF	NT
3.2.1.1.2.1.3.4	Plot products[1]	L
3.2.1.1.2.1.3.4(a)(1)	Plots- surface observations	A,D
3.2.1.1.2.1.3.4(a)(2)	Plots- upper air observations	A,D
3.2.1.1.2.1.3.4.1	Coverage area selection	A,D
3.2.1.1.2.1.3.4.2	Pressure level and time selection	A,D
3.2.1.1.2.1.3.4.3	Parameter selection[1]	A,D

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.1.3.4.4	Display characteristics[1]	L
3.2.1.1.2.1.3.4.4(a)	Discernible parameters	A,D
3.2.1.1.2.1.3.4.4(b)	Automatic declutter	A,D
3.2.1.1.2.1.3.4.4C	Projection	A,D
3.2.1.1.2.1.3.4.4(d)	WMO codes	A,D
3.2.1.1.2.1.3.4.4(e)	DELETED	
3.2.1.1.2.1.3.4.4(f)	Display full areal extent	A,D
3.2.1.1.2.1.3.4.4(g)	Wind direction and speed	A,D
3.2.1.1.2.1.3.4.4(h)	DELETED	
3.2.1.1.2.1.3.5	Thermodynamic product	L
3.2.1.1.2.1.3.5.1	Derived thermodynamic values[1]	A,D
3.2.1.1.2.1.3.5.2	Location selection	D
3.2.1.1.2.1.3.5.3	Display characteristics	L
3.2.1.1.2.1.3.5.3(a)	Plot on thermo diagram	A,D
3.2.1.1.2.1.3.5.3(b)	Temperature line segments	A,D
3.2.1.1.2.1.3.5.3C	Dew point temp line segments	A,D
3.2.1.1.2.1.3.5.3(d)	Wind speed wind barb font	A,D
3.2.1.1.2.1.3.5.3(e)	Wind direction wind barb font	A,D
3.2.1.1.2.1.3.5.3(f)	Pressure heights to left	A,D
3.2.1.1.2.1.3.5.3(g)	Derived thermo values not obscure display	A,D
3.2.1.1.2.1.3.5.3(h)	Display full extent of diagram	A,D
3.2.1.1.2.1.3.6	Wind hodographs, vectors, and indices	N/A
3.2.1.1.2.1.3.7	Contour analyses	L
3.2.1.1.2.1.3.7.1	Parameter selection[1]	L

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.1.3.7.1(a)(1)	Parameter selection- unevenly spaced data, surface data	D
3.2.1.1.2.1.3.7.1(a)(2)	Parameter selection- unevenly spaced data, upper air data	D
3.2.1.1.2.1.3.7.1(b)(1)	Parameter selection - evenly spaced data, 1000 mb	D
3.2.1.1.2.1.3.7.1(b)(2)	Parameter selection- evenly spaced data, upper air	D
3.2.1.1.2.1.3.7.2	Coverage area selection	D
3.2.1.1.2.1.3.7.3	Pressure level and time selection	D
3.2.1.1.2.1.3.7.4	NMC forecast model selection	D
3.2.1.1.2.1.3.7.5	Display characteristics[1]	L
3.2.1.1.2.1.3.7.5(a)	Clearly labelled contours	A
3.2.1.1.2.1.3.7.5(b)	Max, min special characters	A
3.2.1.1.2.1.3.7.5C	Display smooth curved contours	A
3.2.1.1.2.1.3.7.5(d)	Projection	A
3.2.1.1.2.1.3.7.5(e)	Display full areal extent	A
3.2.1.1.2.1.3.7.5(f)	DELETED	
3.2.1.1.2.1.3.7.5(g)	Alaska ACF Reference	NT
3.2.1.1.2.1.3.8	Streamline analyses	L
3.2.1.1.2.1.3.8.1	Coverage area selection	D
3.2.1.1.2.1.3.8.2	Pressure level and time selection	D
3.2.1.1.2.1.3.8.3	NMC forecast model selection	D
3.2.1.1.2.1.3.8.4	Display characteristics[1]	L
3.2.1.1.2.1.3.8.4(a)	Display isotachs w/values	A

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.1.3.8.4(b)	Max, min special characters	A
3.2.1.1.2.1.3.8.4C	Direction of flow arrowheads	A
3.2.1.1.2.1.3.8.4(d)	Projection	A
3.2.1.1.2.1.3.8.4(e)	Display full areal extent	A
3.2.1.1.2.1.3.8.4(f)	DELETED	
3.2.1.1.2.1.3.8.4(g)	Alaskan ACF	NT
3.2.1.1.2.1.3.9	Vertical cross-section analyses	D
3.2.1.1.2.1.3.9.1	Evenly spaced data (gridded)	D
3.2.1.1.2.1.3.9.2(a)	Unevenly spaced data - observed	D
3.2.1.1.2.1.3.9.2(b)	Unevenly spaced data - derived	D
3.2.1.1.2.1.3.9.3	Coverage area selection	D
3.2.1.1.2.1.3.9.4	Display characteristics[1]	L
3.2.1.1.2.1.3.9.4(a)	Clearly label contours	A
3.2.1.1.2.1.3.9.4(b)	Max, min special characters	A
3.2.1.1.2.1.3.9.4C	Station/location relative positions	A
3.2.1.1.2.1.3.9.4(d)	Display full areal extent	A
3.2.1.1.2.1.3.9.4(e)	Display smooth curved contours	A
3.2.1.1.2.1.3.10	Manually generated graphics	D
3.2.1.1.2.1.3.10.1	Display characteristics[1]	L
3.2.1.1.2.1.3.10.1(a)	Discernible parameters	A
3.2.1.1.2.1.3.10.1(b)	Projection	A
3.2.1.1.2.1.3.10.1C	Display full areal extent	A

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.2	Workstation display capabilities	L
3.2.1.1.2.2.1	Products	D
3.2.1.1.2.2.2	Automatic update	A,D
3.2.1.1.2.2.2.1	Automatic update selection	D
3.2.1.1.2.2.3	Display control	Title
3.2.1.1.2.2.3.1	Display area	D
3.2.1.1.2.2.3.2	Screen and window control	D
3.2.1.1.2.2.4(a-d)	Display backgrounds[1]	D
3.2.1.1.2.2.4(e-z)	Display backgrounds[1]	NT
3.2.1.1.2.2.4.1	Projections	A,D
3.2.1.1.2.2.4.2	Decluttering	N/A
3.2.1.1.2.2.4.3	Display background modification[1]	NT
3.2.1.1.2.2.5	Overlays[1]	D
3.2.1.1.2.2.5.1	Legends	D
3.2.1.1.2.2.5.2	Product removal	D
3.2.1.1.2.2.5.3	Overlay precedence	D
3.2.1.1.2.2.6	Zoom	D
3.2.1.1.2.2.6.1	Images	D
3.2.1.1.2.2.6.2	Graphics	D
3.2.1.1.2.2.6.3	Legends	D
3.2.1.1.2.2.7	Pan	D
3.2.1.1.2.2.8	Animation	D
3.2.1.1.2.2.9	Combined capabilities	D
3.2.1.1.2.2.10	Product sequencing	D

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.2.11	Color	D
3.2.1.1.2.2.12	Fonts	NT
3.2.1.1.2.2.13	Line Textures	NT
3.2.1.1.2.2.14	Hard copy	Title
3.2.1.1.2.2.14.1	Alphanumeric	D
3.2.1.1.2.2.14.2	Image and graphics requests	D
3.2.1.1.2.2.14.3	Hard copy requests	D
3.2.1.1.2.2.15	Manual product generation and manipulation	L
3.2.1.1.2.2.15.1	Manual product generation and manipulation tools	Title
3.2.1.1.2.2.15.1.1	Text processing[1]	D
3.2.1.1.2.2.15.1.2	Graphic processing	D
3.2.1.1.2.2.15.1.3	Legends	D
3.2.1.1.2.2.15.1.4	Storage	D
3.2.1.1.2.2.16	Product display request	A,D
3.2.1.1.2.2.16.1	Radar product display	Title
3.2.1.1.2.2.16.1.1	Routine individual radar products	A,D
3.2.1.1.2.2.16.1.2	Request/reply products	NA
3.2.1.1.2.2.16.1.3	Mosaic product display	Title
3.2.1.1.2.2.16.1.3.1	Mosaic product request	A,D
3.2.1.1.2.2.16.1.3.2	Mosaic product display control	N/A
3.2.1.1.2.2.16.2	Alphanumeric product display	Title
3.2.1.1.2.2.16.2.1 (a-f)	Alphanumeric product request	A,D
3.2.1.1.2.2.16.2.2	Collectives	A,D

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.2.2.16.2.3	Alphanumeric display	D
3.2.1.1.2.2.16.2.4	Editing	D
3.2.1.1.2.2.16.3	Graphic product display	Title
3.2.1.1.2.2.16.3.1	Graphic product request	A,D
3.2.1.1.2.2.16.3.2	Graphic data editing	N/A
3.2.1.1.2.2.16.4	Retained product directory	D
3.2.1.1.2.2.17	Legends[1]	A,D
3.2.1.1.2.3	Briefing terminal display capabilities	L
3.2.1.1.2.3.1	Individual product request	A,D
3.2.1.1.2.3.2	Automatic update[1]	A,D
3.2.1.1.2.3.3	Display control	Title
3.2.1.1.2.3.3.1	Display area	D
3.2.1.1.2.3.3.2	Screen and window control	D
3.2.1.1.2.3.4	Retained product directory	D
3.2.1.1.2.3.5	Display backgrounds	D
3.2.1.1.2.3.6	Overlay and projections	A,D
3.2.1.1.2.3.7	Legends	D
3.2.1.1.2.3.8	Zoom[1]	D
3.2.1.1.2.3.9	Pan	D
3.2.1.1.2.3.10	Animation	N/A
3.2.1.1.2.3.11	Product sequencing	D
3.2.1.1.2.3.12	Color	D
3.2.1.1.2.3.13	Color Hard copy	D
3.2.1.1.2.4	Performance	D,T
3.2.1.1.3	Alarm/Alert processing mode	L

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.3.1	Workstation alarm/alert notification requirements	A,D
3.2.1.1.3.1.1	Product alarm/alert[1]	A,D
3.2.1.1.3.1.2	Weather alarm/alert[1]	A,D
3.2.1.1.3.1.3	System alarm/alert[1]	A,D
3.2.1.1.3.1.4	Processing error alarm/alert	N/A
3.2.1.1.3.2	Briefing terminal alarm/alert requirements	N/A
3.2.1.1.3.3	Audible and visual characteristics[1]	D
3.2.1.1.3.3.1	Workstation[1]	D
3.2.1.1.3.3.1(a)	Enable/disable alarm/alert	D
3.2.1.1.3.3.1(b)	Define valid time	D
3.2.1.1.3.3.1C	DELETED	
3.2.1.1.3.3.1(e)	Acknowledgment of alarms	D
3.2.1.1.3.3.1(f)	DELETED	
3.2.1.1.3.3.2	Briefing terminal	N/A
3.2.1.1.3.4	Performance	A,T
3.2.1.1.4	Data management mode	A
3.2.1.1.4.1	System logging	N/A
3.2.1.1.4.1.1	Logs	Title
3.2.1.1.4.1.1.1	Product reception log	A
3.2.1.1.4.1.1.2	Alarm/alert log	A
3.2.1.1.4.1.1.3	Product dissemination log	N/A
3.2.1.1.4.1.1.4	System operations log[1]	A
3.2.1.1.4.1.1.4.1	Event information	N/A
3.2.1.1.4.1.1.5	Resource utilization log	N/A

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.4.1.2	Log requests	L
3.2.1.1.4.1.2(a)	Display system logs	NT
3.2.1.1.4.1.2(b)	Display current logs	NT
3.2.1.1.4.1.2C	Hard copy of logs	D
3.2.1.1.4.2	Retention	A,D
3.2.1.1.4.3	Archiving[1]	A
3.2.1.1.4.3.1	Products	A
3.2.1.1.4.3.1.1	System logs	A
3.2.1.1.4.3.1.2	Generated products	A
3.2.1.1.4.3.1.3	Disseminated products	N/A
3.2.1.1.4.3.2	Archiving requests	D
3.2.1.1.4.3.3	Archive storage[1]	A,D,I
3.2.1.1.4.4	Data base refresh	N/A
3.2.1.1.5	System monitoring and control mode	L
3.2.1.1.5.1	System monitoring	Title
3.2.1.1.5.1.1	Processing[1]	A,D
3.2.1.1.5.1.2	Reporting	N/A
3.2.1.1.5.1.3	Remote Monitoring System (RMS)	N/A
3.2.1.1.5.1.3.1	Request/Reply	N/A
3.2.1.1.5.1.3.2	Command execution option	N/A
3.2.1.1.5.2	System control	Title
3.2.1.1.5.2.1	System start-up/re-start	A,D
3.2.1.1.5.2.1.1	Transition to operational	A,D
3.2.1.1.5.2.2	System shutdown	D

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.1.1.5.2.2.1	Shutdown processing	A,D
3.2.1.1.5.2.2.2	External communications	N/A
3.2.1.1.5.2.3	System security[1]	L
3.2.1.1.5.2.3(a)	Password verification	D
3.2.1.1.5.2.3(b)	Password control	D
3.2.1.1.5.2.3C	DELETED	
3.2.1.1.5.2.3(d)	DELETED	
3.2.1.1.5.2.3(e)	Unauthorized access log	D
3.2.1.1.5.2.3(f)	Add/remove users	D
3.2.1.1.5.2.4	Housekeeping functions	L
3.2.1.1.5.2.4(a)	Write files	D
3.2.1.1.5.2.4(b)	Read files	D
3.2.1.1.5.2.4C	Move files	D
3.2.1.1.5.2.4(d)	System backup/restore	NT
3.2.1.1.5.2.4(e)	Control off-line storage	D
3.2.1.1.5.2.4(f)	Display/print archived files	D
3.2.1.1.5.2.4(g)	Create/rename files/directories files/directories	D
3.2.1.1.5.2.4(h)	COTS diagnostics	NT
3.2.1.1.6	Dissemination mode	N/A
3.2.2	System capability relationships	N/A
3.2.3	External interface requirements	N/A
3.2.4	Physical characteristics	Title
3.2.4.1	Protective coatings	N/A

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.2.4.2	Hardware	I
3.2.4.2.1	Workstation display console[1]	I
3.2.4.2.1.1	ACF WARP workstation display console	I
3.2.4.2.1.2	ATCSCC WARP workstation display console[1]	N/A
3.2.4.2.2	Briefing terminals[1]	I
3.2.4.2.3	Color hard copy device	I,D
3.2.4.2.4	Alphanumeric printer	I,D
3.2.4.3	Installation	N/A
3.2.4.4	Power requirements	N/A
3.2.4.5	Cooling	N/A
3.2.4.6	Weight limits	N/A
3.2.4.7	Sizes	N/A
3.2.5	System quality factors	N/A
3.2.6	Environmental conditions	N/A
3.2.7	Transportability	N/A
3.2.8	Flexibility and expansion	N/A
3.2.9	Portability	N/A
3.3	Design and construction	Title
3.3.1	Materials	N/A
3.3.2	Electromagnetic radiation	N/A
3.3.3	Nameplates and product marking	N/A
3.3.4	Workmanship	N/A
3.3.5	LRU interchangeability	N/A
3.3.6	Safety	N/A

N/A=Not applicable; NT= Not Tested; L=verified by a lower level requirement; A=analysis; D=demonstration; T=test; I=inspection

Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.3.7	Human engineering	L
3.3.7.1	Human factors	N/A
3.3.7.2	User interface requirements	Title
3.3.7.2.1	User display control	Title
3.3.7.2.1.1	Workstation monitors	D
3.3.7.2.1.2	Monitor interactions	D
3.3.7.2.1.3	Display selection	D
3.3.7.2.1.4	Data entry review	D
3.3.7.2.2	User input	D
3.3.7.2.3	Feedback to user	D
3.3.7.2.3.1	Messages	D
3.3.7.2.3.2	Deletion message	D
3.3.7.2.3.3	Command response	D
3.3.7.2.3.4	Command error messages	A,D
3.3.7.3	Display equipment	D
3.3.7.3.1	Monitor positions	I
3.3.7.3.2	Monitor adjustments	I,D
3.3.8	Nuclear control	N/A
3.3.9	System security	N/A
3.3.10	Government-furnished property usage	Title
3.3.11	Computer resource reserve capacity	N/A
3.3.12	Computer resource expandability	N/A
3.4	Documentation	N/A
3.5	Logistics	N/A

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Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
3.6	Personnel and training	N/A
3.7	Characteristics of subordinate elements	N/A
3.8	Precedence	N/A
3.9	Qualification	N/A
3.10	Standard sample	N/A
3.11	Pre-production sample	N/A
30.2, Table 30-1, Table 30-2, Table 30-3, Appendix C	Performance	L
Table 30-1	WSR-88D acquisition	A,T
Table 30-1	Satellite product acquisition	A,T
Table 30-1	Lightning product acquisition	A,T
Table 30-1	Alphanumeric product acquisition	A,T
Table 30-1	Gridded product acquisition	A,T
Table 30-1	Graphic product acquisition	A,T
Table 30-2	Lightning product generation	A,T
Table 30-2	NWS graphic product generation	A,T
Table 30-2	Station model plot generation	A,T
Table 30-2	Thermo analyses	A,T
Table 30-2	W/W/A product plot generation	A,T
Table 30-2	Other graphic product generation	A,T
Table 30-3	Display non-image product	A,T
Table 30-3	Display image product	A,T
40.2, Appendix D	Site Adaptation requirements	A,D

N/A=Not applicable; NT= Not Tested; L=verified by a lower level requirement; A=analysis; D=demonstration; T=test; I=inspection

Verification Requirements Traceability Matrix		
Paragraph #	Paragraph name	Method
40.3, Appendix D	WARP user specific adaptable parameters	A,D

N/A=Not applicable; NT= Not Tested; L=verified by a lower level requirement; A=analysis; D=demonstration; T=test; I=inspection

Appendix B

Area of Coverage Definitions

Offerors shall prepare to model an Area Control Facility (ACF) for portions of the OCT. Offerors shall utilize the following sector definitions for the generation and display of ACF radar mosaics and Intermediate Area (IA) Satellite products, respectively. Each sector definition contains the Latitude and Longitude of the sector center point and the size of the sector (distance units) for both x and y directions.

ACF Radar Mosaic area of coverage.

Latitude and Longitude (deg min sec) of the Center Point: 32 51 13N, 097 18 09W
Sector size in X direction: 2000 km
Sector size in Y direction: 1500 km

Satellite Intermediate Area (IA) coverage.

Latitude and Longitude (deg min sec) of the Center Point: 32 51 13N, 097 18 09W
Sector size in X direction: 2000 km
Sector size in Y direction: 2000 km