Materiel Test Procedure 6-3-186
U. S. Army Artillery Board

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U. S. ARMY TEST AND EVALUATION COMMAND
COMMODITY SERVICE TEST PROCEDURE

3463

METEOROLOGICAL STATIONS, MANUAL OR AUTOMATIC

1. OBJECTIVE

The objective of this test procedure is to describe the methods used to determine the degree that meteorological stations, manual or automatic, and associated tools and test equipment perform the mission as described in the Qualitative Materiel Requirements (QMR), Small Development Requirements (SDR), and Technical Characteristics (TC), and the suitability of the systems and the maintenance packages for use by the Army.

2. BACKGROUND

The phenomenon of weather affects the employment capability of long and short range rockets, the dispersion of ground forces and mobile installations, the efficient use of artillery weapons, and a wide variety of other military operations. Therefore, there is an urgent requirement for meteorological information that is accurate, timely, rapidly obtained in minute detail, and can be disseminated to all commanders. The existing requirement is for new and improved compact weather sensing equipment capable of being carried by combat soldiers, transported in various surface and air vehicles, air dropped or fired into forward areas or desired operational areas with the capability for making measurements of wind, pressure, humidity, temperature, rainfall, visibility, ceiling height and cloud-types and heights.

Development of this type of equipment will also provide the immediate commanders and the Air Weather Service with up-to-date weather data for making small scale local forecasts for chemical, biological and radiological purposes, combat surveillance and battle planning.

3. REQUIRED EQUIPMENT

a. Suitable Test Sites and Facilities, for conducting the applicable subtests.
b. Maintenance Support Facilities.
c. Communications Equipment and Facilities, as required.
d. Equipment and Facilities, as required by the referenced MTP's.
e. Vehicles for Transporting of Test Equipment and Personnel, as required.
f. Battery Charging Facility, as required.
g. "Standard" Item, for comparison, as required.
h. Electronic Ranging Instruments.
i. Acoustic Aids.
j. Optical Instruments.
k. Camouflage Materials, as required.
l. Aerial Cameras with Film.
m. Aerial Photo Interpretation Facilities
n. Replacement Parts, as required.

o. Road Test Courses, as follows:

1) Paved roads
2) Unpaved roads
3) Cross-country terrain

4. REFERENCES

A. AR 705-15, Operation of Materiel Under Extreme Conditions of Environment.
B. DA FM 6-15, Artillery Meteorology.
C. USAMC Regulation 385-12, Safety.
D. USATECOM Regulation 385-6, Safety Release.
E. USATECOM Regulation 385-7, Safety Confirmation.
F. USATECOM Regulation 750-15, Maintenance Portion of the Service Test.
G. MTP 6-3-500, Physical Characteristics.
H. MTP 6-3-501, Technical Inspection.
I. MTP 6-3-502, Personnel Training Requirements.
J. MTP 6-3-504, Ease of Installation and/or Rigging, and Operation.
K. MTP 6-3-505, Emplacement, Action, and Macch Order.
L. MTP 6-3-506, Durability.
M. MTP 6-3-509, Effects of Weather.
N. MTP 6-3-510, Transportability of Communic ations, Surveillance and Electronic Equipment.
O. MTP 6-3-512, Compatibility with Related Equipment.
P. MTP 6-3-514, Qualitative Frequency Accuracy and Stability.
Q. MTP 6-3-515, Reliable Communication Range.
R. MTP 6-3-516, Remote Operation.
S. MTP 6-3-523, Safety.
T. MTP 6-3-524, Maintenance Evaluation.
U. MTP 6-3-525, Human Factors.
V. MTP 6-3-517, Electrical Power Requirements.
W. MTP 7-3-512, Air Drop Capability (Suitability of Equipment For).
X. MTP 7-3-515, Air Transportability, Internal (Suitability of Equipment For).
Y. MTP 7-3-516, Air Transport, External (Suitability of Equipment For).
Z. MTP 10-3-500, Preoperational Inspection and Physical Characteristics.
AA. MTP 10-3-503, Surface Transportability (General Supplies and Equipment).
AB. MTP 10-3-504, Maintenance Evaluation.
AC. MTP 10-3-505, Human Factors Engineering.
AD. MTP 10-3-507, Safety Hazards.
AE. MTP 10-3-510, Logistics Over-the-Shore (LOTS) (General Supplies and Equipment.
AF. MTP 10-4-001, Desert Environmental Test of General Supplies and Equipment.
AG. MTP 10-4-002, Arctic Environmental Test of General Supplies and Equipment.

AH. MTP 10-4-003, Tropic Environmental Test of General Supplies and Equipment.

5. SCOPE

5.1 SUMMARY

This test procedure describes the tests to be performed, data to be collected, and evaluation procedures to determine the suitability of meteorological stations, manual or automatic, for artillery use. The tests will be conducted under field conditions using average trained soldiers within the applicable military occupational specialty (MOS) structure, and will serve as a basis to evaluate the test item's performance in the following categories:

a. Pre-Test Operations consisting of:

1) Technical Inspection - A check to verify that the test item is complete and in satisfactory condition prior to the start of testing.
2) Physical Characteristics - A verification of the physical characteristics of the test item.
3) Electrical Characteristics - A study to ascertain the test item's electrical characteristics and a determination of its power requirements.

b. Operational Characteristics consisting of:

1) Emplacement, Preparation for Action and March Order Suitability - A study to determine the ability of service personnel to set up the test item for operation under various conditions and to restore it to its transport configuration.
2) Measurement Accuracy - A study to determine degree of accuracy of measurement that the test item is capable of as compared to a "standard" item.
3) Frequency Accuracy and Stability - A study to determine the capability of the test item to maintain accurate operating frequencies under field conditions, if applicable.
4) Remote Operation - A study to determine the capabilities of the test item for being remotely "interrogated", if applicable.
5) Reliable Communication Range - A study to determine the distances at which the test item can "transmit" intelligible meteorological data, if applicable.

c. Transportability Tests consisting of:

1) Surface Transportability - A study to determine the suitability of the test item for surface transport.
2) Air Transportability - A study to determine the suitability of the test item for transport by aircraft both internally and externally.
3) Air Drop Capability - An evaluation of the suitability of

the test item for air drop operations.

4) Logistics-Over-the-Shore - A study to determine the capability of the test item to withstand logistics-over-the-shore operations and its suitability for such operations.

d. Vulnerability to Detection - A study to determine the degrees of security from aural and visual detection that the test item, has in its various modes. Ground and aerial observations are included.

e. Compatibility with Related Equipment - A study to determine the suitability of the test item for operations with its related equipment, in various configurations.

f. Full-Test Evaluations consisting of:

1) Durability - An evaluation of the capability of the test item to withstand being transported over various types of terrain for a specified number of miles.
2) Maintainability and Reliability - An evaluation to determine the suitability of the test item to be maintained, the adequacy of its maintenance package, and its overall ability to operate over long periods of time without adjustment or replacement of components.
3) Effects of Weather - An evaluation of the effects of various weather conditions on the operability of the test item.
4) Human Factors - An evaluation of the suitability of the test item for operation, servicing, transport and storage by service personnel without causing undue fatigue and mental errors.
5) Safety - An evaluation of the safeness of the test item in its various configurations, under a variety of conditions, and the resultant safety hazards to service personnel.

g. Post-Test Inspection - A repetition of the technical inspection to determine any adverse effects of testing on the test item.

h. Environmental Suitability - A repetition of the applicable procedures of items b through g under desert, arctic and tropic conditions to determine the environmental effects on the test item operability, etc.

5.2 LIMITATIONS

This MTP shall be limited to ground-operated meteorological stations. Stations carried aloft are tested in MTP 6-3-180, Meteorological Equipment.

6. PROCEDURES

6.1 PREPARATION FOR TEST

6.1.1 Scheduling

6.1.1.1 Personnel

a. Ensure the availability of service personnel who have been trained according to the criteria of MTP 6-3-502 and are knowledgeable about the followin-

1) Installation
2) Operation
3) Maintenance

b. Record the following for all service test personnel:

1) Rank
2) MOS
3) Training time
4) Experience

NOTE: Test personnel shall receive the minimum essential individual instruction in the operation and organization direct support and general support maintenance of that item. The achievement of a skill level to operate the test item under simulated combat conditions shall be a requirement, assuming that the test item can achieve results as set forth in the applicable QMR. Observations of operations and maintenance activities shall be made by technically qualified personnel.

c. Ensure that experienced personnel are available for the duration of testing.

6.1.1.2 Facilities and Equipment

a. Select and schedule the use of testing sites and facilities as required by the applicable subtests.

b. Upon notice of the arrival or estimated time of arrival of the test item, arrange for or secure the following:

1) Engineering safety release or a safety statement from the engineering agency as prescribed by references 4D and 4E.
2) Vehicles for transporting the test items, as applicable.
3) Maintenance support facilities, organization and personnel.
4) Assistance of the U. S. Army Airborne, Electronics and Special Warfare Board (USAAESWBD), as required, during the conduct of aerial delivery and air drop operations.
5) Assistance of the U. S. Army General Equipment Test Activity (USAGETA), as required, during the conduct of logistics-over-the-shore operations.

6.1.2 Safety

a. Verify that the test item safety statement is valid and up-to-date.

b. Verify that all service test personnel have been adequately trained in the safety requirements pertaining to the test item and the testing.

6.1.3 Pre-Test Operations

6.1.3.1 Technical Inspection

Conduct a technical inspection of the test item as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.1.3.2 Physical Characteristics

Determine the physical characteristics of the test item as described by the applicable sections of MTP 6-3-500 and MTP 10-3-500.

6.1.3.3 Electrical Characteristics

Determine the electrical characteristics and the power requirements of the test item as described by the applicable sections of MTP 6-3-517.

6.2 TEST CONDUCT

a. Subtests shall be conducted concurrently with, or in conjunction with, other subtests, whenever possible, so that the time taken to collect the required data can be minimized.

b. Subtests shall be conducted under the conditions of weather prevailing during the period of testing.

6.2.1 Operational Characteristics

At the completion of each subtest for the evaluation of operational characteristics, the test item shall be subjected to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.1.1 Daylight Conditions

Perform paragraphs 6.2.1.1.1 through paragraph 6.2.1.1.3 under daylight conditions:

6.2.1.1.1 Emplacement, Preparation for Action, Operation and March Order Suitability - Determine the suitability of the test item for being emplaced, prepared for action, operated and march ordered according to the criteria of MTP 6-3-505 and MTP 6-3-504.

NOTE: This subtest shall be performed in conjunction with other operational subtests, as possible.

6.2.1.1.2 Measurement Accuracy - Perform the following using a test item and a "standard" item emplaced at the same site:

NOTE: A "standard" item shall be a weather station of the same type presently in use.

a. Determine and record the following:

1) Wind direction

2) Wind speed
3) Ambient temperature
4) Barometric pressure
5) Relative humidity
6) Time of day

b. Repeat step a until a minimum of three sets of determinations have been made with each item.

c. Record the following for each set of determinations, as applicable:

1) Item identity
2) Determination set number

6.2.1.1.3 Frequency Accuracy and Stability - Determine the qualitative frequency accuracy and stability, if applicable, as described by the applicable sections of MTP 6-3-514.

6.2.1.1.4 Remote Operation - Determine the remote operational characteristics of the test item, if applicable, as described by the applicable procedures of MTP 6-3-516.

6.2.1.1.5 Reliable Communication Range - Determine the reliable communication range of the test item, if applicable, as described by the applicable sections of MTP 6-3-515.

6.2.1.2 Darkness (Blackout) Conditions

Repeat paragraphs 6.2.1.1.1 through paragraphs 6.2.1.1.5 under conditions of darkness, as applicable.

6.2.2 Transportability Tests

6.2.2.1 Surface Transportability

a. Determine the surface transportability of the test item as described by the applicable sections of MTP 6-3-510 and MTP 10-3-503.

b. At the completion of the testing, subject the test item to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.2.2 Air Transportability

NOTE: The conduct of air transportability testing shall be coordinated with the U. S. Army Airborne, Electronics and Special Warfare Board (USAAESWBD).

6.2.2.2.1 Internal Transport - Perform the following:

a. Determine the suitability of the test item for internal air transport as described by the applicable sections of MTP 7-3-515.

b. At the completion of the testing, subject the test item to a

technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.2.2.2 External Transport - Perform the following:

a. Determine the suitability of the test item for external air transport as described by the applicable sections of MTP 7-3-516.

b. At the completion of the testing, subject the test item to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.2.3 Air Drop Capability

a. Determine the suitability of the test item for air drop operations as described by the applicable sections of MTP 7-3-512.

NOTE: The conduct of airborne operations shall be the responsibility of the U. S. Army Airborne, Electronics and Special Warfare Board (USAAESWB).

b. At the completion of the testing, subject the test to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.2.4 Logistics-Over-the-Shore

a. Determine the capability of the test item for logistics-over-the-shore as described by the applicable sections of MTP 10-3-510.

NOTE: Logistics-over-the-shore requirements shall be coordinated with the U. S. Army General Equipment Test Activity (USAGETA).

b. At the completion of the testing, subject the test item to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.2.3 Vulnerability to Detection

Observations of the test item shall be made during the following test item emplacement conditions:

a. Operational
b. Standby

6.2.3.1 Daylight Conditions

a. Determine and record the maximum distance at which the test item and its associated power equipment are audible to:

1) Unaided ear
2) Acoustic aids

b. Determine and record the maximum distances at which the test item is discernible without camouflage and with camouflage from ground positions using:

1) Unaided vision
2) Optical instruments
3) Electronic instruments, when applicable

c. Determine and record the maximum attitudes at which the test item is discernible without camouflage and with camouflage from aerial observations using:

1) Unaided vision
2) Optical instruments
3) Aerial photography

NOTE: The conduct of airborne operations shall be the responsibility of the U. S. Army Airborne, Electronics, and Special Warfare Board (USAAESWBD).

6.2.3.2 Darkness (Blackout) Conditions

Repeat paragraph 6.2.3.1 under conditions of darkness (blackout).

6.2.4 Compatibility with Releated Equipment

Determine the compatibility of the test item with related components and devices as described by the applicable sections of MTP 6-3-512.

6.2.5 Full Test Evaluations

During the conduct of this MTP, the following test item characteristics shall be determined and/or evaluated.

6.2.5.1 Durability

a. Determine the durability of the test item as described by the applicable sections of MTP 6-3-506.

b. The test item shall be transported over paved roads, unpaved roads, and cross-country terrain for a minimum of 1000 miles in all transportable configurations and emplaced after each 200 mile travel cycle.

NOTE: This evaluation shall be performed in conjunction with the procedures of paragraphs 6.2.1.1.1 and 6.2.2.1.

c. Evaluate the ability of the test item transit case(s) to protect the test item from shock and vibration.

6.2.5.2 Maintainability and Reliability

NOTE: The overall evaluation of the maintainability and reliability

of the test item shall be made according to the criteria of reference 4F.

a. Complete the authorized maintenance tasks in accordance with the test item maintenance instructions and technical literature.

b. Determine the maintainability of the test item as described by the applicable sections of MTP 6-3-524 and MTP 10-3-504.

c. Record the following, as applicable:

1) Time and number of personnel required to perform scheduled and non-scheduled maintenance tasks on the test item.
2) Frequency of repairs.
3) Test item down-time (cumulative).
4) Nomenclature of repair parts used.
5) Operational time between battery replacements, if applicable.

d. Evaluate the adequacy and accuracy of the test item maintenance package.

6.2.5.3 Effects of Weather

a. Determine the effects of weather on the test item operability as described by the applicable sections of MTP 6-3-509.

b. Evaluate the ability of the test item transit case(s) to protect the test item from moisture, dust and other debris.

6.2.5.4 Human Factors

a. Determine the suitability of the test item design with respect to the man-equipment relationship as described by the applicable sections of MTP 6-3-525 and MTP 10-3-505.

b. Determine and record the suitability and the compatibility of the test item with the service personnel who will operate and service it, with respect to their skills, aptitudes and physical limitations.

NOTE: Each test item detail requiring human attention and/or manipulation shall be observed and evaluated.

6.2.5.5 Safety

a. Determine the test item safety hazards resulting from storage, transport, operation, and maintenance as described by the applicable sections of MTP 6-3-523 and MTP 10-3-507.

b. Prepare a safety confirmation in accordance with USATECOM Regulation 385-7.

6.2.6 Post-Test Inspection

Upon completion of testing, the test item shall be subjected to a technical inspection as described by the applicable sections of MTP 6-3-501 and MTP 10-3-500, and deleterious effects on the test item, due to the testing

program, shall be recorded.

6.2.7 Environmental Suitability

The applicable procedures of paragraphs 6.2.1 through 6.2.6 shall be performed under the desert, arctic and tropic environmental test conditions as described in MTP 10-4-001 (desert), MTP 10-4-002 (arctic), and MTP 10-4-003 (tropic) to determine the effects of these conditions on the operability of the test item with emphasis on the following, as applicable:

a. Time required for installation, emplacement, operation and march order.
b. Time required to complete specific operational procedures when dressed in special clothing with individual equipment.
c. Effects of extreme temperature on lubricants and requirements for special lubricants.
d. Durability of knobs, handles, cables, movable parts, etc., under temperature extremes.
e. Effects of heavy rainfall, continuous exposure to high relative humidity of the air, dust, insects, and fungi (mold, mildew, and slime).
f. Effects of corrosion on electronic devices and components, metal components, fabrics, and the etchings of glass optical instruments.

6.3 TEST DATA

6.3.1 Preparation for Test

6.3.1.1 Personnel

Record the following for all service personnel:

a. Rank
b. MOS
c. Training time, in months
d. Experience, in years

6.3.1.2 Pre-Test Operations

6.3.1.2.1 Technical Inspection -

Record data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.1.2.2 Physical Characteristics -

Record data, collected as described in the applicable sections of MTP 6-3-500 and MTP 10-3-500.

6.3.1.2.3 Electrical Characteristics -

Record data, collected as described in the applicable sections of

MTP 6-3-517.

6.3.2 Test Conduct

6.3.2.1 Operational Characteristics

Record the following for each subtest conducted:

a. Time of day, in hours
b. Weather condition (clear, rain, snow, sleet, etc.)
c. Visibility condition (daylight, darkness)
d. Ambient temperature, in degrees F
e. Test item nomenclature
f. "Standard" item nomenclature, as applicable

6.3.2.1.1 Emplacement, Preparation for Action, Operation, and March Order Suitability -

a. Record data, collected as described in the applicable sections of MTP 6-3-505 and MTP 6-3-504.

b. Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.1.2 Measurement Accuracy -

a. Record the following for each set of determinations:

1) Item identity (test item, standard item)
2) Determination set number (1, 2, 3)

b. Record the following determinations:

1) Wind direction
2) Wind speed, in mph
3) Ambient temperature, in degrees F
4) Barometric pressure, in millibars
5) Relative humidity, in percent
6) Time of day, in hours

c. Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.1.3 Frequency Accuracy and Stability -

Record the following, if applicable:

a. Data, collected as described in the applicable sections of MTP 6-3-514.

b. Technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.1.4 Remote Operation -

Record the following, if applicable:

a. Data, collected as described in the applicable sections of MTP 6-3-516.

b. Technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.1.5 Reliable Communication Range -

Record the following, if applicable:

a. Data, collected as described in the applicable sections of MTP 6-3-515.

b. Technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.2 Transportability Tests

6.3.2.2.1 Surface Transportability -

a. Record data, collected as described in the applicable sections of MTP 6-3-510 and MTP 10-3-503.

b. Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.2.2 Air Transportability -

a. For internal transport:

1) Record data, collected as described in the applicable sections of MTP 7-3-515.
2) Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

b. For external transport:

1) Record data, collected as described in the applicable sections of MTP 7-3-516.
2) Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.2.3 Air Drop Capability -

a. Record data, collected as described in the applicable sections of MTP 7-3-512.

b. Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.2.4 Logistics-Over-the-Shore -

a. Record data, collected as described in the applicable sections of MTP 10-3-510.

b. Record technical inspection data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.

6.3.2.3 Vulnerability to Detection

a. Record the following for each aural observation:

1) Visibility condition (daylight, darkness).
2) Maximum distances, in meters, at which the test item and associated equipment can be detected by:

a) Unaided ear
b) Acoustic aids

3) Test item operational condition (operational, standby).

b. Record the following for each visual observation from ground positions:

1) Visibility condition (daylight, darkness).
2) Test item emplacement condition (camoufalged, uncamouflaged).
3) Maximum distances, in meters, at which the test item is discernible by:

a) Unaided vision
b) Optical instruments
c) Electronic instruments, when applicable

c. Record the following for each visual observation from aircraft:

1) Visibility condition (daylight, darkness).
2) Test item emplacement condition (camouflaged, uncamouflaged).
3) Maximum altitudes, in feet or meters, at which the test item can be detected by:

a) Unaided vision
b) Optical instruments
c) Aerial photography

6.3.2.4 Compatibility with Related Equipment

Record data, collected as described in the applicable sections of MTP 6-3-512.

6.3.2.5 Full-Test Evaluations

6.3.2.5.1 Durability -

a. Record data, collected as described in the applicable sections

of MTP 6-3-506.

b. Record mileage that test item is transported over:

1) Paved roads
2) Unpaved roads
3) Cross-country terrain

6.3.2.5.2 Maintainability and Reliability -

Record the following:

a. Data, collected as described in the applicable sections of MTP 6-3-524 and MTP 10-3-504.
b. Type of maintenance performed (scheduled, nonscheduled).
c. Time required to perform each maintenance task, in hours.
d. Number of personnel required to perform each maintenance task.
e. Frequency of repairs over the period of testing (record dates).
f. Test item down-time (cumulative), in hours.
g. Nomenclature of repair parts used.
h. Operational time between battery replacements, in hours, if applicable.

6.3.2.5.3 Effects of Weather -

Record data, collected as described in the applicable sections of MTP 6-3-509.

6.3.2.5.4 Human Factors -

Record the following:

a. Data, collected as described in the applicable sections of MTP 6-3-525 and MTP 10-3-505.
b. Observations of service personnel during testing, and the suitability of the test item with respect to their:

1) Skills
2) Aptitudes
3) Physical limitations

6.3.2.5.5 Safety -

Record data, collected as described in the applicable sections of MTP 6-3-523 and MTP 10-3-507.

6.3.2.6 Post-Test Inspection

a. Record data, collected as described in the applicable sections of MTP 6-3-501 and MTP 10-3-500.
b. Record any deleterious effects of the test program on the test item.

6.4 DATA REDUCTION AND PRESENTATION

Data obtained from all subtests covered by applicable MTP's shall be summarized, compared with "standard" data, and evaluated according to procedures described in those applicable MTP's. Appropriate charts, graphs, and tabulated summaries shall be used to present the data in a clear manner. Special consideration shall be given to any condition or circumstance contributing to any test result.

Calculations shall be performed as specified by the individual MTP's, wherever applicable, and all photographs, motion pictures, and illustrative material shall be suitably identified.

The evaluation of the test item measurement accuracy shall be based on the summarized data and on the comparison with data produced by the "standard" item.

Compute the maintenance ratio by determining the man-hours of maintenance for each hour of test item operation. Compute the availability ratio by determining the hours of down time for each hour of test item operation.

The qualitative and quantitative data collected shall also be evaluated in terms of the requirements specified in the QMR's and TC's which are applicable, to determine the degree of fulfillment of the test item performance specifications.

For the evaluation of the vulnerability of the test item, to detection, average distances and altitudes shall be computed, tabulated, and compared for the various observation methods under the various conditions.

A safety confirmation based on the data of paragraph 6.3.2.5.5, shall be presented in accordance with USATECOM Regulation 385-7.