Test Working Groups

9.0 TEST WORKING GROUPS

This section contains plans for the organization of operation of test working groups at the operational bases.

The first part of this section outlines the organization and delineates the responsibilities of the Test Working group at the Site Level.

The second part of this section presents the framework of the Complex Test Working group organization and outlines the functions of each member of the complex group.

9.1.0 SITE TEST OPERATIONS PLAN

PURPOSE

A. To present a detailed plan for effective planning, scheduling, control and integration of Sub-system and Weapon System Testing at Titan Operational Bases.

B. Define the organization necessary at Site Level to implement this plan and to define relations with Complex Operations Group, Command Control Post and SATAF.

C. Establish procedures to be followed in scheduling, monitoring, reporting and documenting tests.

SCOPE

This plan has been prepared within the scope of AFBMD Exhibit 59-11, Contractor Responsibilities for Activation of Titan Bases. This Plan is intended to clarify responsibilities of the Integrating and Associate Contractors.

9.1.1 ORGANIZATION

A Test Working Group will be established at Site Headquarters Level. This group, hereafter referred to as the TWG, will be composed of qualified test representatives from the Integration and Associate Contractor Offices. SATAF and the Corps of Engineers will also be members of the TWG.

The TWG will operate as an extension of the Site Working Group and will be chaired by the Integrating Contractor in the person of the General Supervisor, Integrated Test Operations.

Organization of the TWG will be as shown in Figure 1.

9.1.2 FUNCTION

The TWG will function to provide the overall planning of Integrated Test Operations to assure that Sub-system and Weapon System Testing are accomplished in a timely manner to be compatible with Titan Master Schedule. Functions of the TWG include but not be limited to:

9.1.2 FUNCTION (Cont'd)

1. Accomplish long range planning
2. Develop detailed Integrated Test Schedules
3. Resolve Test Interface Problems
4. Review Test Plan and Procedures
5. Approve changes to Integrated Test Plans
6. Provide advance planning for logistic support
7. Review test data

9.1.3 RESPONSIBILITIES AND INFORMATION FLOW

Figure 2 shows relations and flow of information between SATAF and the Integrator. The SATAF Test Directorate will obtain any test information through the General Supervisor, Integrated Test Operations.

Responsibilities of the Integrator in regard to test operations are as follows:

A. General Supervisor Integrated Test Operations

1. Chairs the Test Working Group.
2. Develops Integrated Test Schedules.
3. Furnishes information to project Supervisor to prepare Test Milestone and Detailed Test Schedules.
4. Furnished detailed test schedules and test plans to Complex Test Conductors.
5. Receives Daily Log Sheet from Complex Test Conductors. Log sheet to contain detailed test schedule status, test problems and resolution
6. Distributes copies of Log Sheets to the other Complex Test Conductors to alert them of problems.
7. Furnishes Milestone Test status to TMC Project Supervisor.
8. Receives requests for test information from SATAF Test Directorate.
9. Furnishes Test information to SATAF Test Directorate as requested.
10. Resolves test problems through the TWG.
11. Maintains detailed overall status of tests and problems at all Complexes.

9.1.3 RESPONSIBILITIES AND INFORMATION FLOW (Cont'd)

B. Complex Test Conductor

1. Chairs Complex Working Group and accomplishes duties outlined in Complex Test Working Plan
2. Receives detailed test plans and schedules from General Supervisor Integrated Test Operations.
3. Furnishes copies of Daily Log Sheet to General Supervisor I.T.O. and to Complex Supervisor
4. Notifies Complex Supervisor and General Supervisor of formal demonstrations for TAT
5. Maintains test status of all testing at the Complex, Facility Sub-system and Activation Exercise.

C. Complex Supervisor

1. Receives detailed test schedules and plans from Complex Test Conductor.
2. Receives copy of Daily Test Log Sheet from Complex Test Conductor.
3. Furnishes Test Milestone Schedule information to SATAF Complex Commander and to TMC Project Supervisor.
4. Notifies SATAF Complex Commander of Formal Demonstrations for TAT.

D. TMC Project Supervisor

1. Receives test schedule information from General Supervisor Integrated Test Operations
2. Prepares Milestone Test Schedules.
3. Furnishes Milestone Test Schedules to Command Control Post, for preparation of Field Control Charts.
4. Receives Milestone Test Schedule Status from Complex Supervisor and furnishes same to Command Control Post

9.1.0.3

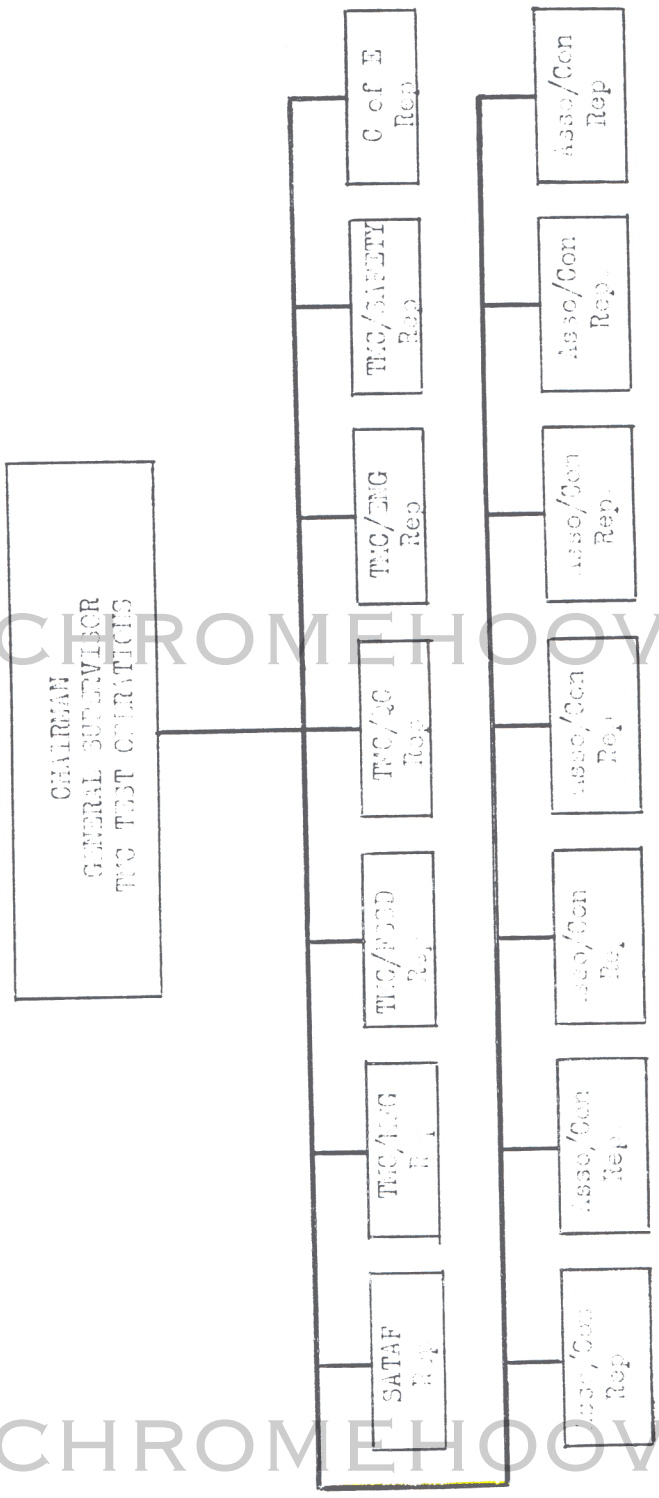


Figure 1

ORGANIZATION SITE
TEST WORKING GROUP

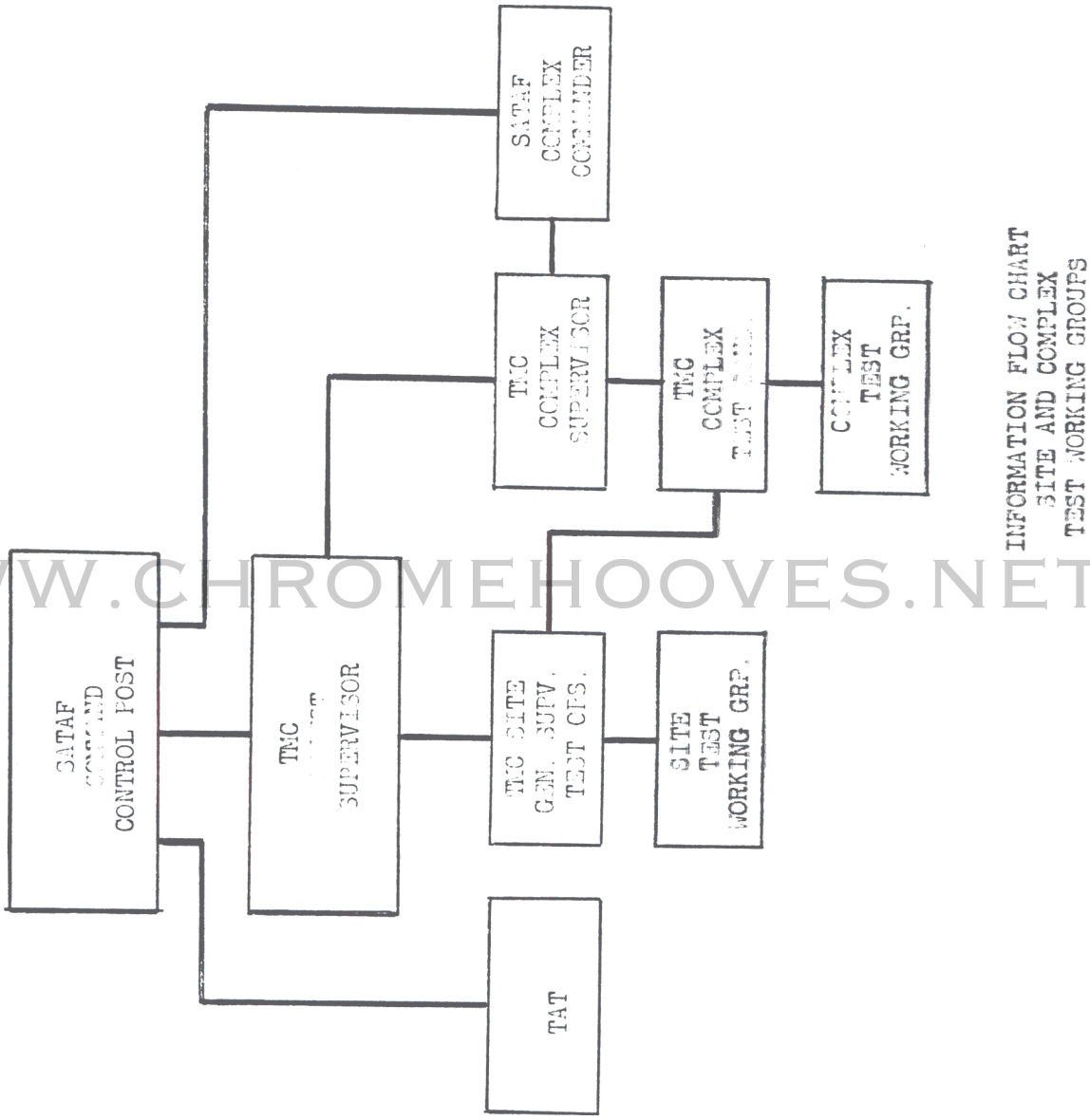


Figure 2

9.2.0 COMPLEX TEST WORKING PLAN

PURPOSE

The purpose of this plan is to:

A. Present a detailed plan within the framework of the Site Test Operation Plan for effective control and integration of the checkout and activation of the Weapon System at the Lowry complexes.

B. Define the complex organization necessary to implement the Integrated Test Plans.

C. Establish or confirm standard operating procedures and forms required for effective control and coordination of all groups participating in the checkout and activation of the complexes.

SCOPE

A. This plan has been prepared witin the scope of AFBMD Exhibit 59-11, Contractor Responsibilities for Activation of Titan Bases. The Complex Test Working Group will function as an extension of the COG. Initially the various test personnel will function as members of the COG working group. As installation is completed, the test member will play a more and more important role and the working group will become, in fact, a test group.

B. The period of effectivity for this plan will be from the start of Integrated Sub-system Tests at a Complex until final acceptance by the Air Force of the complete activated Weapon System.

9.2.1 GROUP FUNCTION AND ORGANIZATION

A. Function - The Complex Test Working Group as an extension of the COG will be composed of qualified representatives and test conductors from the Integrating Contractor, Associate Contractors and other participating agencies and shall be established as each Complex. The function of this group will be to plan and coordinate sub-systems tests, conduct activation exercise and resolve field problems pertaining to the test operation. The Complex Working Group organization is as shown in Figure 1.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

B. Organization Roles and Responsibilities

1. Complex Test Conductor, Integrated Test Operations

a. Sub-systems Tests

1) Coordinate Associate Contractor test activities.

2) Accomplish daily planning and scheduling of all test activities.

3) Resolve field problems pertaining to test activities.

b. Activation Exercise

1) Direct Associate Contractor activities in performance of formal demonstration tasks.

2) Exercise complete authority over the complex during countdowns and other hazardous situations.

3) Accomplish daily planning and scheduling of all Activation Exercise activities.

4) Coordinate activities for verification of Air Force Technical Manuals.

5) Resolve field problems pertaining to the Activation Exercise.

6) Maintain configuration control and system readiness through Int. QC during the Activation Exercise.

7) Coordinate Logistic Support.

8) Acquire and review acceptance data for TAT evaluation.

2. Logistic Coordinator

a. Sub-system Tests

1) Coordinate Logistic Support

b. Activation Exercise

1) Insure that all test equipment is on hand, complete with chart rolls, ink, etc., where applicable.

2) Insure that test equipment on hand is properly calibrated and that calibration periods will not expire during period of test.

3) Insure that required propellant, gases, fuels, lubricants, hydraulic fluid, etc., are on hand.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

4) Insure that necessary stationary items, forms, engineering pads, pencils, etc., are on hand.

3. Associate Contractor Test Conductor or Representative

a. Sub-systems Tests

1) Provide planning and scheduling information for testing of their sub-systems.

2) Direct their sub-systems tests.

3) Insure that all items of logistic support are on hand.

4) Operate, maintain and control configuration of their respective systems.

5) Assure that proper manning is available to conduct the test.

b. Activation Exercise

1) Provide planning, scheduling and system status information.

2) Support the activation exercise task under the direction of the Complex Test Conductor, Integrated Test Operations.

3) Provide technical assistance on their system.

4. Integration Quality Control Supervisor

a. Sub-systems Tests

1) Chair the Complex Integrated Quality Control group, composed of a Quality Control representative from each Associate Contractor.

2) Report Quality Control problems and status to the Test Conductor in relation to proposed tests, tests in progress, and completed tests.

3) At completion of Sub-systems Tests, Integrated Quality Control will assure that all systems are sealed to approved sealing procedure.

b. Activation Exercises

1) Assume total responsibility for the Quality Control of each increment of the Complex as it is turned over to The Martin Company by the Air Force.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

2) Direct the Associate Contractors, as required, to assure acceptable Quality Control through the Activation Exercise.

3) Provide control, inspection and status for all work accomplished by Associate Contractors following turnover of the pertinent increment to The Martin Company by the Air Force.

4) Chair the Complex Integrated Quality Control group.

5. Facility Support Supervisor

a. Operate and maintain facility equipment, i.e., diesel generators, water chillers, heating and air conditioning, etc., but not to include the PLPS, missile air conditioning, missile hydraulics and similar GSE equipment.

b. Provide janitorial service for the complex.

c. Accomplish P-1 and P-2 inspections as directed by the Integration TC.

d. Operate a tool crib.

e. Supply MAX-MINs, operating supplies, special tools, equipment, and calibration services.

6. Safety Engineer

a. Assist the Integration Test Conductor in maintaining safe conditions during test operations.

b. Provide safety information in the formulation of test schedules and procedures.

c. Provide special safety equipment.

7. Engineering Representative - TMC

a. Provide technical assistance to the Integration TC.

b. Provide engineering liaison between the site and Headquarters.

8. FSSD Representative

a. Provide maintenance engineering information to TMC.

b. Implement the validation and verification of Air Force Technical Manuals.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

c. Provide "quick change" capability for Technical Manuals.

d. Establish Technical Manual file at Complex.

9. SAC Representative

a. Coordinate the activities of the SAC personnel involved in the SAC phase in program.

b. Provide assistance to Integration and Associate Contractor personnel concerned with SAC phase in.

c. Reference SAC Phase-In Plan, Exhibit 61-2.

V. Standard Operating Procedures

A. Planning and Scheduling

1. Long Range - The Integrated Test Schedule as prepared by site headquarters will be utilized at each Complex for long range planning purposes.

2. Weekly Planning - Each week the Complex Integration Test Conductor will prepare and distribute to all participating agencies a Weekly Work Schedule extracted from the T-1 Integrated Test Schedule. Each Associate will review these schedules and advise the Integration TC of any changes required. The Weekly Work Schedule will be prepared at least two weeks in advance of the period covered. The integration TC will prepare the corrected Weekly Work Schedule, one week prior to the period covered, for review and approval by the Complex Commander. The schedule provides a three week span, with the current week displayed in the center, to illustrate continuity.

3. Daily Activity Planning - The Complex Integration Test Conductor will conduct a daily planning meeting for the purpose of discussing the day's tests' progress, problems and resolutions, equipment and material requirements, action items, etc., and to plan the next day's activity. Each Associate will present his schedule of work items for the following day by area and time. Any interference or interface problems will be resolved at this planning meeting

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

3. (cont'd)

before the Daily Activity Plan is finalized, approved and distributed. Problems arising during the test operations will be resolved at the lowest possible level and in the most expeditious manner. Informal meetings will be held between the Complex TC and the involved Associate Test Conductors as required to resolve interface, interference and other coordination problems.

B. Modification, Repair and Maintenance Control

1. During Sub-system Test - Each Associate Contractor will maintain configuration control and work authorization status through its own Quality Control group during the sub-system test period. The associate will normally use his own work authorization system and forms for this control. If the unscheduled work will affect the completion of a test as shown on the Weekly Test Schedule, will cause congestion in work areas or will affect the performance of another Associate's test, the Associate will submit a Work Authorization to the Complex Test Conductor for approval and scheduling.

2. During Activation Exercise - Integrated Quality Control will assume QC responsibility for each increment of the Weapon System as it is turned over to The Martin Company by the Air Force for performance of the Activation Exercise. All systems will be sealed for the purpose of controlling system configuration and integrity. After this system sealing, any work not covered in the Technical Manuals or Test Procedures will be controlled by the use of the "Discrepancy and Work Authorization" form prepared and submitted by the Associate to the Integration Test Conductor and Integration Quality Control for proper documentation, approval and scheduling.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

C. Procedures and Technical Manuals

1. A Technical Files Area will be operated at each Complex. All Technical Manuals and Procedures required for operation for the Weapon System, validation and verification and Integrated Activation Exercise will be on file at the Complex. A clerk will control the distribution within the Complex of the T.O.'s and will be responsible for change control of the documents. Certain Technical Manuals will be specified as "official" and used for validation and verification only.
2. All Associates will provide "Quick change" systems for their respective T.O.'s. As discrepancies are encountered, a T.O. Field Change Notice will be initiated at the site. Within 48 hours, a Change Page will be available for all copies.

3. As each "official" copy is verified, it will be turned over to the Associates' Technical Publications Department for finalization.
4. If any test or operation is not covered by an Air Force Technical Manual procedure, a special procedure will be required before the test or demonstration will be conducted. The procedure will be approved by The Martin Company, Engineering and affected Associate Contractor(s).

D. Propellants and Equipment

As Figure A equipment is required, it will be the responsibility of the Associate with custodial responsibility to have the equipment available at the place and time required, properly manned and serviced.

When a Weekly Schedule is prepared, two weeks prior to the period covered, a schedule for equipment requirements will also be determined. As the time nears for equipment use, the schedule will be discussed at the daily meetings and coordinated with the daily planning and scheduling. Each Associate Test Conductor or representative will be responsible for the equipment assigned to his company.

9.2.1 GROUP FUNCTION AND ORGANIZATION (Cont'd)

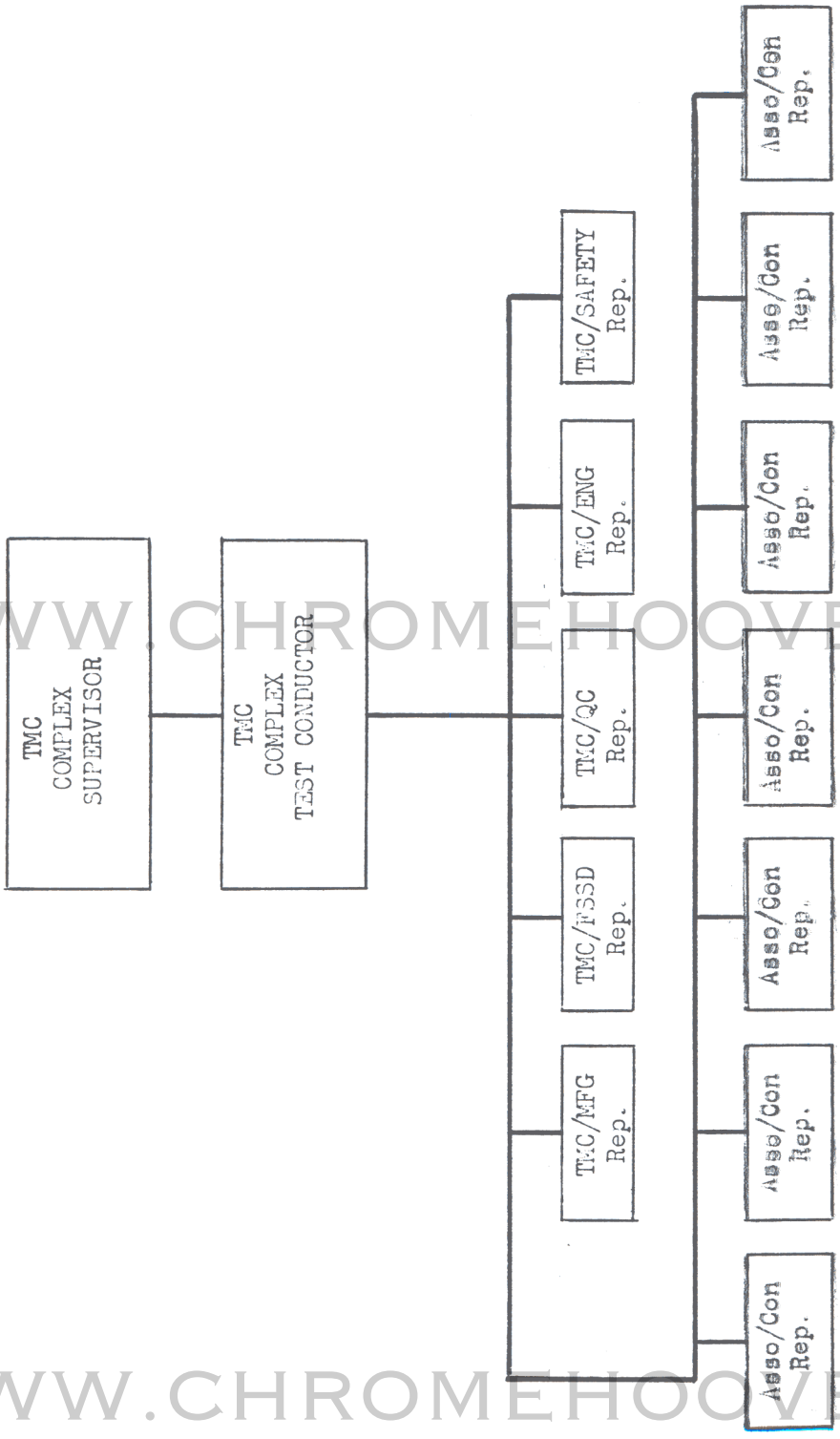
Propellants and gases will be ordered and coordinated through the TMC Scheduling and Coordination Section. From the Weekly Schedule, the quantities required will be determined and scheduled. Closer coordination of needs will be achieved at the daily planning meetings.

E. Data Acquisition

1. Daily Log - The Integration TC will keep a daily log on the significant happenings, problems,resolutions, etc., during each day. A copy of that log will go to the Complex Supervisor so that he can incorporate the information into his T-1 Daily Log Sheet. Five copies will be sent to the Integrated Test Operations Supervisor for distribution to other Complexes or areas that will benefit from the log information.
2. Acceptance Data - Integration Quality Control will be responsible, under the cognizance of the Integration TC, to accumulate the necessary test data, documents, records, etc., for presentation to the TAT for buy-off.

F. Reporting

1. The Integration Test Conductor will furnish test data to the General Supervisor, Integrated Test Operations, and to the Complex Supervisor within 12 hours of satisfactory completion of demonstrations.



ORGANIZATION
COMPLEX
TEST WORKING GROUP