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/S/ NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

14 00067099D

1 0 MAY 1967

THE NRO STAFF

MEMORANDUM FOR ALL SOC PERSONNEL

SUBJECT: Reorganization of the Satellite Operations Center

1. Effective immediately, the Satellite Operations Center will be
organized in the following manner (see attachments for organizational
chart and specific branch duties):

    a. Deputy Director for Satellite Operations

    b. Photo Branch

    c. SIGINT Branch

    d. Weather Branch

    e. Support Branch

    f. Technical Executive

2. The branch chiefs and Technical Executive will be directly
responsible to the Deputy Director. Their general responsibilities
are as follows:

    a. The Photo Branch (see attachment 2) will be responsible
for all photographic intelligence collection functions of photo
reconnaissance satellites. It is responsible for implementing United
States Intelligence Board (USIB) requirements through coordination with
the Committee for Overhead Reconnaissance (COMOR) and the Photo Working
Group (PWG), as effectively as possible.

    b. The SIGINT (Signals Intelligence) Branch (see attachment 3)
will be responsible for all functions relating to the collection of signal
intelligence through the use of satellites. It is responsible for implementing
USIB SIGINT requirements through coordination with the COMOR and the SIGINT
Working Group (SWG)

    c. The Weather Branch (see attachment 4) will be responsible
for providing meteorological support for the plans and operations of
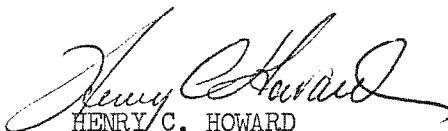the SOC Branches.

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     d. The Support Branch (see attachment 5) is responsible for insuring that all SOC software is compatible and interfaces properly with all external activities supporting the NRO. The Support Branch will act as an advisor to the SIGINT and Photo Branches on matters concerning software support. The Support Branch has no operational responsibilities, and will not represent the SOC Branches in contacts with external organizations on operational matters. The Support Branch, will however, provide operational and non-operational computer support, and operational assistance to the SOC branches as required.

     e. The Technical Executive (see attachment 6) will be responsible for the technical and administrative, supply and general maintenance functions of the SOC; and have an additional duty as Assistant Administrative Executive to Director, Office of Space Systems.

    3. Responsibilities not specifically listed herein will be accomplished by the appropriate branch. Further, as the mission and methods of operation of the SOC change, branches and units within the branches may be reorganized accordingly.

HENRY C. HOWARD
Colonel, USAF
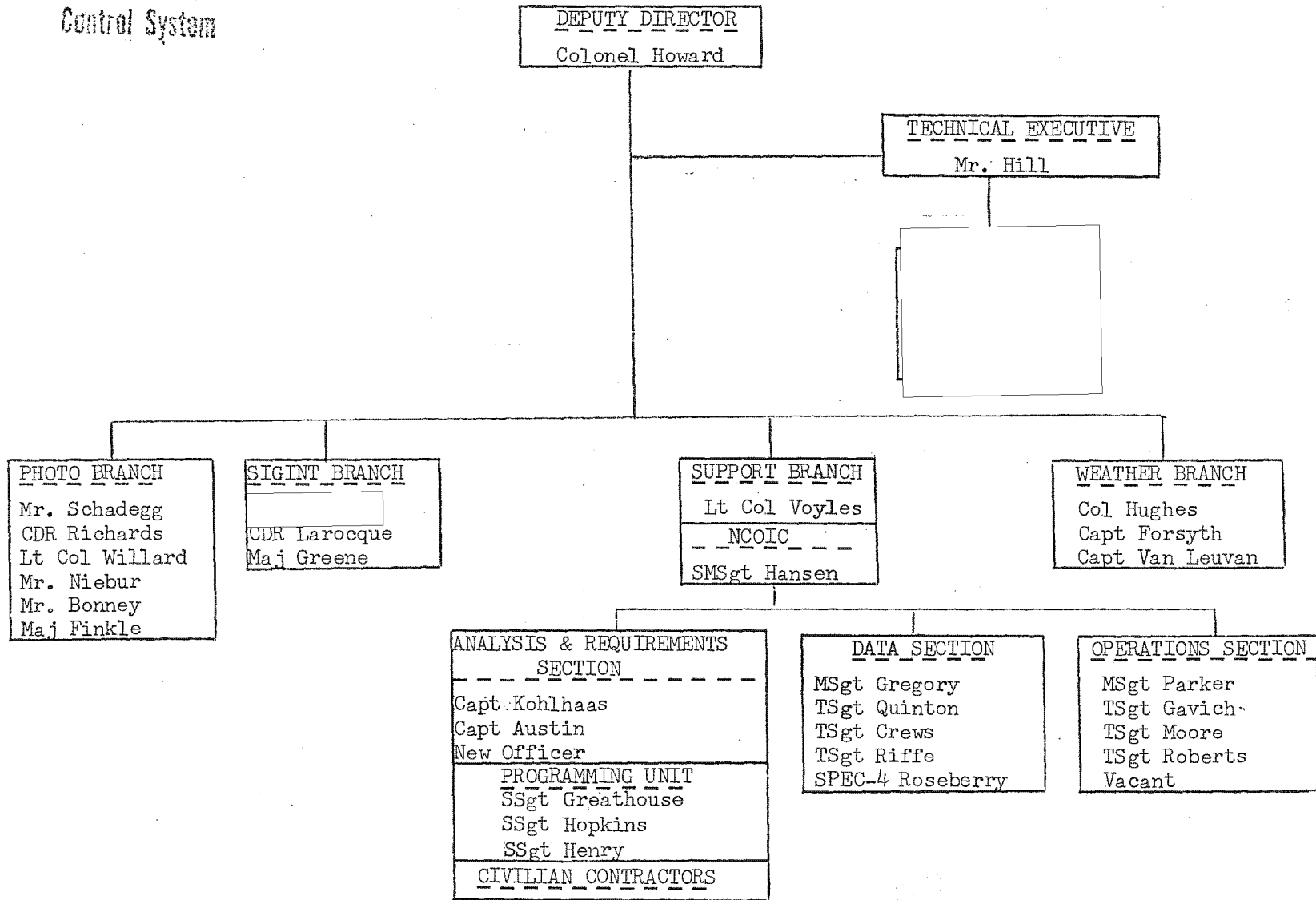Deputy Director of Operations
NRO Staff

ATTACHMENTS:

1. Organizational Chart
2. Photo Branch
3. SIGINT Branch
4. Weather Branch
5. Support Branch
6. Technical Executive

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ORGANIZATION CHART
SATELLITE OPERATIONS CENTER

DEPUTY DIRECTOR

Colonel Howard

TECHNICAL EXECUTIVE

Mr. Hill

PHOTO BRANCH

Mr. Schadegg
CDR Richards
Lt Col Willard
Mr. Niebur
Mr. Bonney
Maj Finkle

SIGINT BRANCH

CDR Larocque
Maj Greene

SUPPORT BRANCH

Lt Col Voyles

NCOIC

SMSgt Hansen

WEATHER BRANCH

Col Hughes
Capt Forsyth
Capt Van Leuvan

ANALYSIS & REQUIREMENTS SECTION

Capt Kohlhaas
Capt Austin
New Officer

PROGRAMMING UNIT
SSgt Greathouse
SSgt Hopkins
SSgt Henry

CIVILIAN CONTRACTORS

DATA SECTION

MSgt Gregory
TSgt Quinton
TSgt Crews
TSgt Riffe
SPEC-4 Roseberry

OPERATIONS SECTION

MSgt Parker
TSgt Gavich
TSgt Moore
TSgt Roberts
Vacant

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PHOTO BRANCH

1. The organization of the Photo Branch is as follows:

> Mr. John Schadegg, Branch Chief
> CDR Richards, Assistant Branch Chief and CORONA Officer
> Lt Col Willard, HEXAGON Officer
> [   ] GAMBIT Officer
> [   ] COMOR Requirements Officer
> Maj Finkle, DORIAN Officer and Branch Data Officer.

2. To most effectively fulfill its responsibilities, all Photo Branch personnel will perform mission control shifts for all photographic satellites during on orbit operations, and will, in addition, have the following specific responsibilities:

    a. <u>CDR Richards</u>

        (1)   Assistant Photo Branch Chief to Mr. Schadegg.

        (2)   Photo Branch Scheduling Officer

> Will be responsible for maintaining current (up to 90 days), programmed (one year), and long range (greater than one year) photo satellite schedules.

        (3)   Primary action officer for all CORONA operations.

        (a) Will maintain currency on all technical and operational aspects of the CORONA system at all times.

        (b) Will attend all engineering, operational and system evaluation meetings pertaining to CORONA.

        (c) Will initiate through the Branch Data Officer all operational software requirements and improvements for the CORONA program.

    b. <u>Lt Colonel Willard</u>

        Primary action officer for HEXAGON operations.

        (1)   Will maintain currency on all technical and operational aspects of the HEXAGON system.

        (2)   Will attend all engineering, operational and system evaluation meetings pertaining to HEXAGON.

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(3)   Will initiate through the Branch Data Officer all operational software requirements and improvements for the HEXAGON program.

c. [   ]

Primary action officer for GAMBIT operations.

(1)   Will maintain currency on all technical and operational aspects of the GAMBIT system.

(2)   Will attend all engineering, operational and system evaluation meetings pertaining to GAMBIT.

(3)   Will initiate through the Branch Data Officer all operational software requirements and improvements for the GAMBIT program.

d. [   ]

Primary action officer for COMOR requirement matters.

(1)   Will maintain detailed knowledge of COMOR requirements; the branches ability to satisfy same within the planned launch schedule; and the current status of accomplishments.

(2)   Coordination and liaison officer with other agencies for defining support requirements such as holiday maps, target decks, special target plots, etc.

(3)   Responsible for defining through the Branch Data Officer all software requirements and improvements designed to maintain the branches status on accomplishing COMOR requirements.

e.   Major Finkle

(1)   Primary action officer for DORIAN operations.

(a) Will maintain currency on all technical and operational aspects of the DORIAN system.

(b) Will attend all engineering, operational and system evaluation meetings pertaining to DORIAN.

(c) Will initiate through the Branch Data Officer all operational software requirements and improvements for the DORIAN program.

(2)   Branch Data Officer

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(a) Assists as action officer in designing software requirements. The single Photo Branch coordinator and liaison with the Support Branch for all software and computer support matters.

(b) Maintain continued coordination with appropriate support agencies during all software design and checkout phases to insure required software products meet desired objectives.

(c) Will initiate through the Support Branch, Analysis and Requirements Section all operational software requirements and improvements for the DORIAN program.

3. General Photo Branch responsibilities are as follows:

a. Develops and recommends for the approval of the Deputy Director SOC payload programs, orbital parameters, launch dates, and launch schedules for all assigned photo reconnaissance satellites. The branch insures that all required operational information is transmitted to system operational control elements by established deadlines. The branch is responsible for providing all data processing requirements to the Support Branch for implementation.

b. With respect to program and mission planning the branch will:

(1) Maintain current knowledge of intelligence collection requirements and provide consulting representation to the COMOR Photo Working Group.

(2) Maintain current knowledge of satellite collection capabilities.

(3) Monitor intelligence documents.

(4) Recommend long and short-range launch schedules.

(5) Maintain approved launch schedule records.

(6) Monitor status of launch schedule factors.

(7) Recommend to the Deputy director for Satellite Operations changes in collection capability which would be desirable with supporting analysis relating the proposed improved collection capabilities to USIB collection requirements.

(8) Prepare Reports Control Manuals for Satellite Operations.

(9) Conduct general pre-mission planning and coordination, including conduct of CPXs.

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(10) Develop detailed operational procedures.

(11) Attend important engineering and evaluation meetings.

(12) Coordinate activities in connection with the over-
head and peripheral reconnaissance, and satellite launch schedules.

(13) Develop contingency plans.

(14) Recommend and coordinate with the Support Branch or
other supporting agencies all new program changes to existing software
program development that produces target path selection and any other
routine affecting the satellite payload.

c. With respect to program and mission analysis the branch
will:

(1) Correlate USIB collection requirements with NRP
collection capability.

(2) Correlate USIB collection requirements with the
cumulative target coverage.

(3) Analyze the collection environment (climatology).

(4) Analyze the mission performance from an intelligence
collection viewpoint.

d. With respect to mission operations the branch will:

(1) Recommend operational orbits for the approval of
the Deputy Director SOC.

(2) Specify desired on-orbit target program options.

(3) Specify target program for each photographic mission.

(4) Specify desired launch time.

(5) Specify desired target coverage.

(6) Monitor the launch, mission progress, recovery, and
product movement until it has been delivered to the intelligence community
users.

(7) Coordinate pre-launch intelligence collection pay-
load activities.

(8) Coordinate photo-reconnaissance missions.

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(9)   Take necessary emergency action when a photo reconnaissance vehicle is predicted to reenter in a location likely to provoke undesirable reaction or disclosure.

(10)   Coordinate all auxiliary payload assignments.

(11)   Coordinate all engineering camera operations.

(12)   Recommend or delay launch dates to meet intelligence or target weather criteria within the options permitted by the launch pad and system availability, and the vehicle status.

(13)   Schedule and activate all ground, air and orbital operations of the controlled range network (CORN).

(14)   Conduct post-mission critiques to improve mission procedures and coordination.

(15)   Perform directed operational studies related to Photographic Payloads.

(16)   Maintain approved list of personnel to be notified of satellite reconnaissance operations, develop procedures for such notification, and carry out notification procedures as approved by the Director, NRO.

(17)   Brief the Deputy Director SOC on the summary status of mission progress and any need for a change in targeting criteria on a daily basis.

(18)   Know the orbital status of inactive photographic satellite reconnaissance vehicles in orbit and record date and location of reentry.

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SIGINT BRANCH

1. The SIGINT Branch will be under the direction of [   ]
    [   ] assisted by CDR George N. Larocque and Major John S. Greene.

2. The SIGINT Branch develops and recommends for the approval of the Director SOC specific payload tasking, orbital parameters, launch dates, and current (up to 90 days), programmed (one year), and long range (greater than one year) launch schedules for all assigned SIGINT-reconnaissance satellites. The branch insures that all required operational information is transmitted to system operational control elements by established deadlines. The branch is responsible for levying SIGINT data processing requirements on the Support Branch for implementation.

3. With respect to program and mission planning the branch will:

    a. Maintain current knowledge of USIB-approved intelligence collection requirements and provide representation to the COMOR SIGINT Working Group.

    b. Maintain current knowledge of satellite collection capabilities.

    c. Monitor intelligence documents.

    d. Recommend long and short-range launch schedules.

    e. Maintain launch schedule records.

    f. Monitor status of launch schedule.

    g. Recommend collection capability improvement to the Deputy Director for Satellite Operations with supporting analysis as required.

    h. Prepare Reports Control Manual for publication by Deputy Director for Satellite Operations.

    i. Conduct pre-mission planning and coordination, including conduct of CPXs as required.

    j. Develop operational procedures.

    k. Attend engineering and evaluation meetings.

    l. Coordinate overhead, peripheral reconnaissance, and satellite launch activities.

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m. Develop contingency plans.

4. With respect to mission operations the branch will:

a. Specify desired coverage.

b. Recommend operational orbits for the approval of the Deputy Director SOC.

c. Specify desired on-orbit target program options.

d. Recommends payload operation for SIGINT satellite missions for the approval of the Deputy Director SOC.

e. Recommend launch dates and specify desired launch time.

f. Monitor the launch, mission progress, readout, and product movement until it has been delivered to the designated processing organization.

g. Coordinate overhead, peripheral reconnaissance, and satellite launch activities.

h. Advise appropriate authorities when a SIGINT-reconnaissance vehicle is predicted to reenter in a location likely to provoke undesirable reaction or disclosure.

i. Coordinate all auxiliary payload assignments.

j. Coordinate all engineering payload operations.

k. Recommend payload operations in conjunction with calibration exercises for approval of the Deputy Director SOC.

l. Conduct post-mission critiques.

m. Carry out notification procedures as approved by the Director, NRO.

n. Brief the Deputy Director for Satellite Operations on the summary status of mission progress.

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WEATHER BRANCH

1. The Weather Branch will be under the direction of Colonel Lloyd C. Hughes assisted by Captains Van Leuvan and Forsyth.

2. The Weather Branch will develop and recommend methods for applying climatology and current weather to the Photo Branch operations that will best overcome weather limitations and the operation of photo satellites. The Weather Branch will prepare studies as often as necessary to determine the weather effects upon the operation of photo satellites. The Weather Branch will coordinate with the Air Weather Service and Global Weather Central to insure that all weather requirements of the SOC and the NRO Staff are provided in a timely manner.

3. With respect to program and mission planning the branch will:

    a. Maintain knowledge of current and planned photo satellite capabilities.

    b. Provide weather information that will best define the weather effects upon planned satellite operations.

    c. Develop detailed operational procedures for obtaining and using weather data.

    d. Recommend improved applications of weather information that appear desirable together with supporting analyses.

    e. Coordinate with supporting weather organizations and with other elements of the NRP that provide or use weather information in satellite photo reconnaissance to insure effective weather support.

    f. Attend meetings that involve the weather effect upon photo satellites.

4. With respect to program and mission analysis the branch will:

    a. Obtain and maintain files of world-wide climatological data applicable to current and future requirements.

    b. Analyze climatological data of various types and prepare standardized data to be maintained readily available for application to various photo satellite requirements.

    c. Prepare and present briefings on climatology.

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        d. Analyze the weather factor in mission results with the objectives of:

            (1)   Improving the weather data input for future missions.

            (2)   Improving operational decisions concerning schedules orbit selection and on-orbit operations, and,

            (3)   Improving the capability to analyze performance of present and future satellite reconnaissance systems.

        e. Prepare and present briefings on the weather effects upon past and future mission performance.

    5. With respect to mission operations the branch will:

        a. Provide climatological and forecast weather for orbit selection and scheduling.

        b. Provide snow cover data for pre-launch camera exposure settings, on-orbit camera operations and film processing.

        c. Provide weather forecasts and after the fact evaluations of cloud cover for on-orbit camera operation.

        d. Provide after the fact evaluations of cloud cover expected on exposed film to aid photo interpretation.

        e. Provide weather information for mission progress briefings and mission critiques.

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SUPPORT BRANCH

1. The organization of the Support Branch is as follows:

    Support Branch Chief:
        Lt Col Voyles

    NCOIC:
        SMSgt Hansen

    Analysis and Requirements Section: (Includes the
    Programming Unit, and Civilian Contractors)

        Capt Kohlhaas Chief, and Officer for SIGINT Projects
        Capt Austin, Officer for Search Projects
        New Officer, Officer for Surveillance Projects.

        Programming Unit:
            SSgt Greathouse, NCOIC Programmers
            SSgt Hopkins
            SSgt Henry

        Civilian Contractors

    Data Section:
        MSgt Gregory
        TSgt Quinton
        TSgt Crews
        TSgt Riffe
        SPEC-4 Roseberry

    Operations Section:
        MSgt Parker
        TSgt Gavich
        TSgt Moore
        TSgt Roberts
        Vacant

2. The general responsibilities of the Support Branch will be:

    a. Provide analytical and computational support to the SOC.

    b. Provide software analysis and development to the SOC
requirements.

    c. Insure that all SOC software is compatible and will
interface with external supporting activities.

    d. Provide data processing and development.

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e. Provide a communications interface between data lines and data equipment.

f. Supervise the conduct of operation software programming.

g. Provide guidance and advice on data flow and data formats.

h. Maintain the SOC mission tape records library.

i. Supervise the conduct of SOC studies performed or contracted.

j. Provide standard message summaries and reports as required by SOC branches.

k. Support all data processing programming and computational requirements levied by other SOC branches

l. Provide operational support by other SOC branches, and the Technical Executive.

3. The specific Section responsibilities are as follows:

a. The Analysis and Requirements Section:

This section will, in addition to its analysis and requirements responsibilities, also manage the branch Programming Unit, and Civilian Contractors working for the SOC. Other responsibilities of the Analysis and Requirements Section are:

(1) Provide software and analytical planning for SOC branches.

(2) Develop standard operating procedures for the Data Branch.

(3) Monitor the development of software programs.

(4) Maintain knowledge of NRO support software.

(5) Develop contingency plans for Support Branch operation.

(6) Provide guidance and advice concerning data processing capabilities to SOC branches as required.

(7) Provide liaison with the SOC branches.

(8) Attend engineering and evaluation meetings pertaining to the SOC operation as required.

(9) Maintain knowledge of the satellite collection capabilities.

(10) Insure that all SOC software is compatible and will interface with external supporting organizations.

(11) Supervise the Programming Unit whose responsibilities are:

(a) Prepare SOP's to insure continuity and efficient operation of the unit.

(b) Provide branch approved computer programs as required.

(c) Assist the Analysis and Requirements Section in developing software and analytical planning.

(d) Prepare programs for mission operations.

(e) Prepare specific program operation instructions to be followed by the Data Section.

(f) Shred and bag all classified material produced for and by the Analysis and Requirements Section, and the Programming Unit; and assist in the removal of classified trash from BD-944.

(12) Supervise contractor personnel to insure that all their capabilities are being fully utilized.

b. The Data Section:

(1) Prepare SOP's to insure continuity and efficient operation of the unit.

(2) Maintain close liaison with the Operations Section, and provide assistance when requested.

(3) Establish and maintain a library and reference file of historical data, tape programs, card programs, etc., filed and used by the SOC.

(4) Establish and maintain a working tape and card library.

(5) Operate computers and associated equipment to support missions, special studies, and run off test programs for programmers.

(6) Distribute machine products to the appropriate branch.

(7) Pack tapes for libraries.

(8) Punch cards as required.

(9) Prepare tape as required.

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(10) Provide standard mission summaries, reports, and histories as required by other SOC branches.

(11) Maintain the operational status of equipment, including the performance of daily preventative maintenance.

(12) Maintain security watch for machine maintenance personnel.

(13) Shred and bag classified material produced by the Data Section, but not delivered to any specific SOC section; and assist in the removal of classified trash from BD-944.

c. The responsibilities of the Operations Section are:

(1) Maintain close liaison with all SOC Branches.

(2) Maintain a close working relationship with the Data Section, and provide assistance as required.

(3) Provide Mission support.

(4) Distribution of SOC messages.

(5) Plot mission cases.

(6) Answer telephone for all branches during nonduty hours.

(7) Spot targets for special COMOR requirements.

(8) Mount maps as required.

(9) Post and process SPADAT and TIP reports.

(10) Tabulate data for special studies.

(11) Process mission message traffic (R-60, 22, 52, 34, etc.)

(12) Operate SOC equipment such as the polaroid camera, calculator and xerox machine, as required.

(13) Perform courier service for the SOC.

(14) Responsible for closing of the SOC during normal duty house. In the event assigned SOC personnel remain after normal duty hours during non-mission periods, that individual or the ranking individual will be responsible for closing the SOC. In addition, whenever non-SOC personnel (Contractors - Maintenance, etc.) remain after normal duty hours during non-mission periods, it will be the responsibility of the branch concerned to provide the necessary security watch, and to close and secure the SOC.

(15) Shred and bag classified material that has been
prepared for mission support; and with the assistance of the Data
Section, and the Programming Unit, will be responsible for the re-
moval of classified trash from BD-944.

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TECHNICAL EXECUTIVE

The Technical Executive, Mr. Hill, will be responsible for the following technical and administrative functions of the SOC:

1. The Technical responsibilities are:

 a. Collect the required papers, and documents listed on the weekly USIB agenda for the ~~Deputy~~ Director, NRO Staff.

 b. Collect, coordinate, and publish current (up to 90 days), programmed (one year), and long range (greater than one year) NRO launch schedules.

 c. Maintain liaison with CIA.

 d. Schedule conference room for briefings.

2. The Administrative Section responsibilities are:

 a. Prepare and publish numbered memoranda and SOP's.

 b. Monitor and prepare Performance Reports.

 c. Maintain leave records.

 d. Prepare travel requests and vouchers.

 e. Monitor travel obligations.

 f. Monitor trip reports.

 g. Procure supplies for the SOC.

 h. Destruction of controlled, classified material.

 i. Arrange for passes, badges, and clearances.
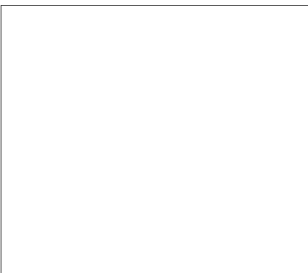
 j. Maintain SOC files.

 k. Supervise the SOC secretaries. The secretaries, however, will work primarily for the following branches:

 (1) Deputy Director for Operations

 (2) Photo Branch

 (3) Support Branch

 (4) SIGINT and Weather Branches, and Technical Executive

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During periods of absence and extra work loads, Mrs. Seckinger will supervise the work distribution of the secretaries.

    3. Act as Assistant Executive Officer to Director, Office of Space Systems