# BY ORDER OF THE COMMANDER 45TH SPACE WING





Space, Missile, Command and Control

EASTERN RANGE SCHEDULING

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This instruction defines policies, procedures and responsibilities for scheduling operations at the 45th Space Wing (45 SW) Eastern Range (ER). It defines the method by which 45 SW resources are committed for operations support. It applies to personnel of Range user agencies, project offices and 45 SW offices in the scheduling of operational instrumentation support, range modernization and sustainment and test activities. This procedure allows for scheduling Range user operation support requirements along with internal ER operations, Range Modernization and Sustainment activities. See **Attachment 1** for a glossary of terms. This document implements DoD Directive 3200.11, *Major Range and Test Facility Base Summary of Capabilities*.

#### SUMMARY OF REVISIONS

This revision updates the definition of process for scheduling operational range modernization and recognized sustainment activities not covered in UDS documents between the Range Technical Services Contractor (RTSC), Spacelift Range System Contractor (SLRSC) and Range Standardization Automation (RSA) Contractor (paragraph 2.6.); further defines NMC condition reporting to 1 ROPS/DOUS (DOUS) and RTSC scheduling representatives during Range Scheduling console operating hours and other periods; states approval authority for launch dates on the 45 SW Launch Manifest (paragraph 2.1.5.); states 1 ROPS/CC authority to place launch missions in "indefinite" scheduling status (paragraph 2.1.9.); and reference to 1st Range Operations Squadron (1 ROPS) versus 45th Range Squadron (45 RANS) throughout.

**1. Objectives and Procedures.** The objective of DOUS is to ensure all instrumentation operations are scheduled and fully supported as closely as possible to the Range user's requested date and time. This must be consistent with ER capability, economy of operation, and the standard ER working day. In attaining this objective, the following specific scheduling procedures will be applied:

- 1.1. **Standard Working Day.** The standard ER working day is 8-hours daily, Monday through Friday, excluding federal holidays. Hours of operation are:
  - 1.1.1. Cape Canaveral AFS and Patrick AFB:
    - 1.1.1.1. Normal Duty Hours: 0730L-1615L, Monday through Friday. Range contractor industrial support is available 0730L-1600L
    - 1.1.1.2. Non-Duty Hours. 1615L-0730L, Monday through Friday, and 1615L Friday through 0730L Monday. Hours outside normal duty hours include federal holidays.
    - 1.1.1.3. Overtime. Work performed outside normal duty hours.
    - 1.1.1.4. Range Scheduling Console Operating Hours. Normal Range scheduling console operating hours are: 0600L-2200L, Monday through Friday, and 0800L-1600L, Saturday and Sunday. DOUS is closed during federal holidays. Voice mail message and fax service is provided. Call-in requests outside of normal console hours are coordinated through the wing command post, who will in turn contact the 1 ROPS/DO for call-in determination.
  - 1.1.2. Downrange stations. Normal duty hours for downrange stations are:
    - 1.1.2.1. Antigua: 0730L-1630L AST (Atlantic Standard Time).
    - 1.1.2.2. Ascension: 0730Z-1600Z GMT (Greenwich Mean Time).

**NOTE:** The work period may vary from the standard working hours as required for operations support.

- 1.2. **Allocation of Range Resources.** Range instrumentation resources are committed for support by DOUS upon request and in accordance with applicable Operations Directives, Operations Control Instructions and briefing messages, range modernization and sustainment test plans and verbal agreements deemed necessary to ensure efficient use of Range resources. Resources will be allocated to support the maximum number of operation requirements.
  - 1.2.1. All use of Range instrumentation resources for the purpose of operation support, planned maintenance, calibration, modernization and sustainment activities, engineering checks, etc., whether institutional or reimbursable, will be requested through and scheduled by DOUS.
  - 1.2.2. Range instrumentation NMC condition reporting from 0530L to 1730L, Monday through Friday, is directed to the RTSC Maintenance Control Center (MCC) for wing coordination. If Range instrumentation resources are declared NMC between 1730L to 2200L Monday through Friday or 0800L-1600L Saturday and Sunday, the Range Technical Services Contract (RTSC) site representatives will report immediately to the RTSC Contractor Scheduling Office in DOUS with an explanation of cause (if known) and an estimate of the time required to return the resource to FMC condition. DOUS will forward the NMC information to the 45 SW Command Post for notification to Wing staff. If Range instrumentation resources are declared NMC between 2200L to 0530L Monday through Friday, 1600L to 0800L Saturday and Sunday or anytime during federal holidays the RTSC site representative will report the NMC condition to Command Post. Command Post will pass capability conditions status to 1 ROPS Daily Duty Officer (DDO).
- 1.3. **Scheduling Priority.** In the event of unresolved scheduling conflicts excluding launches, DOUS will assign priorities, with 45 OG/CC concurrence, when placing operations on the weekly Range Operations Schedule.

- 1.3.1. Corrective maintenance to restore a Range resource to a FMC condition for a current launch or a critical path operation will normally have priority over other non-critical instrumentation requirements.
- 1.3.2. Critical milestone pre-launch certification operations that must be successfully completed on the date requested and determined as essential to meet a user's launch date will be regarded as having priority over other operations that if scheduled for another period would not cause a launch date change.
- 1.3.3. Pre-launch instrumentation calibration checks will normally be scheduled during normal duty hours on the workday preceding launch. These checks may carry the associated launch operation priority.
- 1.3.4. Additional factors such as inter-range support, worldwide communications, national urgency, space or scientific achievement, DoD contingency exercises, comparative expenses involved, Range modernization and sustainment activities and planned maintenance will be strongly considered when determining scheduling priority.
- 1.4. Range Operations Scheduling Meetings. Two primary Range Operations Scheduling Meetings are hosted weekly. These meetings are conducted to allow all Range users to participate in planning and negotiations for allocation of Range resources. All agencies requesting or providing support should be represented at these meetings. Conflicts will be identified and resolution options will be discussed. Short notice change requests impacting previously scheduled operations may require additional meetings/telecons with parties involved to reconcile access for instrumentation resources between users. Users requesting support which potentially displaces previously scheduled operations will attempt coordination with the existing user for alternative support solutions. DOUS will review pre-negotiated compromises for Range ability to support and approve acceptable requests. Unacceptable requests will be addressed in accordance with paragraph 2.1.2.
  - 1.4.1. A weekly Launch Planning and Status Meeting is held on an established and pre-coordinated day of the week in the Range Operations Control Center (ROCC) to brief and discuss the 90-Day Range Forecast, pre-launch scheduled major operations, range modernization activities and significant work projects of interest. A free and open exchange of scheduling issues is promoted. Range user representatives are encouraged to attend this meeting to obtain insight for forecasted resource requirements.
  - 1.4.2. The Range Operations Schedule is finalized at the Weekly Range Instrumentation Scheduling Meeting normally held each Thursday at 0900L in the ROCC. Changes will be limited and additional requirements to the schedule will be allowed only if no previously scheduled requirements exist for the desired time period and the resources necessary for support are available.

## 1.5. Acceptance of Schedule Requests.

1.5.1. Requests for operation support from Range users will only be accepted from authorized scheduling representatives clearly identified by mission type and name who have been formally designated, in writing by unit commanders or commercial project directors, to DOUS. The coordination process for commercial launches from government complexes (e.g., SLC-17) is determined by the unit (SLS) commanders and commercial project directors. These commercial launch schedule requests may be submitted directly to DOUS with indication of SLS coordination if required.. DOUS will query the appropriate SLS/CC for changes submitted in this manner to ensure no con-

flict with current scheduled mission operations before proceeding with the normal schedule approval process.

- 1.5.2. All schedule requests must be accompanied with a valid Job Order Number (JON).
- 1.5.3. All operations which have a valid OD, fall within the definition of minor support, or qualified test plans and approved schedule requests will qualify for scheduling. All other requests for operation support will be considered for scheduling only after it has been determined by DOUS that sufficient information and time are available to develop and disseminate a plan for support.
- 1.5.4. Operations requested must be in compliance with EWR 127-1, *Range Safety*, (or a waiver obtained) and the hazardous procedures to be used have been approved by 45th Space Wing Safety Office (45 SW/SE). Compliance requirements apply to launches, pre-launch and countdown operations, operations of high-pressure systems, handling of propellants, radioactive source handling and corrosion control maintenance activities.
- 1.5.5. Launch date requests submitted in obvious conflict with pre-existing scheduled launch dates or critical path milestone pre-launch operations will not be placed on the 45 SW Launch Manifest. Alternative supportable launch dates will be offered. Receipt of launch date requests to DOUS establishes precedence for launch date queue consideration should previously scheduled launch dates become available.
- 1.5.6. Deviations from the OD or support document should reach DOUS no later than 1200L on the day preceding the requested support date. For changes to launch support requirements, changes should reach DOUS on the day preceding the scheduled F-1 day support. If for any reason ER cannot support the deviation as requested, the Range user will be requested to take the following action:
  - 1.5.6.1. Withdraw the deviation and run the operation as initially requested.
  - 1.5.6.2. Reschedule the operation at a later date so proper coordination with all agencies concerned may be accomplished.
- 1.6. **Schedule Control.** Resource allocation problems that arise while an operation is being conducted or during the current day's operation will be resolved by the RCO (when operating from a console position) or DOUS in consultation with the affected Range users. Authorization for minor support and deviations from support requirements, resolutions of ER and Range user conflicts and operations scrubs is the function of DOUS.
- 1.7. **Operation Cutoff Time.** The ER, in the interest of efficient operations and due to limitations for providing user support activities, may impose a Range operation termination time (cutoff). DOUS will coordinate each case with the Range user involved.
- **2. Scheduling Procedures:** DOUS serves as the Wing's impartial broker by accommodating all requests based on the philosophy that major milestone critical path launch operations will usually take precedence over reoccurring institutional test operations. The following sections describe this philosophy in detail.
  - 2.1. **Launch Slot Allocation.** Fourteenth Air Force, in providing Numbered Air Force (NAF) oversight for procedures and responsibilities for spacelift scheduling, conducts and chairs a Current Launch Schedule (CLS) semiannual review. The CLS Review Board (CLSRB) determines an executable plan for conducting space launch operations and serves as the approval authority for launch slot allocation for users of Air Force Space Launch Complexes (SLC). The CLS is an agreed to launch

schedule plan for missions from zero to 18 months in the future. When official launch/landing schedule changes occur between quarterly reviews, and the changes do not impact any other missions, the 45 SW/CC has the authority to commit the ER to a modified supportable date for a user.

- 2.1.1. Forecast of Major Launches. Range users will submit their anticipated launch requirements to the DOUS Forecast Section on 45 SW Form 2010, **Launch Forecast**. Launch requests should be submitted as soon as they are known. Information from 45 SW Form 2010 will be used to prepare the 45th Space Wing Launch Manifest. Valid and funded JON numbers must accompany this request. Requests will be processed in the order they are received.
- 2.1.2. Range users requesting launch dates in conflict with other launch dates or scheduled maintenance may negotiate support accommodations with an existing operation, provided mutual agreement is obtained from the parties impacted and ER capabilities can support the change. When negotiation between users is not possible, DOUS will determine and offer alternative supportable dates. If proposed solutions are not acceptable to the involved parties, DOUS will inform the user the conflicting request is rejected.
- 2.1.3. Requests for changes to the CLS within 18 months of launch date must be coordinated by DOUS to 1 ROPS/CC and approved by 45 SW/CC. Changes to the launch forecast that are more than 18 months from launch date will be coordinated and approved by DOUS based on T-times and Range turnaround capabilities.
- 2.1.4. Range users must submit a 45 SW Form 2050, **Launch Operation Schedule Request**, 30 calendar days prior to the forecasted date or the launch status will change to "indefinite". The launch operation will remain "indefinite" until an actual launch date/time is requested and approved.
- 2.1.5. Requests for changes to the 45th Space Wing Launch Manifest must be coordinated through DOUS to determine availability of Range resources to accommodate the proposed date change. Users may submit their launch date requests to DOUS using 45 SW Form 2010, 45 SW Form 2050, or send a signed and dated facsimile request, or at least a memorandum for record (MFR). E-mail MFRs with electronic signatures are acceptable. In evaluating the request, DOUS will consider possible impacts to critical path pre-launch operations required by other users to meet their currently scheduled launch date. Newly submitted launch date requests will be reviewed by DOUS and recommendation forwarded for 45 SW/CC approval. The 45 SW/CC approval actions will be forwarded to HQ AFSPC and 14 AF. DOUS recommendation for acceptance will be based on sufficient Range turnaround allowances for instrumentation support resources to transition from the nominal T-Zero time of one mission type to the nominal T-Zero time of a following mission type. DOUS will require verification of 45 SW/CC concurrence for launch date changes or additions prior to placing the launch on the CLS. Upon receipt of official notification, Range Scheduling will inform the customer representative submitting the request, by telephone, of 45 SW approval or the current status of their request.
- 2.1.6. A Range user's requested launch date is scheduled as a single, officially approved date. For advance planning purposes, and to maximize crew rest time following a launch scrub in-count for weather, a consecutive 24 hour recycle period is normally provided. This can also apply to a 48 hour period in consideration for a user that has scrubbed on a first attempt and may require more than 24 hours of turnaround time for a second launch attempt.
- 2.1.7. Exceptions to the rule are:

- 2.1.7.1. If a Range user requests a launch date that would allow them only one attempt prior to a date for a previously scheduled launch user, the requester will be informed that only one attempt is available. If the requesting user is not successful on their launch attempt they must agree to move to a later date that is open and supportable by the Range. The user desiring to place their launch on the Range Schedule ahead of another previously scheduled launch may negotiate inserting a schedule change with the involved user provided mutual agreement is obtained and ER capabilities can support the change.
- 2.1.7.2. If a Range user desires to submit a launch date request based on the expectation that a previously scheduled customer will not require a second day of launch opportunity, they must agree to move to alternative launch dates if the previously scheduled user elects to use a second attempt day. Any launch user wishing to advance ahead of, insert themselves between, or propose minimum turnaround time following a previously scheduled launch, may negotiate a schedule change with the users involved provided complete agreement is obtained and ER capabilities can support the change.
- 2.1.8. Range users requesting to launch on federal holidays, or a day that would fall within a standard three-day holiday weekend, must provide complete justification to and obtain approval from the 45 SW/CC. Prior approval is also required for launch date requests that result in exceeding 45 SW crew rest guidelines, found in EWR 127-1, paragraph 6.5.1.4.
- 2.1.9. After a requested change to launch dates is coordinated, approved, and the Range user notified of any stipulation affecting the launch date, the previous launch date is available to other Range customers. Range users do not always reschedule a launch date when the program date has slipped. The actual reschedule sometimes lags from days to weeks after a slip is known. Range Scheduling activities can be labor intensive when rescheduling occurs as all integrated and associated operations must be rescheduled. Additionally, there is significant impact on other Range user's operations when moving their activities because of a change. Therefore, Range users are strongly encouraged to relinquish their scheduled date and request an "indefinite" status when they determine the scheduled date cannot be met. 1 ROPS/CC retains final authority to place missions in "indefinite" scheduling status when Range users have rescheduled required pre-launch operations necessary to achieve an approved launch date, but have not requested a revised mission launch date.
- 2.2. **Scheduling of Major Pre-launch Operations.** Requests for scheduling launch operations or additions/deletions to major pre-launch operations (e.g., F-6 Flight Program Verification, user F-1s, Mission Dress Rehearsals, Combined Systems Tests, Integrated Exercises, etc.) should be submitted for forecast planning whenever a launch date is requested. No later than 30 calendar days prior to the launch date, all major readiness pre-launch operations must be included on the 45 SW Form 2050. All other schedule requests will be submitted on 45 SW Form 2091, **Operations Schedule/Forecast Request**. Additional pre-launch and post-launch operation requests will be submitted prior to 1200L Wednesday of each week for the next 1- to 2-week periods.
  - 2.2.1. Requests requiring support from other than Eastern Range resources, e.g., helicopters, weather aircraft, ships, and off-range resources such as Kwajalein Missile Range, NASA instrumentation sites, Western Range, etc., will be submitted NLT 30 calendar days prior to support date. The 45 SW helicopter support will be scheduled in accordance with 45SWI 13-204, *Scheduling and Use of Helicopters for Eastern Range Support*.

- 2.2.2. Required services and resources that are not Range Technical Services Contract (RTSC) instrumentation-related will be requested and coordinated through the Joint Base Operations Support Contractor (JBOSC). At the time of submission, customers must identify those operations that are weather sensitive or hazardous. Conflicts for resources or services that cannot be resolved by the JBOSC contractor will be channeled by JBOSC representatives to DOUS for resolution and prioritization.
- 2.2.3. Support planning of major aeronautical operations should be coordinated with the applicable 1 ROPS/DOUF Program Support Manager (PSM) prior to submitting a scheduling request.
- 2.3. Adding Requirements to a Scheduled Operation. When an operation is scheduled by OD, all support appearing in the OD will be committed to that operation except for deletions requested by or agreed to with the user or specified in an OCI. Any agency requiring instrumentation or facilities not listed in the OD must contact DOUS for determination of availability and approval for use of the equipment or instrumentation facility. DOUS will coordinate with the appropriate 45 SW or RTSC contractor planning offices to determine the ability of the ER to support the added requirements and to ensure coordinated planning. If support can be provided and adequate coordination accomplished, the equipment or facility will be added to the operation. This will constitute commitment and authorize planning agencies to issue the necessary instruction. Additional requirements for operations should be requested not later than 1200L the day prior to the requested support date.
- 2.4. **Scheduling of an Associated Operation.** An associated operation involving developmental systems, radiation or non-radiation and/or real-time flight which is concurrent with a primary launch operation will not be scheduled without the written approval of the project office conducting the primary operation. It is the responsibility of the owner of the associated operation obtaining derivative data to request such approval directly from the launch project office. The Range user desiring to schedule this type of operation will present written approval to DOUS in sufficient time to coordinate and schedule the requirements.
- 2.5. **Requests for Minor Support.** In general, instrumentation minor support consists of requirements not specifically covered by an OD, and will be considered on a case-by-case basis. (Refer to Minor Support Operations under definition for an Operation.) Requests for minor support may be made to:
  - 2.5.1. DOUS for instrumentation requests in support of Range Operations not covered by an OD.
  - 2.5.2. The RCO, if the requested support is in conjunction with an operation in progress and the RCO is operating from a console position. Requests must be coordinated with DOUS to ensure no other previously requested and scheduled operations are adversely impacted.
  - 2.5.3. Joint Base Operations Support Contract (JBOSC) Support Operations Center (SOC) whenever industrial support is required (generators, shop support, air conditioners, etc.) for support of scheduled operations.
- 2.6. Requests for Range Modernization and Sustainment Activities. A process for scheduling RSA/SLRS modernization and sustainment efforts is prescribed to establish a recognized upgrade activity on the Eastern Range. Recognized activities include, but are not limited to: analysis; demonstrations; both dry run and formal Developmental Test and Evaluation (DT&E); Installation/Integration Assembly Test and Checkout (IATC); Range system down time; upgrades; and Site Integration/Acceptance Tests.

- 2.6.1. RSA/SLRS Project Lead/Test Conductors will develop a Test Plan/Procedure detailing step-by-step action on what is to be done at the time of testing. Test Plans/Procedures are then used to complete locally produced Test Support Requirements Worksheets (TSRW) as checklists for range instrumentation sites to understand the required test configuration/setup and successfully support the RSA/SLRS activity. RSA/SLRS Project Lead/Test Conductor submits completed TSRWs to their contract specific internal schedulers for review.
- 2.6.2. RSA/SLRS schedulers will submit approved Test Plan/Procedures, TSRW and Range schedule request to designated RTSC Operations Control and System Analysis POCs no later than 10 days prior to the schedule request need date.
- 2.6.3. RTSC Operations Control will evaluate the RSA/SLRS test documentation for instrumentation support adequacy. RTSC Operations Control will determine and issue range instrumentation Operations Control Instructions (OCI) as necessary and submit a Range Schedule request form to DOUS. Conflict-free RSA/SLRS test requests will be assigned an operations number by DOUS and entered in the ER instrumentation schedule database.
- 2.7. **Operations Scrub.** DOUS will be notified immediately when Range users decide to scrub a scheduled operation. If a scheduled operation is to be scrubbed or terminated by the Range, ER and the Range user will jointly evaluate the circumstances involved and explore possible alternative solutions prior to a decision. If an operation is in progress, the decision to scrub or terminate will be jointly coordinated and agreed to between ER and the Range user prior to any announcement. The operation must be scrubbed by official actions as follows:
  - 2.7.1. Prior to pick up of Range operation count, all requests for scrubs will be directed to DOUS.
  - 2.7.2. During Range operation or launch countdown, the Range Control Officer (RCO) will be the official agent for accepting customer scrub requests. Upon notification of a scrub, the RCO will determine whether a customer will request a 24-hour or longer recycle. Prior to releasing instrumentation, the RCO will forward the user's request to the ROC who will coordinate with DOUS and Wing leadership to determine if a 24-hour or longer launch recycle is possible. If 45 SW/CC approves a new launch date, the RCO will forward this information to DOUS before instrumentation release.
- 2.8. **Rescheduling Action Following a Scrub.** A reschedule date may be requested from DOUS immediately following the scrub.
- 2.9. **Notification of Schedule Changes.** Notifications of schedule changes are made as soon as possible after a change request is approved. Only those agencies requiring reschedule information will be notified of schedule changes. Agencies requiring specific notification of schedule changes should furnish their requirements to DOUS. Rescheduling of a launch operation which advances the launch date and time by more than 12 hours from the originally scheduled date and time will be coordinated by DOUS with Safety (45 SW/SE) prior to approval for adequate pre-mission safety data processing time.
- 2.10. **Extending an Operation.** Any active operation conducted on the ER that cannot be completed during the scheduled time period will be terminated at the scheduled completion time unless a request for an extension is approved by DOUS.

2.11. **Operation Termination Reporting.** The Range user will immediately report completion, scrub, or termination of all active operations to DOUS whenever a RCO is not available at a console position.

### 3. Classification of Schedule.

- 3.1. The Range Operations Schedule will include the remarks: Unclassified, FOUO, Not For Public Dissemination.
- 3.2. Reference to any classified operation may only be made using the operation number, time, and date.
- 3.3. The classification of scheduled operations will be in accordance with the appropriate Security Classification Guide (SCG). Operation request forms will be marked with the highest classification authorized by the appropriate SCG or derivative information. Information provided on operation request forms that have different levels of classification will be portion marked with the appropriate level. Proper downgrading and declassification instructions will also be provided by the requesting agency. Operation request forms that are not properly marked will be refused by DOUS until proper markings have been applied. *NOTE:* The Range Schedule, Daily Instrumentation Schedule, 90 Day Range Forecast and Major Ops Calendars contain information that must be protected IAW AFI33-332 and DOD Reg 5400.11; Privacy Act of 1974 as Amended 5 U.S.C. 552a, and is For Official Use Only (FOUO). Range users and aerospace contractor recipients are responsible for safeguarding and maintaining Scheduling products IAW the Privacy Act of 1974, PL 93-579.
- **4. Downgrading of Scheduling Information.** The Department of Defense (DoD) or National Aeronautics and Space Administration (NASA) public releases identifying the launch of specific missiles at the ER will not automatically remove the classification of local Range scheduling information (operation number, scheduled T-time, and launch vehicle name). This information will not be declassified unless specifically approved by the local Range user project office. Public Affairs (45 SW/PA) will be the office of record for DoD and NASA releases that apply to 45 SW launch operations.
- **5. Security.** Operations Security (OPSEC) was considered in the development of this document in accordance with AFI 10-1101, *Operations Security*.

## 6. Forms Prescribed.

- 6.1. The 45 SW Form 2010, Launch Forecast.
- 6.2. The 45 SW Form 2050, Launch Operation Schedule Request.
- 6.3. The 45 SW Form 2091, Operation Schedule/Forecast Request

SUSAN J. HELMS, Colonel, USAF Vice Commander

### **Attachment 1**

# GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

### **Terms**

**Allocation of Resources**—A commitment by Range Scheduling (DOUS) for 45 SW resources required to support an operation. It includes, but is not limited to, instrumentation, frequencies, airspace and off-Range requirements.

**Built-in-Hold**—A Range user hold programmed to occur during the orderly progress of the Range countdown.

**Downtime**—The time a system, site or facility is not available to support Range operations. Downtime is required for emergency and scheduled maintenance, engineering modification, repair, Range modernization and sustainment activity, etc.

**Fully Mission Capable (FMC)**—The system, site, or facility is fully operational and capable of providing full support.

**Indefinite**—A scheduling status that may apply to any instrumentation support, launch operation, or STS launch/landing that is expected to occur, but the exact date/time has not been declared.

**Inspect and Repair as Necessary (IRAN) Maintenance**—Scheduled or emergency major maintenance repair activity requiring resources not available at the instrumentation site.

**Launch Manifest**—An official AF Space Command manifest of approved 45 SW future launches within 36 months issued by HQ AFSPC. It provides a space launch manifest planning tool for advanced operations support, conflict identification, and overall Range management.

**Not Mission Capable (NMC)**—The system, site, or facility is not operational and cannot provide support.

Operation—Any procedure that requires the use of Range resources. (1) Launch Operation: A complete countdown including ignition firing and liftoff of a missile or other launch vehicle and plus count activities. (2) Major Support Operation: An operation that requires technical planning for Range instrumentation to provide data; establishes Radio Frequency (RF) radiation restrictions that affect the ER and Range user, and requires significant involvement of major Range support. Examples include: combined systems test (CST), mission dress rehearsal (MDR), terminal countdown demonstration test (TCDT), network simulation (NETSIM), dress rehearsal at sea (DRAS), integrated crew exercises (ICE), or a major milestone pre-launch instrumentation activity. (3) Associated Operation: An operation conducted to support the objective of a major milestone event or launch related activity as its basic source. (4) Minor Support Operation: Any operation support required which is not defined in operations directives and does not require a major commitment of Range resources. Minor support operations are normally requested when time does not allow for proper documentation and should be restricted to user needs for which a minimum of prior planning is required.

**Operations Conductor**—A Range user representative who is responsible for the technical conduct of an operation. The operations conductor must be available at a console or telephone during the scheduled operation.

Operations Directive (OD)—A detailed operations plan prepared in accordance with 45 SWI99-101, 45

SW Mission Program Documents, specifying support to be provided by the Range for a particular type or series of operations.

**Operation Number (OPNR)**—A five-digit alphanumeric designator assigned to all operations scheduled on the Range. The alpha prefix changes periodically to prevent duplication and provides an unlimited supply of operations numbers. OPNRs are randomly selected by Range Scheduling to avoid any inadvertent reference to mission information. This number is used to identify, track and apply charges for support.

**Partially Mission Capable (PMC)**—The system, site, or facility is not fully operational, but may provide partial support with its remaining capability.

**Project Office**—The Range user's office designated as Office of Primary Responsibility (OPR) for conduct of operations on the ER. This is the Range user's official single point of contact for 45 SW for accomplishment of the project office's assigned programs and missions.

Range Count Time—A period of time during the countdown of an operation that includes the ER minus count and the Range user's minus count (prior to the intended T-Time) including built-in holds. Range count time also includes the ER and Range user's plus count (after the intended T-Time) of a launch liftoff or operation event.

Range Control Officer (RCO)—An individual responsible for conducting in-count operational support activities. This may include allocation of resources, imposing operation cutoffs, determining reasons and disseminating information for holds and scrubs, coordinating operation countdowns and rendering real-time authorization for launch count recycle decisions.

Range Maintenance—Scheduled maintenance activities resulting in a less than fully mission capable Range resource status. This includes, but is not limited to, refurbishment, system modifications, certifications, instrumentation installations, testing, checkout and training.

Range Operations Commander (ROC)—An individual responsible for managing the real-time operation support activities of the entire Range crew. This includes operational coordination and interaction with Wing leadership, disseminating information for holds and scrubs, coordinating operational countdowns and rendering real-time authorization for launch count recycle decisions.

Range Operations Schedule—The formally accepted ER instrumentation workload schedule. The schedule is transmitted daily, Monday through Friday, except federal holidays, and officially specifies all operations supported by Range instrumentation during the present and forthcoming week. The Range Operations Schedule is also disseminated electronically for planning purposes. The Range Operations Schedule is For Official Use Only (FOUO) and should be handled appropriately. Specific support related questions should be directed to DOUS, as schedules require continuous updates.

**Range Scheduling**—The process of allocating specific periods of Range time and resources for conducting an operation. The goal of DOUS is to ensure all customer operations are scheduled and fully supported as close as possible to the user's requested date and time.

Range User—An agent or agency authorized to conduct operations on the ER.

**Real-time Schedule**—The Real-time Schedule is a term used by DOUS to reference ER operations that have been scheduled and disseminated in the Range Operations Schedule.

**Scrub**—A determination to discontinue support for an operation that has been disseminated in the current Range Operations Schedule.

**Start-Time (S-Time)**—The time the ER begins to meet a Range user's scheduled operational support period. Equipment turn-on and calibrations are normally accomplished prior to this (S) time.

**Terminate**—The completion of a scheduled operation whether successful or unsuccessful.

**Track-Time** (**T-Time**)—The intended time a launch liftoff or major milestone event during a scheduled operation is planned to occur. The exact beginning of this time is also referred to as T-Zero (T-0).

**Turnaround Time**—The minimum support period interval required for Range instrumentation to transition between consecutive nominal launch support attempts. For example, the Range turnaround time interval required in supporting the T-0 time of one launch mission to the T-0 time of a following launch mission. Turnaround time can also refer to the requested periods of consecutive launch to major pre-launch operations support.

**Zulu Time (Z-Time)**—Also referred to as Greenwich Mean Time (GMT) or Universal Time Coordinated (UTC). Zulu Time is Eastern Standard Time plus five hours or Eastern Daylight Time plus four hours. All schedules and forecasts use this time.