



DEPARTMENT OF DEFENSE  
UNITED STATES STRATEGIC COMMAND

Reply To:  
USSTRATCOM/J006 (FOIA)  
901 SAC BLVD STE 2E20A  
OFFUTT AFB NE 68113-6000

5 November 2018

[REDACTED]  
Nautilus Institute for Security and Sustainability  
2342 Shattuck Ave. #300  
Berkeley, CA 94704

Dear [REDACTED]

This is in response to your 25 October 2018 FOIA request for Strategic Instruction (SI) 534-16, *Missile Warning and NUDET Detection Operations*. This SI has been requested twice in the past, and no additional information can be released. On 24 December 2014, Major General John Uberti, the USSTRATCOM FOIA Initial Denial Authority, denied the release of certain information pursuant to 5 U.S.C. § 552(b)(1) as the information was, and still remains, properly classified according to Executive Order (EO) 13526, Section 1.4.(a) and (g). Certain unclassified information was also denied as the information, when combined with other unclassified portions, reveals classified information pursuant to EO 13526, Section 1.7(e), and is therefore exempt from disclosure pursuant to FOIA Exemption 1. Lastly, the name on the front cover was denied under Exemption 6, as release could subject the individual to harassment and would clearly be an invasion of personal privacy.

If you are not satisfied with this action, you may appeal this response to the appellate authority, Ms. Joo Chung, Director of Oversight and Compliance, Office of the Secretary of Defense. The appellate address is: ODCMO, Director of Oversight and Compliance, 4800 Mark Center Drive ATIN: DPCLTD, FOIA Appeals, Mailbox #24, Alexandria VA 22350-1700. As an alternative, you may use the OSD FOIA request portal at <http://pal.whs.mil/palMain.aspx>; or e-mail your appeal to [OSD.FOIA-APPEAL@mail.mil](mailto:OSD.FOIA-APPEAL@mail.mil). Your appeal should be submitted within 90 calendar days of this letter and should cite case number 19-045, and be clearly marked "Freedom of Information Act Appeal."

Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, e-mail at [ogis@nara.gov](mailto:ogis@nara.gov); telephone at 202-741-5770; toll free at 1-877-684-6448; or facsimile at 202-741-5769.

Sincerely,

  
KENDALL L. COOPER  
Command FOIA/PA/CL Manager

**BY ORDER OF THE COMMANDER**

**STRATEGIC COMMAND INSTRUCTION**

**(SI) 534-16**

**26 September 2011**



**Operations, Planning, and Command and Control**

**MISSILE WARNING AND NUDET  
DETECTION OPERATIONS (U)**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements National Security Presidential Directive (NSPD) 28, *United States Nuclear Weapons, Command and Control, Safety, and Security*; Department of Defense Directive (DoDD) S-5210.81, *United States Nuclear Weapons Command and Control, Safety and Security*; Chairman Joint Chiefs of Staff Instruction (CJCSI) 6210.02B, *Information And Operational Architecture Of The Integrated Tactical Warning And Attack Assessment System*; CJCSI 6811.01B, *Nuclear Command and Control System Technical Performance Criteria*; CJCSI 3222.01, *CJCS Prioritization of C3 Nodes and Systems for High Altitude Electromagnetic Pulse Protection*; and Emergency Action Procedures (EAP)-CJCS, Vol II, EAP of the CJCS, Vol VI. A glossary of references and supporting information is included at Attachments 1.

**SUMMARY OF REVISIONS**

~~(S//REL)~~ This SI has been completely revised and must be reviewed in its entirety. Major changes include the combination of SD 523-02, SD 505-03, SD 505-06 and SD 515-02.

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**CHAPTER 1**  
**MISSILE WARNING OVERVIEW**

**1. (U) Roles and Responsibilities.**

**1.1. (U) United States Strategic Command (USSTRATCOM).**

1.1.1. (U) Commander USSTRATCOM (CDRUSSTRATCOM) supports Combatant Commanders (CCDR), North American Aerospace Defense Command (NORAD) and allies by providing the missile warning (MW), nuclear detonation (NUDET) detection, and space surveillance necessary to fulfill the U.S. commitment to the NORAD Agreement and provides assessment of missile attack if the appropriate Combatant Command is unable. USSTRATCOM also provides warning and assessment of attack on space assets. USSTRATCOM, through the USSTRATCOM/J313 Missile Warning Functional Manager's Office (MWFMO), also advocates desired ballistic and cruise missile defense and MW characteristics and capabilities for all CCDRs, including battle management, command, control, communications, weapons, sensors, intelligence systems, and integration of MW, cruise and ballistic missile defense architectures.

**1.1.2. (U) USSTRATCOM/J313 MWFMO.**

1.1.2.1. (U) The MWFMO supports USSTRATCOM's Unified Command Plan (UCP) assigned mission of providing MW data to CCDRs and advocating for MW and NUDET capabilities and characteristics. Strict control of the operational procedures and architectures is ensured through publications, such as Operations Review Boards (SI 534-14) and Configuration Control Boards (CCB) (SI 534-21 and SI 534-22). The MWFMO assists CCDRs and NORAD with identifying, examining and validating MW and NUDET requirements. The MWFMO then advocates these requirements through USSTRATCOM to the Joint Staff. There are two sections of the MWFMO: Integrated Tactical Warning and Attack Assessment (ITW/AA) and Theater.

1.1.2.2. (U) The ITW/AA Functional Manager's Office (FMO) Section is the USSTRATCOM's portion of the co-sponsored (with NORAD) ITW/AA FMO. The mission of this section is to ensure ITW/AA assessors' and forward users' operational needs are met. They also manage the ITW/AA change control process to ensure its execution across the entire spectrum of the ITW/AA system. The ITW/AA change control process is outlined in NORAD Instruction 10-3 and SI 534-22.

1.1.2.3. (U) The Theater FMO Section is responsible for supporting the needs of the CCDRs with respect to Theater Missile Warning (TMW) and their sponsored partner nations via the Shared Early Warning System (SEWS). The TMW CCB is the primary forum and process that provides change control oversight.

1.1.2.4. (U) An analysis function within the MWFMO addresses both the theater and strategic mission areas; however, the primary focus currently resides within the Theater Event System (TES). For TES, it focuses on the end-to-end operational reliability and standardization of the TMW architecture. Master Threat Code's maintenance, the Profile Working Group (PWG), the Analysis Working Group

(AWG), and the Joint Command and Control (JC2) MW Working Group (WG), fall within the purview of this section.

1.1.3. (U) Joint Functional Component Command (JFCC) for Space (JFCC Space).

1.1.3.1. (U) JFCC Space is a multi-national organization in support of USSTRATCOM's UCP missions through planning, execution, and management of assigned space forces, as directed by Commander, USSTRATCOM (CDRUSSTRATCOM). JFCC Space provides planning support to USSTRATCOM and other Joint Functional Component Command's and Joint Task Force's (JTF) strategic and operational-level objectives.

1.1.3.2. (U) JFCC Space Missile Warning Center (MWC).

1.1.3.2.1. (U) Strategic MW - The JFCC Space MWC fulfills USSTRATCOM's responsibility to NORAD by providing unambiguous, timely, accurate, and continuous ITW/AA data. This information is passed to senior authorities in the National Military Command Center (NMCC), Canadian Forces Integrated Command Centre (CFICC), United Kingdom Space Operations Coordination Centre (UK SpOCC), CCDRs, and other key agencies. Data provided by the MWC is critical to NORAD's timely North American attack assessment mission and forward reporting to above agencies. The JFCC Space MWC receives, analyzes, and disseminates event data, which culminates with a site report (Valid, Under Investigation, Anomalous, All Clear, or Cancel Site Reporting).

1.1.3.2.2. (U) Theater MW - The MWC also ensures operational TMW systems under their purview support the theaters to the level necessary to ensure TMW data, to include voice, is received at the designated command centers and applicable TIER 1 nodes. The MWC receives missile event voice reports simultaneously with theater users, via the First Detect First Report (FDFR) Conference. The MWC is responsible for theater event verification (characterization and false/real data determination). MWC personnel will use all available information to relay to theater users the true nature of a missile event, providing a "worst case" scenario and identifying known false information.

1.1.3.3. (U) Joint Space Operations Center (JSpOC).

1.1.3.3.1. (U) The JSpOC is CDR JFCC Space's command, control, and coordination node. The JSpOC provides space situational awareness (SSA), predictive analysis, protection, and operational planning and execution capability. CDR JFCC Space will plan, task, direct, and execute assigned joint space operations through the JSpOC. The JSpOC provides a 24/7 capability in support of operations and exercises, and provides commanders, USSTRATCOM Global Operations Center (GOC) and other users with the Space Common Operating Picture (COP) for SSA and Battlespace Awareness (BA). The JSpOC focuses on current operations in the near-term (within the Joint Space Tasking Order (JSTO) planning and execution cycle). The JSpOC uses the planning cycle to develop CDR JFCC Space approved Strategy, Plans, and JSTO.



1.1.3.3.2. (U) Sensor realignment decision authority rests with the JSpOC as the prime for Sensor Management of strategic missile warning assets. This includes time-sensitive realignment of either ground-based radars or space-based assets to ensure warning times, warning coverage, missile warning Operational Capabilities (OPSCAP), and Systems Capability (SYSCAP) as necessary to ensure mission accomplishment.

1.1.3.3.3. ~~(S//REL)~~ (b)(1) USSC

(b)(1) USSC Sensor Management of MW/Space Surveillance Network (SSN)/JFCC Space Missile Defense (MD) assets. During the periods when (b)(1) USSC Sensor Management, the (b)(1) USSC MW/SSN/MD Sensor Management for both 21st Space Wing (SW) and 460th SW on behalf of CDR JFCC Space. When (b)(1) USSC direct time-sensitive mission status changes of either ground-based radars or space-based assets to ensure warning times, warning coverage, and SYSCAPs are not degraded. All time-sensitive directions, recommendations, and decisions will be briefed via the Missile Warning Sensor Management loop. Decisions, which impact MD OPSCAP, will be briefed on the Ballistic Missile Defense System (BMDS) Asset Management Conference IAW SI 538-1 Vol I, BMDS Description and Asset Management. Significant decisions that affect mission status must be approved by CDR JFCC Space through the JSpOC Director.

1.1.4. (U) JFCC for Integrated Missile Defense (IMD). JFCC IMD supports USSTRATCOM's UCP missions by synchronizing operational-level global missile defense planning and coordinating global missile defense operations support, supports development of global effects for Department of Defense (DOD), provides alternate missile defense execution support when directed, collaborates with JFCC Space for multi-mission asset management.

1.1.5. (U) Joint Overhead Persistent Infrared (OPIR) Planning Cell (JOPC).

1.1.5.1. (U) The JOPC is a joint organization between USSTRATCOM, through JFCC Space, and the National Geospatial-Intelligence Agency (NGA), through Source Operations and Management Directorate (NGA/S), holistically managing OPIR operational information needs from customer input to collection planning to capabilities tasking.

1.1.5.2. (U) The JOPC is responsible for ensuring OPIR collection needs are successfully processed from initial request through planning, tasking, execution, and assessment.

1.1.5.3. ~~(S//REL)~~ (b)(1) USSC

(b)(1) USSC

1.2. (U) North American Aerospace Defense Command (NORAD). NORAD is a bi-national U.S. and Canadian organization charged with the missions of aerospace warning, aerospace control, and maritime warning for North America. Aerospace warning consists of processing, assessing, and disseminating intelligence and information related to man-made

objects in the aerospace domain and the detection, validation, and warning of attack against North America, whether by aircraft, missile, or space vehicles, utilizing mutual support agreements with other commands and agencies. Commander NORAD (CDRNORAD) validates, characterizes, assesses, and warns the governments of Canada and the U.S. of any aerospace event that threatens or has the potential to threaten North America.

1.3. (U) Missile and Space Domain (MSD). The MSD will determine attack characteristics, correlate the event, and recommend in a timely, accurate, and unambiguous manner all source information to the CDRNORAD, USSTRATCOM, NMCC, CFICC, and other key agencies. The MSD is directly responsible to the Command Center Director (CCD) for participation in the National Event and National Threat conferences. The MSD coordinates and acknowledges scheduled downtime for ITW/AA and BMDS in coordination with JFCC Space and JFCC IMD. Additionally, the MSD will coordinate with USSTRATCOM and JSpOC for re-entry information, Electro Magnetic Interference (EMI) events, ground attack on USSTRATCOM assets, inhabited space system conjunctions, and tasking of national assets for loss of strategic threat coverage.

1.4. (U) Air Force Space Command (AFSPC). AFSPC organizes, trains, and equips Air Force MW units based upon operational requirements and tasking received from USSTRATCOM. AFSPC performs this mission within a broad and complex space enterprise composed of multiple participants and organizations, both in and outside government. This space enterprise includes space systems (including space, ground, and link segments), mission needs and requirements players, a research and development establishment, a mission operations and support establishment, a development and acquisition establishment, industry partners, and international and allied participants. In the U.S. the space enterprise encompasses DOD, Intelligence Community, civil (e.g., National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration), and commercial space partners. AFSPC has a critical role as the force provider for Shared Early Warning System-Space (SEWS-S).

1.5. (U) Fourteenth Air Force (14 AF)/Air Forces Strategic (AFSTRAT). The mission of 14 AF is to organize, train, and equip forces for space operations. The organization is comprised of a headquarters and five subordinate wings that conduct a full range of space operations readiness.

1.6. (U) U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMD/ARSTRAT). USASMD/ARSTRAT is the Army Service component command to USSTRATCOM and provides planning, integration, control, and coordination of Army forces and capabilities in support of USSTRATCOM missions; serves as a proponent for space, high altitude, and ground-based Midcourse Defense (GMD); serves as the joint user representative, centralized manager, and integrator for the GMD system; develops and transitions technology and provides acquisition support to space, high altitude, and GMD; and is the force provider for the Joint Tactical Ground Station (JTAGS).

1.7. (U) Missile Defense Agency (MDA). MDA is tasked to develop and enable the fielding of elements of the BMDS capable of providing a layered defense for the homeland, deployed forces, friends, and allies against ballistic missiles of all ranges in all phases of flight. MDA also chairs the TMW CCB Engineering Subgroup, co-chairs the TMW CCB and JC2 MW WG, and provides monetary support for testing and change control efforts.

They are the Joint Requirements Oversight Council appointed Technical Executive Agent for TMW. MDA, or the military department with primary responsibility for the applicable radar, in coordination with the SEWS Program Office and respective geographic combatant commander, shall ensure that design, development, implementation, and support requirements are met for the SEWS-S mission.

1.8. (U) Joint Integrated Air and Missile Defense Organization (JIAMDO). JIAMDO is the Joint Staff point of contact for theater ballistic missile early warning and provides TMW integration support to USSTRATCOM. In addition to being the secretariat and a co-chair of the TMW CCB, JIAMDO provides funding via the Joint Distributed Engineering Plant (JDEP) to fund the Joint Early Warning Lab (JEWL), which serves as the primary venue for JIAMDO funded TMW integration tests, and leads/coordinates all TMW-related JDEP events. JIAMDO advocates for TMW issues via the Protection Functional Capabilities Board, defines TMW system interoperability, and develops operational TMW architectures, validates operational Integrated Air and Missile Defense capability through simulation and technology demonstrations, supports integration of TMW with theater missile defense and strategic missile warning mission areas, and supports integration of other space sensors and radars with the existing TMW architecture.

1.9. (U) National Geospatial-Intelligence Agency (NGA).

1.9.1. (~~S//REL~~) NGA commands, controls, and coordinates the following OPIR sensors:

(b)(1) USSC

(b)(1) USSC

unless otherwise noted. NGA

funds programs for these capabilities to meet USSTRATCOM's MW mission. NGA/S plans, tasks, directs, and executes OPIR space and ground operations through Source Strategies and Source Operations.

1.9.2. (U) NGA sensor realignment decision authority rests with the NGA/S. This includes time-sensitive realignment of space-based assets to ensure warning times and warning coverage as necessary to ensure mission accomplishment. DODD 5105.6, para 5b. references NGA as a combat support agency. NGA maintains and certifies (b)(1) USSC systems to augment OPIR MW architecture. USSTRATCOM J65 certifies NGA systems for the MW mission.

## CHAPTER 2

### MWFMO RESPONSIBILITIES

2. (U) Missile Warning Functional Manager's Office (MWFMO). The MWFMO is responsible for ensuring compliance with the UCP and CJCSI 6210.02B assigned missions of providing MW and NUDET detection data to the President of the United States (POTUS), Secretary of Defense (SECDEF), Chairman Joint Chiefs of Staff (CJCS), CCDRs, other U.S. agencies, allies, and coalition partners and advocating for MW and NUDET detection capabilities and characteristics. Compliance is ensured by the strict control of the architectures and operational procedures. The MWFMO assists the combatant commands and NORAD with examining and identifying U.S. TMW and Shared Early Warning (SEW) operational support requirements. The MWFMO then advocates these requirements through USSTRATCOM to the Joint Staff. Two sections support specific functions within the MWFMO: ITW/AA and Theater.

2.1. (U) ITW/AA FMO Section. Pursuant to CJCSI 6210.02B, in support of the MW and NUDET detection mission, CDRUSSTRATCOM and CDRNORAD have assigned USSTRATCOM/J3 and NORAD/J3 as the ITW/AA Functional Manager, and in turn, USSTRATCOM/J313 and NORAD/J351 serve as the ITW/AA FMO. Reference SI 534-22, *Mission Integrity, Change Control Management, and Test Control for the ITW/AA System*, for a thorough explanation of ITW/AA FMO change control responsibilities and SI 709-3, ITW/AA Communications and Architecture Panel, for ITW/AA architecture information.

2.2. (U) Theater FMO Section.

2.2.1. (U) The theater section fulfills UCP requirements for MW support by providing long-term stability and corporate TMW and SEW knowledge in support of CCDRs. The scope of this responsibility spans theater users, correlation centers, sensor sites, and the various implementation organizations. Key functions and organizations of the theater section include:

2.2.1.1. (U) Maintains an active role in determining suitable architecture configurations to meet operational requirements and ensuring changes to the TES baseline support operational requirements accordingly and effectively.

2.2.1.2. (U) Establishes the operations approval process and supporting structure to ensure the integrity and mission capability of the TES is maintained by tasking the appropriate users and support organizations to work specific issues as required.

2.2.1.3. (U) Serves as the advocate and focal point for standardizing procedures, training, hardware and software, and processes for upgrading TMW systems and equipment.

2.2.1.4. (U) Has the primary responsibility for all TES exercise and simulation support coordination. The Theater FMO will review, coordinate, and approve all exercise taskings and exercise scripts.

2.2.1.5. (U) Has the primary responsibility for coordination of TES support to MDA live fire events.

2.2.2. (U) TMW CCB. The TMW CCB supports the Theater FMO by providing a forum for technical and operational analysis, review, and solution recommendation to the TMW

system architecture. It is co-chaired by the JIAMDO and MDA, and ensures compliance with command policy, doctrine, plans, instructions, and technical change control, and implementation of and adherence to applicable standards. For more details on the TMW CCB organization and responsibilities, reference SD 505-7, *Configuration Control Management for Theater Missile Warning*. SD 505-7 is currently in review and will be superseded by SI 534-21.

2.2.3. (U) TMW Health Checks. The Theater FMO provides CCDRs with a comprehensive TMW system Health Check of Tier I Command and Control (C2) nodes. CCDR logistical support, to include transportation, is critical for this mission accomplishment. This assessment is required to evaluate current TMW and SEW architectures for proper equipment configurations and training standards to identify areas of sub-standard performance or areas requiring system upgrades/improvements. Health Checks conduct an assessment of all available Combatant Command (COCOM) Tier I C2 nodes. These nodes have the responsibility to provide MW distribution to subordinate units.

2.2.4. (U) SEWS. USSTRATCOM is the Supporting Commander for SEWS-S and SEWS-R and provides MW information to SEW partners. USSTRATCOM may also recommend to the geographic combatant commander's new SEWS-S/R partners and any additions to SEW information provided to partners. The Theater FMO ensures CCDR SEW requirements are included in the annual SEW Priorities Requirements package submitted to the Joint Staff. The MW FMO also acts as the liaison between sponsoring COCOMs and applicable agencies. SEWS-S is data provided by OPIR sensors and SEWS-R is data provided by radars.

2.3. (U) Operations Support and Analysis.

2.3.1. (U) Profile Working Group (PWG). The Theater FMO chairs the PWG, operating IAW an established charter outlining the roles and responsibilities for members and participants. The PWG identifies, prioritizes, approves, implements, and provides developmental feedback on profiles used in operations for strategic and theater MW as well as MD. The processes utilized by the PWG promote responsive and timely implementation of new profiles, which are provided to MW producers and receivers for implementation.

2.3.2. (U) Analysis Working Group (AWG). The AWG supports the Theater FMO and functions to promote meaningful analysis to optimize overall OPIR MW system performance. It promotes common understanding of data products and tools available to the community and is the focal point for collaborative and end-to-end analysis efforts. The AWG provides a forum for analysts to discuss common practices and anomalies, and for developing recommendations. The group will provide inputs to directives affecting analysis and measurements of effectiveness of the OPIR MW system. Any official discussions or decisions affecting OPIR MW analysis and OPIR Battlespace Awareness will be coordinated through this group to provide continuity.

2.3.3. (U) Joint Command and Control Missile Warning Working Group (JC2 MW WG). The Theater FMO and MDA/BC Co-Chair the JC2 MW WG and are guided in their responsibilities by CJCSI 3265.01 (Command and Control Governance and

Management). Composed of representatives from the Joint Staff, combatant commands, services, and agencies, the JC2 MW WG is the single authority on all MW-related requirements and implementations for the Global Command and Control System-Joint (GCCS-J).

2.3.4. (U) Missile Warning Analysis.

2.3.4.1. (~~S//REL~~) MW analysis is conducted to evaluate system performance. The Theater FMO has established operational Measures of Effectiveness for event analysis and is the office of primary responsibility for MW Analysis. The Theater FMO (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The Theater FMO will produce an operational evaluation report on each (b)(1) USSC

(b)(1) USSC

(b)(1) U The evaluation report will state performance according to the ten MOEs listed below, provide an event analysis synopsis, and, when appropriate, give guidance to improve TES element operational performance.

2.3.4.2. (U) MOEs. The Theater FMO analyst will evaluate performance using the following accuracy and timeliness standards.

2.3.4.2.1. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC as released by each reporting element in the initial and final launch message (prior to predicted impact time, if applicable) with the (b)(1) USSC This provides a quick, initial indication of TES effectiveness and accuracy.

2.3.4.2.2. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

2.3.4.2.3. (~~S//REL~~) (b)(1) USSC

The absolute value of the difference between the (b)(1) USSC

(b)(1) USSC

The smaller the difference, the better the element performance.

2.3.4.2.4. (~~S//REL~~) (b)(1) USSC

The absolute value of the difference between the (b)(1) USSC the initial and final launch message. Minimal differences are indicative of increased element performance.

2.3.4.2.5. (~~S//REL~~) (b)(1) USSC

GOC Processing and Display Subsystem - Migration (PDS-M) (b)(1) USSC

(b)(1) USSC

Minimal differences are

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indicative of increased element and supporting communications system performance.

2.3.4.2.6. (S//REL) (b)(1) USSC A determination of whether the (b)(1) USSC received falls within the (b)(1) USSC

2.3.4.2.7. (S//REL) (b)(1) USSC (b)(1) USSC

2.3.4.2.8. (S//REL) (b)(1) USSC (b)(1) USSC

2.3.4.2.9. (S//REL) (b)(1) USSC provides, minus the (b)(1) USSC Smaller differences are indicative of increased element performance. A positive difference is better than a negative difference of equal magnitude as it is better (b)(1) USSC (b)(1) USSC

2.3.4.2.10. (S//REL) (b)(1) USSC The (b)(1) USSC provides, minus GOC receipt time of the (b)(1) USSC message. A greater difference is indicative of increased element and supporting communications system performance.

2.3.4.3. (U) For the purpose of MW analysis, missiles are categorized using the following schema: category, class, family, and type.

2.3.4.3.1. (U) Category - Categories are defined by the Space Based Infrared System (SBIRS) detection capability. See section II, para 5.5.8. for amplifying information.

2.3.4.3.2. (U) Class - Class, as it refers to a missile launch event, refers to the general function of the launched missile. In the case of a ballistic missile launch, class may also refer to the range of the missile. In this context, there are four ballistic missile launch class ranges.

2.3.4.3.2.1. (U) Short Range Ballistic Missile (SRBM): land-based ballistic missile with a range of less than 1000 km.

2.3.4.3.2.2. (U) Medium Range Ballistic Missile (MRBM): land-based ballistic missile with a range of 1000 to 3000 km.

2.3.4.3.2.3. (U) Intermediate Range Ballistic Missile (IRBM): land-based ballistic missile with a range of 3000 to 5500 km.

2.3.4.3.2.4. (U) Intercontinental Ballistic Missile (ICBM): land-based ballistic missile with a range greater than 5500 km.

2.3.4.3.2.5. (U) Other missile classes are as follows.

2.3.4.3.2.5.1. (U) Submarine Launched Ballistic Missile (SLBM): ballistic missile launches by submarine.

2.3.4.3.2.5.2. (U) Space Launch Vehicle (SLV): rocket used to carry a payload from the Earth's surface into space.

2.3.4.3.2.5.3. (U) Anti-Satellite Missile (ASAT): missile designed to incapacitate or destroy satellites.

2.3.4.3.2.5.4. (U) Anti-Ballistic Missile (ABM): missile designed to counter ballistic missiles.

2.3.4.3.2.5.5. (U) Surface-to-Air Missile (SAM): guided missile from land or sea against an airborne target.

2.3.4.3.2.5.6. (U) Anti-Tactical Ballistic Missile (ATBM): missile designed to counter short range ballistic missiles.

2.3.4.3.3. (U) Family - the basic chassis of the weapon system, including all modifications. A modification of a weapon system may change the function of the newly modified weapon, but it would still be considered within the weapon system family as long as the basic chassis of the weapon system is used. As an example, the CSS-7 Mod 1, CSS-7 Mod 2, and CSS-7 Mod 3 would all be within the CSS-7 family; a CSS-6 Mod 1, CSS-6 Mod 2, and CSS-6 Mod 3 would be within the CSS-6 family.

2.3.4.3.4. (U) Type - the specific name of the missile system, to include the variant, if applicable. Type also refers to the profile selected to identify a missile launch event. The producers use the latest published surrogate list as a guide to determine the profile best suited as an alternative in the event a profile does not exist to accurately type a missile event. The surrogate list takes into consideration the class of the suitable substitute profile.

2.4. (U) Conferences and Forums. The MWFMO, in coordination with NORAD J35, conducts Missile Warning Operators Conference to provide worldwide MW operators a venue to discuss current, future, and potential issues affecting the MW community. Additionally, the MWFMO hosts a number of other conferences and forums aimed at providing MW stakeholders valuable operations information; these include the Theater Missile Warning Operators Conference, PWG, AWG, ITW/AA Operations Approval Board and TMW CCB Operations Subgroup.

2.5. (U) Asset Management. MW asset management will be accomplished IAW SI 507-4, Integrated Asset Management and the applicable JFCC Space Operating Instruction (OI). Missile defense asset management will be accomplished IAW SI 507-4 and SI 538-1 Vol I.



2.6. (U) Constellation Sustainment Assessment Team (CSAT). The Defense Support Program (DSP)/SBIRS CSAT meeting is hosted twice a year by the 14 AF and evaluates the constellation, assesses constellation health, reviews spacecraft anomalies, discusses deployment options, and ensures current and future requirements are met. Members of this meeting include: USSTRATCOM, JFCC Space, NORAD, NGA, AFSPC, and other stakeholders. Reference para 4.1.3 for further information.

**CHAPTER 3**  
**MISSION**

**3. (U) MISSION.**

**3.1. (U) Theater Missile Warning (TMW).**

3.1.1. (~~S//REL~~) TMW is the near real-time notification to operational command centers and the warfighter of a potential missile threat to a designated area of responsibility (AOR), Joint Operating Area, and/or area of interest (AOI). The Theater FMO plans, integrates, and coordinates global warning operations and support for the (b)(1) USSC

(b)(1) USSC Additionally, USSTRATCOM will manage and advocate desired MW characteristics and capabilities for all CCDRs in order to ensure global interoperability. TMW is provided primarily by the TES, (b)(1)

(b)(1) USSC

(b)(1) USSC TMW information must include estimated time to impact and estimated impact point and/or geographic area(s) at risk. Updates and refined TMW data will be provided as they become available and may be used to support refined warning.

3.1.2. (U) Assured Warning. Due to relatively short flight times of Theater Ballistic Missile (TBM) events and the required reaction time for theater forces to respond and react to these threats, theater commanders have adopted a strategy known as "assured" warning (reference para 5.5.10.1. for mission criteria). This strategy emphasizes and establishes the need and priority for the most expedient reporting timeline for TBM threats vice unambiguous reporting, therefore, accepting the increased likelihood of false event reports. The ultimate goal is to minimize the amount of time it takes for TBM warning to arrive in the affected theater. This policy allows CCDRs to maximize detection and warning of inbound missiles, thereby ensuring effective passive defense, active defense, and attack operations.

3.1.3. (U) Theater MW elements process sensor data from satellite systems, forming the data into MW reports, and disseminating the information to theater users. MW elements consist of multiple continental U.S. (CONUS) ground sites and in-theater units.

3.1.4. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

**3.1.5. (U) Combined Early Warning (CEW).**

3.1.5.1. (~~S//REL~~) CEW provides the CCDRs: U.S. Central Command (USCENTCOM), U.S. Pacific Command (USPACOM), U.S. European Command (USEUCOM), U.S. Southern Command (USSOUTHCOM), U.S. Northern Command, (USNORTHCOM) and U.S. Africa Command (USAFRICOM) the ability to receive situation awareness information on most

|                                                                 |                    |
|-----------------------------------------------------------------|--------------------|
| (b)(1) USSC                                                     |                    |
| (b)(1) USSC                                                     | CEW event data and |
| voice reporting is used by the CCDRs for situational awareness. |                    |
| (b)(1) USSC                                                     | (b)(1) USSC        |
| (b)(1) USSC                                                     |                    |

3.1.5.2. (U) The Theater FMO, in concert with Secretary of the Air Force/International Affairs (SAF/IA) and AFSPC/A8I, is the sole agency responsible for issuing guidance on the releaseability of U.S. launch activity, to include, but not limited to: ICBM, SLBM, and SLV; CONUS and Outside CONUS (OCONUS) occurring events; and MDA Live Fire events. The Theater FMO is responsible for producing official messages implementing profiles, AOIs, or anything else that modifies the TES architecture. Reference SAF/IA memo dated 10 Jan 08 and Change 2 to TES Global Missile Event Reporting Policy Clarification message, Date Time Group (DTG) 151533Z Apr 11, for further guidance.

3.2. (U) Strategic Missile Warning.

3.2.1. (U) The ITW/AA system provides unambiguous, timely, accurate, and continuous warning and characterization information to the POTUS, SECDEF, CJCS, Canadian government, UK SpOCC, duly designated CCDRs, and other users on a continuous basis during peacetime and throughout a conflict or other national crisis to support decisions necessary for situational awareness, force survival, force employment, and reconstitution. Because the consequences of national decision makers' actions are so high, there is little room for error in strategic MW. Therefore, strategic MW must be timely, accurate, continuous, unambiguous, and adhere to ITW/AA standards, per references in Attachment 1.

3.2.2. (~~S//REL~~) Strategic Missile Detection and Warning. OPIR sensors usually provide the first level of immediate missile detection.

|             |
|-------------|
| (b)(1) USSC |
| (b)(1) USSC |

detection.

|                            |             |
|----------------------------|-------------|
| 3.3. ( <del>S//REL</del> ) | (b)(1) USSC |
| (b)(1) USSC                |             |

**CHAPTER 4**  
**OPIR SENSOR SYSTEMS AND GROUND COMPONENTS COMMON TO BOTH**  
**THEATER AND STRATEGIC MISSILE WARNING**

4. (U) Overhead Persistent Infrared (OPIR) Sensor Systems and Ground Components.

4.1. (U) OPIR Sensor Systems.

4.1.1. (U) Space Based Infrared System (SBIRS).

4.1.1.1. (S//REL) SBIRS is a (b)(1) USSC (b)(1) USSC  
(b)(1) USSC The baseline SBIRS architecture includes the residual  
(b)(1) USSC  
(b)(1) USSC and is operated by JFCC Space via the 2 Space  
Warning Squadron (SWS) and 11 SWS. The SBIRS (b)(1) USSC  
(b)(1) USSC

communications links. The MCS receives SBIRS (b)(1) USSC from the MCSB-H and processes them with DSP data (if available) to create event reports for transmission to forward users.

4.1.1.2. (S//REL) SBIRS (b)(1) USSC SBIRS (b)(1) USSC  
(b)(1) USSC TMW threats.  
The sensor has (b)(1) USSC  
(b)(1) USSC and is  
used solely for strategic MW coverage (b)(1) USSC Dedicated (b)(1) has a  
(b)(1) USSC and is used for both strategic and theater coverage. The  
embedded (b)(1) USSC This  
will provide the ability for SBIRS (b)(1) USSC

4.1.1.3. (U) The 460 SW, located at Buckley AFB, CO, is responsible for operations of the SBIRS constellation and reports warning information to USSTRATCOM and NORAD early warning centers and MW forward users, theater CDRs, the BMDS, allies, and other users.

4.1.2. (U) Subpoint Control Authority. CDRUSSTRATCOM is the final approval authority for repositioning satellites and for approving subpoint assignments. The SBIRS CSAT, office of primary responsibility is 14 AF/CC (AFSTRAT), who recommends satellite repositioning and sub-point placement to USSTRATCOM for CDRUSSTRATCOM approval. Attachment 3, Figure A3.2 illustrates the potential SBIRS sub-points and Field of View (FOV) coverage.

4.1.3. (S//REL) (b)(1) USSC  
(b)(1) USSC

(b)(1) USSC The field of view and revisit rate varies depending upon the operating mode. The sensor can (b)(1) USSC (b)(1) USSC Sensor data is certified for TES and ITW/AA by USSTRATCOM J65. Sensor commanding occurs at (b)(1) USSC which performs initial event characterization at the ground station, while follow-on analysis is performed (b)(1) USSC (b)(1) USSC is Classified Source 2.

4.2. (U) Ground Components.

4.2.1. (~~S//REL~~) (b)(1) USSC organizes, trains and equips, including manning support, and performs operations for (b)(1) USSC (b)(1) USSC architectures. (b)(1) USSC (b)(1) USSC DSP and SBIRS data through a (b)(1) USSC (b)(1) USSC

4.2.2. (U) Mission Control Station (MCS).

4.2.2.1. (U) The MCS is operated by the 14 AF through the 460 SW, 460 Operations Group. JFCC Space operates the SBIRS mission through the 2 SWS and 11 SWS, with manning support provided by the 8 SWS, an Air Force Reserve unit, and multiple foreign national partners. The MCS is comprised of the facilities and equipment located at Buckley AFB, CO.

4.2.2.2. (~~S//REL~~) The MCS supports both the TES and ITW/AA architectures. TMW is supported by releasing applicable theater data over the TES communications architecture. ITW/AA is supported by releasing applicable strategic data over the ITW/AA communications architecture. The MCS fuses data (b)(1) USSC (b)(1) USSC (b)(1) USSC SBIRS MCS may include all available satellite data into their messages (DSP, (b)(1) USSC SBIRS (b)(1) USSC under direction of the on-duty crew commander (CDR). The MCS is the primary (b)(1) USSC (b)(1) USSC

4.2.2.3. (U) Parallel/Backup Operations. Two fixed ground SBIRS sites (MCS/IMCSB and SMCS) are operating at the same time. While two sites are operational (parallel), both are capable of releasing data simultaneously over appropriate data communications paths. This is a common occurrence during scheduled transfers. However, only one SBIRS site can be prime at anytime. The other operational SBIRS site will be in backup.

4.2.3. (U) Interim MCS Backup (IMCSB).

4.2.3.1. (~~S//REL~~) The IMCSB is located in (b)(1) USSC acts as the interim backup to the MCS, and provides backup SBIRS processing capability. The IMCSB is (b)(1) USSC

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4.2.3.2. (~~S//REL~~) The Interim Test Center (ITC) facilities (b)(1) USSC  
(b)(1) USSC operated by the Combined Task Force (CTF), a joint DOD and industry  
team. The ITC is set to perform (b)(1) USSC  
(b)(1) USSC

4.2.4. (U) MCSB - HEO (MCSB-H).

4.2.4.1. (U) The MCSB-H is operated by the 11 SWS and Detachment 1 of the 8  
SWS, an Air Force Reserve unit. The MCSB-H is located at Schriever AFB, CO.

4.2.4.2. (~~S//REL~~) The MCSB-H (b)(1) USSC  
(b)(1) USSC Command requests are sent to the  
(b)(1) USSC

DSP data is transmitted via the appropriate communications system to end users.

4.2.5. (U) Relay Ground Stations.

4.2.5.1. (~~S//REL~~) RGS-P. RGS-P is a relay ground station (b)(1) USSC  
(b)(1) USSC  
The asset consists of (b)(1) USSC  
(b)(1) USSC

4.2.5.2. (~~S//REL~~) RGS-M. RGS-M is a relay ground station (b)(1) USSC  
(b)(1) USSC The asset consists of two (b)(1) USSC  
(b)(1) USSC

4.2.5.3. (U) RGS-B. RGS-B is a relay ground station co-located with the MCSB at  
Schriever AFB, CO. The asset consists of two SBIRS/DSP transmit/receive antennas  
(S-band, K-band, and Q-band compatible). Only one of the two antennas is currently  
operational.

4.2.5.4. (U) RGS-E. RGS-E is a relay ground station located near Menwith Hill,  
United Kingdom. The asset consists of two SBIRS/DSP transmit/receive antennas  
(S-band, K-band, and Q-band compatible). It is fully operational for contingency  
operations of DSP satellites.

4.2.5.5. (U) RGS-Contractor (RGS-C). RGS-C is a relay ground station co-located  
with the IMCSB at Boulder, CO. This asset consists of two SBIRS/DSP receive-only  
antennas (S-band only) supporting contractor testing efforts as well as the IMCSB  
and can relay data to the MCS if required.

4.2.5.6. (~~S//REL~~) (b)(1) USSC and Survivable Relay Ground  
Station (SRGS). The (b)(1) USSC and consists of  
(b)(1) USSC

|                                                                       |                               |             |             |
|-----------------------------------------------------------------------|-------------------------------|-------------|-------------|
| (b)(1) USSC                                                           | Survivable RGS (SRGS)) and is | (b)(1) USSC | A legacy    |
| (b)(1) USSC                                                           |                               |             |             |
| Survivable data from the SRGS is provided to the SMCS via a dedicated |                               |             | (b)(1) USSC |
| link.                                                                 | (b)(1) USSC                   |             |             |
| (b)(1) USSC                                                           |                               |             |             |

## CHAPTER 5

### THEATER MISSILE WARNING

#### 5. (U) Theater Architecture.

##### 5.1. (U) Theater Event System (TES).

5.1.1. (~~S//REL~~) The TMW mission, including SEW, is largely accomplished by the TES and supports theater users primarily for passive defense, but also supports attack operations and active defense. The TES processes OPIR data from (b)(1) USSC (b)(1) USSC into mission event and situational awareness data in the form of MW events, (b)(1) USSC (b)(1) USSC messages. These messages are then sent over IBS-S, Integrated Broadcast Service-Interactive (IBS-I) and voice circuits (b)(1) USSC. In the future, (b)(1) USSC (b)(1) USSC As a supporting CCDR, CDRUSSTRATCOM executes the Theater Warning aspect of the MW mission in support of CCDRs and by extension, all theater users within their geographic AOR.

5.1.2. (U) Mission Scope. The TES is used to meet the theater users' requirements for MW and OPIR information in support of situational awareness of the operational environment. The TES is not part of the ITW/AA system, although the two systems share some mission commonality and components.

5.1.3. (~~S//REL~~) TES Elements. The TES (b)(1) USSC processing and reporting elements: (b)(1) USSC (b)(1) USSC (b)(1) USSC through a dedicated data exchange circuit. (b)(1) USSC can be fused (b)(1) USSC (b)(1) USSC (b)(1) USSC Reference Attachment 2, Table A2.1 for (b)(1) USSC.

5.1.4. (U) Joint Tactical Ground Station (JTAGS). JTAGS is the in-theater element of the TES. JTAGS receives and processes direct downlink (DDL) data from up to three DSP satellites within its FOV. (b)(1) USSC (b)(1) USSC JTAGS can establish serial data feeds in Tactical Data Inter-Computer Message Format (TDIMF) and TAB 37 formats in addition to IBS-S and IBS-I dissemination in support of the TES. TAB 37 reports inject directly into a local Global Command and Control System (GCCS), with further dissemination via GCCS COP Sync Tool. JTAGS can also provide data directly into theater LINK-16 networks via line of sight radio transmissions and/or serial connection. JTAGS is assigned to the 1st Space Brigade of USASMD/ARSTRAT. There are four operational employed JTAGS detachments: A Detachment in Germany, (JTAGS-EUR); B Detachment in Qatar, (JTAGS-CEN); C Detachment in South Korea, (JTAGS-KOR) and D Detachment in Japan, (JTAGS-JPN). A fifth suite of equipment located in



Colorado Springs, CO, supports operator initial qualification training and may be used to replace a damaged or destroyed system. Reference para 5.5.7 for information on (b)(1) USSC

(b)(1) USSC

5.1.5. (S//REL) (b)(1) USSC element of TES. (b)(1) USSC and receives and fuses (b)(1) USSC (b)(1) USSC MCS through a dedicated exchange circuit and receives and fuses (b)(1) USSC (b)(1) USSC

5.1.6. (S//REL) (b)(1) USSC sensors hosted on (b)(1) USSC (b)(1) USSC respectively, that provide (b)(1) USSC (b)(1) USSC meet the warning needs of USSTRATCOM. (b)(1) USSC is part of the OPIR sensor (b)(1) USSC The program provides persistent (b)(1) USSC (b)(1) USSC for supporting a variety of users and mission areas, such as technical intelligence and BA, with particular emphasis on MW. (b)(1) USSC messages and reported on IBS.

5.2. (U) Command, Control & Communications (C3).

5.2.1. (U) Integrated Broadcast System - Simplex (IBS-S) and IBS-Interactive (IBS-I).

5.2.1.1. (S//REL) IBS-S and IBS-I data can be received by (b)(1) USSC (b)(1) USSC U.S. personnel via tactical receivers such as (b)(1) USSC (b)(1) USSC (b)(1) USSC IBS-S and IBS-I are the primary means for transmission of TMW data, while IBS-Network (IBS-N) provides a backup capability. (b)(1) USSC (b)(1) USSC in the near future.

5.2.1.2. (S//REL) (b)(1) USSC

(b)(1) USSC

5.2.1.3. (S//REL) (b)(1) USSC

(b)(1) USSC

5.2.1.4. (S//REL) (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

5.2.2. (~~S//REL~~) LINK-16. LINK-16 networks are (b)(1) USSC and not part of the TES or TES architecture; however, JTACS has the ability to provide TMW data via LINK-16. LINK-16 is an improved communication, navigation, and identification system (b)(1) USSC

(b)(1) USSC

data over LINK-16.

5.2.3. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.3. (U) TES Capability (TESCAP). Description. TESCAP is an overall assessment of the TES ability to meet TMW operational requirements. The MWC determines TESCAP through a combination of the overall OPSCAP of the TES elements. Each element determines its own OPSCAP (per AOI/tasked area) using the worst case status of three criteria: Sensor, Processor, and Communications.

5.3.1. (~~S//REL~~) TES Coverage Requirements. The TES elements are scheduled for operations to maintain (b)(1) USSC The TES elements (excluding (b)(1) USSC will notify the MWC and their respective component operations centers of individual

(b)(1) USSC

5.3.2. (~~S//REL~~) TESCAP determination: If one TES element is (b)(1) USSC

(b)(1) USSC

(b)(1) USSC TESCAP is based on the best overall OPSCAP for each AOI. The MWC will notify the affected theater of any TESCAP changes. (Attachment 4, Table A4.12.).

5.3.2.1. (~~S//REL~~) DSP OPSCAP and Theater Satellite Capability (SATCAP). Each DSP satellite will have an associated SATCAP (b)(1) USSC

(b)(1) USSC

capability of each satellite is reviewed on a (b)(1) USSC

(b)(1) USSC

The JSpOC is the central agency for determining and notifying the MWC of changes to SATCAP. The MWC will notify the TES elements of changes in theater SATCAPs to aid in OPSCAP determination.

5.3.2.2. (U) DSP sensor OPSCAP is based on the system receiving quality data from a sufficient number of DSP sensors to achieve the accuracies stated in system specifications. Additionally, for determination of AOI OPSCAP status ratings, 100% stereo coverage of an AOI is necessary for an AOI to be considered OPSCAP green. Minimum Detectable Signal (MDS) is used in lieu of SATCAP to determine OPSCAP for AOIs in which the SCUD B (SS-1C) is not the minimum detectable theater missile. In these instances, the MDS equates to the minimum detectable theater missile in that AOI. MDS is automatically calculated by the SBIRS system and provides real-time, AOI-specific SATCAP. (Attachment 4, Table A4.14.).

5.3.2.3. (~~S//REL~~) SBIRS is relieved from reporting yellow OPSCAP changes when

(b)(1) USSC

(b)(1) USSC

SBIRS will inform the JSpOC and MWC of OPSCAPs resulting in the AOI going from green to red. When the situation improves, or if the AOI is already red, SBIRS will notify the JSpOC and MWC of an AOI OPSCAP return to green. This exception is in place to reduce the number of OPSCAP notifications placed to the JSpOC and MWC.

5.3.3. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.3.4. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.3.5. (U) TES Maintenance/Downtime. TES elements are required to forecast downtimes and provide this information to the MWC. The MWC consolidates and deconflicts inputs, maintains the master schedule, and has the responsibility to approve/disapprove the schedule. For real-time requests, TES elements must obtain approval from the MWC.

5.3.6. (U) Management of TES Coverage. The MWC is responsible for managing overall TES coverage to ensure theater warning is available and can modify maintenance downtimes to ensure TESCAP remains GREEN when possible. Each TES element is required to notify the MWC and their respective component operations centers 30 minutes and five minutes prior to scheduled downtime.

5.3.7. (U) Outages.

5.3.7.1. (U) General. When an OPSCAP change occurs which exceeds, or is expected to exceed two minutes, TES elements will immediately report the outage, cause, and estimated time of return to operations (ETRO) to the MWC and other applicable entities. Sites do not need to report outages not expected to exceed two minutes. Information about any ongoing outage lasting longer than two minutes in duration is classified and must be reported by secure means. Upon termination, an outage generally becomes unclassified. The MWC will report the overall TESCAP to the affected theater(s). When the outage no longer exists, the TES element will immediately notify the MWC and other applicable entities of the change in OPSCAP status.

5.3.7.2. (U) Scheduled Outages. The TES element crew commander must obtain approval before performing any maintenance that will degrade site OPSCAP. Site personnel will contact the MWC and other applicable entities for verification and final approval of scheduled outages 30 minutes and five minutes prior to outage start time. If the MWC disapproves the downtime (e.g., to maintain TESCAP coverage), an attempt will be made to reschedule as soon as possible. If approved, the site may be recalled from the scheduled downtime when the TES element's coverage is required. Upon outage completion, TES elements will immediately notify the MWC and other applicable entities of the change in OPSCAP status.

5.3.7.3. (~~S//REL~~) IBS Broadcast Outages. Each broadcast operations center will assess outages and notify the MWC when an outage is expected (b)(1) USSC (b)(1) USSC or will otherwise affect the timely delivery of TMW data to theaters. The MWC will provide broadcast outage notification to the TES elements and the affected theater headquarters (HQ) via the appropriate FDFR Conference.

5.4. (U) Theater Area of Interest (AOI) Coverage.

|                                          |                                                                                                                                                                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.4.1. ( <del>S//REL</del> ) (b)(1) USSC |                                                                                                                                                                                                                                                                            |
| (b)(1) USSC                              |                                                                                                                                                                                                                                                                            |
| (b)(1) USSC                              | The missile threats for each AOI will be developed by NASIC in coordination with the PWG, and implemented by USSTRATCOM/J31 via the Theater FMO for the supported CCDRs. Additionally, the PWG, through the AOI subgroup, defines specifics for AOI boundaries (b)(1) USSC |
| (b)(1) USSC                              |                                                                                                                                                                                                                                                                            |

(b)(1) USSC

5.4.2. (~~S//REL~~) AOI Management. The Theater FMO has overall TES AOI management responsibility. USSTRATCOM/J313 proposes changes to the AOI database (e.g., geographic areas and missile profiles) through the PWG. (b)(1) USSC

(b)(1) USSC

5.4.3. (~~S//REL~~) MCS normally monitors and reports events (b)(1) USSC

(b)(1) USSC

5.4.4. (U) JTAGS normally monitors and reports its full field of view. For OPSCAP reporting reference message DTG 011820Z Feb 10. Criteria for, and prioritization of, OPIR events to be reported: intensity and/or duration

5.4.5. (~~S//REL~~) Period of Interest (POI) Notification Procedures. (b)(1) USSC

(b)(1) USSC

5.5. (U) Data Warning.

5.5.1. (U) TES elements disseminate warning messages over IBS-S and IBS- I. Additional update messages using the same track number may be released if they provide more accurate warning messages to theater users (e.g., missile retyping and additional data points). JTAGS also has additional data dissemination capabilities as described in para 5.1.4.1.

5.5.2. (U) IBS-S Message Descriptions.

5.5.2.1. (~~S//REL~~) Missiles. The Launch and Observation Reports are transmitted upon initial operator release (Attachment 2, Table A2.2.). The Launch Update,

(b)(1) USSC

TES elements will transmit operational-flagged TMW messages using (b)(1) USSC

(b)(1) USSC

5.5.2.2. (~~S//REL~~) (b)(1) USSC The following series of reports are authorized for release. Update reports will be transmitted as required. TES elements will transmit (b)(1) USSC

(b)(1) USSC

5.5.2.3. (~~S//REL~~) SE (Static and Non-Static) (Attachment 2, Table A2.4.).

(b)(1) USSC

5.5.2.4. (~~S//REL~~) ALERT (b)(1) USSC The primary purpose and benefit of the ALERT message is for (b)(1) USSC

(b)(1) USSC

(b)(1) USSC The ALERT messages allow SBIRS operators the ability to report activity on (b)(1) USSC

The validity requirements for an ALERT event are (b)(1) USSC

(b)(1) USSC

(b)(1) USSC Reference Attachment 2, Table A2.15.

5.5.2.5. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.5.2.6. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.5.2.7. (~~S//REL~~) Operational Status Reports (Attachment 2, Table A2.5.). These reports are automatically transmitted by each TES element (b)(1) USSC to the IBS-S inject node, or can be transmitted manually by the TES operator to verify communications connectivity. If a TBM, (b)(1) USSC report is released, the operational status reports will (b)(1) USSC

(b)(1) USSC

The reports are displayed at a static location. Operational Status Reports will be transmitted to verify communications status connectivity after a system outage, prior to declaring OPSCAP Green.

5.5.2.8. (~~S//REL~~) Source Identification (b)(1) USSC

(b)(1) USSC

5.5.3. (U) IBS-I Message Descriptions.

5.5.3.1. (S//REL) Missiles. The TES elements use (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

IBS-I reports are output using a variety of formats, with (b)(1) USSC being the most common for TMW.

5.5.3.2. (S//REL) (b)(1) USSC

(b)(1) USSC

The TES elements use (b)(1) USSC. TES elements will transmit operational-flagged aircraft messages using the (b)(1) USSC

(b)(1) USSC

IBS-I aircraft update reports are transmitted based on established criteria (reference Attachment 2, Table A2.13.). If autotracks (system generated) are released initially, updates must be sent as soon as practical.

5.5.3.3. (S//REL) ALERT (b)(1) USSC

The primary purpose and benefit of the ALERT message is for (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The ALERT messages allow SBIRS operators the ability to report activity on (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

Reference Attachment 2, Table A2.15.

5.5.3.4. (S//REL) (b)(1) USSC

(b)(1) USSC

5.5.3.5. (S//REL) (b)(1) USSC

(b)(1) USSC

5.5.3.6. (S//REL) Operational Status Reports (Ops OK) (Attachment 2, Table A2.9.). To reduce the disruption to real world collection platforms caused by the TES elements transmitting the traditional IBS-I "Fully Operational" messages, the TES elements will (b)(1) USSC. Operational status reports are automatically transmitted by each TES producer element to the IBS-I inject node, or can be manually transmitted by the TES operator to verify communications connectivity. The required timeline for transmitting operational status reports for IBS-I is at least once every (b)(1) USSC. This allows forward users to verify the communications connectivity status of the TES elements. After a system outage and prior to declaring OPSCAP Green, the TES element will transmit an operational status report(s) and verify its IBS-I transmission capability by calling another unit receiving IBS-I, or the IBS-I node for receipt verification.

5.5.4. (~~S//REL~~) Mission Event Processing. Mission event processing includes generating event reports, reviewing event reports to determine validity, releasing valid event reports to the IBS networks, and providing voice report via the appropriate FDFR Conference. TES mission events currently include (b)(1) USSC

TES elements will release over (b)(1) USSC

(b)(1) USSC

5.5.4.1. (U) Two Action Release. During peacetime operations, TES elements will implement two action release procedures to disseminate MW data messages. Two action release is defined as an operator being required to take two separate actions to release a missile event message (e.g., having to enter the release button twice prior to releasing a missile event message). Two action release is required to reduce the potential for inadvertent releases. During a crisis or wartime situation, single action release may be implemented at the site commander's discretion.

5.5.4.2. (~~S//REL~~) Report Timelines. As practical, the goal is to ensure (b)(1) USSC

(b)(1) USSC

however, it is understood that this (b)(1) USSC

(b)(1) USSC

In order to achieve predictability and consistency for when a first report can be expected, TES producers should strive to ensure the initial IBS-I/IBS-S message arrives in theater at a minimum of not later than (b)(1) USSC Operators will not delay release to confirm event typing. TES elements will use all information available to ensure the highest probability of correct event typing. If additional information presents itself, TES elements must update the initial report with the new data. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC Release reports in support of battlespace awareness (reference para 5.5.9.) as soon as practical (b)(1) USSC since the last data point collected. Unless directed otherwise by the MWC, TES operators will not release a (b)(1) USSC

(b)(1) USSC

since the last data point was collected.

5.5.4.3. (U) Reporting Errors.

5.5.4.3.1. (U) False Report. A false report is a released missile event report not meeting the release criteria in Attachment 2, Table A2.12. or that did not occur. The TES element involved will immediately send an event cancellation data message, and initiate the FDFR Conference and report an event cancellation IAW section II, para 5.5.6.10.4.4.

5.5.4.3.2. (U) Mission Failure. A mission failure is a missile event meeting defined release criteria in Attachment 2, Table A2.12. not released by an operator. A missed missile event constitutes mission failure.



5.5.4.3.3. (U) Double Release. Release of a single valid missile event with two different track numbers from the same TES element constitutes a double release. To avoid confusion to users, the TES element involved will immediately send a Cancel Data Message for one of the messages, and immediately activate the appropriate FDFR Conference and report the valid missile IAW established procedures.

5.5.4.3.4. (~~S//REL~~) Event mistyping. Event mistyping is defined as the occurrence of one of the following at final report: (1) reporting a theater missile as a CEW event or vice versa (2) reporting a (b)(1) USSC or vice versa (3) reporting an event meeting (b)(1) USSC

Correct typing is critical as this prompts certain actions at the operational and strategic levels. If additional information presents itself, TES elements must update the initial report with the new data and reactivate the FDFR (reference para 5.5.6.10.2.). TES elements will provide comments in daily Situation Report (SITREP) to highlight mistyping causes when a known mistyping has occurred. Any additional information will otherwise be reported via the FDFR Conference using established procedures.

5.5.4.4. (U) Reporting Error Procedures. If an event reporting error is caused by a system problem, the TES element will accomplish required actions to prevent further release of false data. If necessary, the TES element will disable the dissemination systems to prevent further reporting errors until the problem is corrected. USSTRATCOM component commands must report all system problems IAW current guidance.

5.5.5. (~~S//REL~~) CEW Reporting. Release of CEW events will be in accordance with current TES event release criterion as described in section II, para 5.5.4.2, Report Timelines. Further CEW information can be found in para 3.1.5.

5.5.6. (U) Voice Reporting.

5.5.6.1. (~~S//REL~~) Voice Reporting. Voice reporting is used to verify (b)(1) USSC

(b)(1) USSC

(Attachment 2, Table A2.1.)).

5.5.6.2. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

5.5.6.3. (~~S//REL~~) Voice Reporting Architecture. The voice reporting architecture is based on an initial FDFR event report followed by a voice summarization report

performed by the MWC. (b)(1) USSC  
(b)(1) USSC

5.5.6.4. (~~S//REL~~) The FDFR Conference will be activated for all ballistic missile launch activity and may be activated to provide amplifying missile event information (e.g., IBS-S/I broadcast outages, space surveillance information, and OPSCAP changes). In the event a TES element is unable to initiate the conference (b)(1) USSC (b)(1) USSC for any of the previously stated events, the MWC will bring up the conference. The MWC will control the FDFR Conference and is responsible for maintaining proper conference protocol. If the MWC is not able to participate on the appropriate FDFR Conference for a real world event, the initiating TES element will assume control of the conference and must provide voice summarization IAW section II, para 5.5.6.8.

5.5.6.5. (~~S//REL~~) (b)(1) USSC  
associated events released over IBS should not be reported over the FDFR Conference. (b)(1) USSC  
(b)(1) USSC

5.5.6.6. (~~S//REL~~) FDFR Conference Initiation. The FDFR Conference begins with an initial voice report. (b)(1) USSC  
(b)(1) USSC

5.5.6.7. (~~S//REL~~) The TES element initiating the FDFR Conference will report using the applicable formats beginning with section II, para 5.5.6.8. (b)(1) USSC  
(b)(1) USSC

5.5.6.8. (U) Voice Summarization. The FDFR Conference initial voice report is followed by an MWC query of the remaining TES elements for their report(s). The intent of the MWC query is to provide additional information associated to an event

(e.g., additional area(s) at risk) from secondary observing TES elements to provide a cumulative assessment (i.e., worst case scenario) of the event the MWC must report the most accurate information to theaters during the summarization. The MWC is authorized to discount invalid information during the summarization and provide clarification when appropriate.

5.5.6.9. (U) Call Signs. Units will use call signs listed in Attachment 2, Table A2.11. to accomplish voice reporting and summarization. **Note:** The Theater FMO is responsible for maintaining the FDFR Conference polling sheets and unit call signs.

5.5.6.10. (U) Voice Report Formats. Units will use the following voice report formats, as required, to accomplish initial voice reporting and voice summarization.

5.5.6.10.1. (U) Initial Voice Report Format. The initiating TES element will activate the appropriate FDFR Conference and immediately pass the following:

This is (TES CALL SIGN), Standby for missile launch report. (Repeat 2 times) (Preface with "exercise, exercise, exercise," if required).

This is (TES CALL SIGN) with (a Single or Multiple) launch(es) from (nearest country of launch origin).

Areas/Sectors at risk are: (When required by theater Concept of Operations (CONOPS), report Areas/Sectors at risk IAW supported theater CONOPS).

**Note:** Upon completion of the initial voice report, the initiating TES element or the MWC will poll the appropriate FDFR conferees.

5.5.6.10.2. (U) Update Voice Report Format. If the FDFR Conference has been terminated and a missile event update occurs changing the class of missile, increasing the impact ellipse or the original threatened area changes due to change in missile type, the respective TES element(s) will reactivate the FDFR and contact MWC for update reporting using the following format:

This is (TES CALL SIGN), Standby for update missile launch report. (Preface with "exercise, exercise, exercise," if required).

This is (TES CALL SIGN) (Report only those lines different from earlier reports).

**Note:** Upon completion of the update voice report, the initiating TES element or the MWC will poll the appropriate FDFR conferees.

5.5.6.10.3. (U) If an FDFR conferee fails to acknowledge when polled, the reporting TES element will reply, "Nothing Heard," and continue polling the remaining FDFR conferees. The method used to relay to missing conferees will normally be via an alternate direct line. It is at the discretion of all FDFR conferees whether to remain on a conference throughout the duration of the event. Operational necessity may require FDFR conferees to abort the FDFR Conference due to more critical tasks during a missile event. The MWC or TES element should expect no response from some users, particularly during real world events. In the event a Tier 1 user must drop from the FDFR Conference, the statement, "Break, Break, This is (TES callsign) Out" will be used to inform the MWC the

Tier 1 user is departing the net and has all necessary information to complete in-theater warning requirements.

5.5.6.10.4. (~~S//REL~~) Voice Summarization Format. Immediately following the initial voice report, the initiating TES element will turn control of the FDFR Conference over to MWC by stating, (b)(1) USSC. The MWC will accomplish the summary confirmation beginning with a poll of the applicable TES elements as follows:

(b)(1) USSC

5.5.6.10.4.1. (~~S//REL~~) After all TES elements have reported, the MWC will report the most accurate information by providing the following summary:

“(b)(1) USSC” (Preface with “exercise, exercise, exercise,” if required).

(b)(1) USSC

5.5.6.10.4.2. (U) After the MWC completes the summary report, it will conduct a final poll of the Tier 1 nodes by stating: “(Tier 1 node call sign), how copy, over?”

5.5.6.10.4.3. (U) Multiple Events. If additional events occur while the FDFR Conference is activated, the detecting TES elements will break in and state, “Break, break. This is (TES CALL SIGN)” and pass additional event information. The MWC will then proceed with voice summarization.

5.5.6.10.4.4. (U) Canceled Events. In the event a TES element releases any data report, excluding SAM/ABM events, it did not intend to release, or otherwise determined was invalid or did not occur (False Reports, Double Release, and Non-Reportable Events only), the releasing TES element will use the following format: “This is (TES CALL SIGN). (Preface with “exercise, exercise, exercise,” if required.) Cancel, Cancel, Cancel, (Single/Multiple or strategic missile) launch(es) (from nearest country of launch origin or track number).”

5.5.6.10.4.5. (~~S//REL~~) The MWC will then initiate the cancellation summary. MWC will poll the remaining TES elements as follows: “(b)(1) USSC

(b)(1) USSC”

5.5.6.10.4.6. (U) When polled by MWC, the TES elements will report: “(TES CALL SIGN). All clear.”

5.5.6.10.4.7. (S//REL) After all the TES Elements have reported, MWC will provide a cancellation summary. (b)(1) USSC B. (Preface with “exercise, exercise, exercise,” if required.) (b)(1) USSC (b)(1) USSC

5.5.6.10.4.8. (U) After the cancellation summary the MWC will conduct a poll of the FDFR conferees as follows: “(CALL SIGN), how copy, over?”

5.5.6.11. (S//REL) CEW Event Voice Report. (b)(1) USSC (b)(1) USSC

**Note:** The MWC will accomplish a summary confirmation for CEW events when two or more TES producers transmit data for the event. To minimize the lengthy polling process, for all CEW FDFR Conference event reports, the only Tier 1 conferee polled will be the CCDR HQ. CCDR HQs are responsible for ensuring their respective Tier 1 agencies receive appropriate CEW event notification.

5.5.7. (S//REL) Catastrophic Backup. MCS and the SMCS are (b)(1) USSC (b)(1) USSC In the event of a catastrophic failure (i.e., complete loss of capability to process and disseminate strategic MW) affecting both sites, (b)(1) USSC (b)(1) USSC (b)(1) USSC will use the release rules, typing, and voice reporting timelines defined in section II, para 5.5.4.2.

5.5.7.1. (S//REL) (b)(1) USSC As this mode of operations is a contingency mission, (b)(1) USSC (b)(1) USSC

5.5.7.2. (S//REL) (b)(1) USSC (b)(1) USSC

5.5.7.3. (S//REL) (b)(1) USSC (b)(1) USSC

(b)(1) USSC

**Note:** After catastrophic failure initial voice warning is complete, the MWC will proceed with summary confirmation procedures.

5.5.8. (U) TES Missile Categories/Characterization.

5.5.8.1. ~~(S//REL)~~ TES Missile Launch Event Categories. Missile events are (b)(1) USSC

(b)(1) USSC

5.5.8.2. ~~(S//REL)~~ Category I. (b)(1) USSC

(b)(1) USSC

5.5.8.2.1 Range: (b)(1) USSC

5.5.8.2.2. Burn Time: (b)(1) USSC

5.5.8.2.3. Maximum Intensity: (b)(1) USSC

5.5.8.2.4. Average Motion: (b)(1) USSC

(b)(1) USSC

5.5.8.2.5. (b)(1) USSC

(b)(1) US

5.5.8.3. ~~(S//REL)~~ Category II. This category of missiles (b)(1) USSC

than Category I, but the systems are (b)(1) USSC

(b)(1) USSC

This category has been expanded to include targets such as (b)(1) USSC

(b)(1) USSC These missiles have the following general performance parameters:

5.5.8.3.1. Range: (b)(1) USSC

5.5.8.3.2. Burn Time: (b)(1) USSC

5.5.8.3.3. Maximum Intensity: (b)(1) USSC

5.5.8.3.4. Average Motion: (b)(1) USSC

(b)(1) USSC

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5.5.8.3.5. (b)(1) USSC

(b)(1) USSC

5.5.8.4. (~~S//REL~~) Category III. This category consists of a (b)(1) USSC

(b)(1) USSC

TES may be able to process based on timing, weather conditions, geometry, system configuration, and operator proficiency. (b)(1) USSC

(b)(1) USSC

5.5.8.4.1. Range: (b)(1) USSC

5.5.8.4.2. Burn Time: (b)(1) USSC

5.5.8.4.3. Maximum Intensity: (b)(1) USSC

5.5.8.4.4. (b)(1) USSC

(b)(1) USSC

5.5.9. (~~S//REL~~) Battlespace Awareness. TES supports BA by providing OPIR information in the form of (b)(1) USSC and ALERT reports. Some examples of events that might be reported as Battlespace Awareness are (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

and events not meeting missile event release criteria. TES elements (b)(1) USSC Battlespace Awareness. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

5.5.9.1. (U) Customers can submit ad hoc requests through the JOPC. TES elements will optimize their respective systems to the maximum extent possible, without impacting their primary mission, to support ad hoc requests. Requests should contain the following information:

5.5.9.1.1. Activity type expected.

5.5.9.1.2. Supported Operations.

5.5.9.1.3. Start and stop dates/times support is required.

5.5.9.1.4. Area or areas to be observed, defined by coordinates and/or a point or points defined by a coordinate and radius.

5.5.9.1.5. Criteria for, and prioritization of, OPIR events to be reported: intensity and/or duration.

5.5.9.2. (~~S//REL~~) (b)(1) USSC reports will be released as soon as possible after they are determined valid by the TES element. (Use the criteria in Attachment 2, Table A2.13. to determine event validity). Update (b)(1) USSC reports according to the criteria in Attachment 2, Table A2.13. (b)(1) USSC have the following general performance parameters:

5.5.9.2.1. Average Motion: (b)(1) USSC

5.5.9.2.2. Intensity: (b)(1) USSC

5.5.9.2.3. Altitude: (b)(1) USSC

5.5.9.2.4. Ground Speed: (b)(1) USSC

5.5.9.3. (~~S//REL~~) Special Events are OPIR data that cannot be characterized as a (b)(1) USSC but may be of interest to theater forces or (b)(1) USSC. Examples of SEs are (b)(1) USSC.

OPIR data from known static locations are not considered SEs. The most common situation requiring reporting SEs is during support to characterization of the operational environment. (b)(1) USSC

(b)(1) USSC (Use the criteria in Attachment 2, Table A2.14. to determine event validity). SEs have the following general performance parameters:

5.5.9.3.1. Average Motion: (b)(1) USSC

5.5.9.3.2. Intensity: (b)(1) USSC

5.5.9.3.3. Altitude: (b)(1) USSC

5.5.10. (U) Theater Mission Criteria.

5.5.10.1. (~~S//REL~~) Mission Criteria. Mission event reports must be reviewed to determine validity prior to release via the tactical broadcast networks. The USSTRATCOM goal is to preserve the integrity and confidence in the TES by releasing only valid mission event reports. However, the theater user requirement for no greater than (b)(1) USSC.

Category II and III missiles). To standardize reporting procedures, the following mission criteria will apply (Attachment 2, Tables A2.12., A2.13., and A2.14.).

5.5.10.2. (U) Mission Criteria Definitions. The following definitions have been derived from operational launch data and are general guidelines to aid in determining event validity for all TMW OPIR assets, to include SBIRS HEO.

5.5.10.2.1. (~~S//REL~~) (b)(1) USSC Ballistic missile reports should show (b)(1) USSC. For missiles, (b)(1) USSC.

(b)(1) USSC

(b)(1) USSC Category II missiles normally (b)(1) USSC

(b)(1) USSC

(b)(1) USSC Typically, Category III missiles (b)(1) USSC

(b)(1) USSC



5.5.10.2.2. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

This is represented by a single point on the mission displays.

The system uses representative returns displaying a single data point for the

(b)(1) USSC

OPIR source. Most valid mission events will show

(b)(1) USSC

5.5.10.2.3. (~~S//REL~~) Logical Intensity. With respect to the data points collected, ballistic missile reports (b)(1) USSC

(b)(1) USSC

depending on the OPIR source.

5.5.10.2.4. (~~S//REL~~) Logical Location. The location of a TBM launch should be

(b)(1) USSC

TBMs are (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

region considerations. Static OPIR data

within a predicted TBM impact area associated to a TBM launch is an example of a resulting missile impact.

5.5.10.2.5. (~~S//REL~~) Logical Ground Speed (b)(1) USSC

(b)(1) USSC

5.5.10.2.6. (~~S//REL~~) Logical Altitude (b)(1) USSC

(b)(1) USSC

5.5.10.2.7. (~~S//REL~~) Sources. Consider data or lack of data from all available sources, including intelligence sources. Ex: if a missile event report is generated from an area covered by more than one SBIRS sensor, (b)(1) USSC

(b)(1) USSC

5.5.11. (~~S//REL~~) TES Producer AAR. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The AAR

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will be prepared and delivered as soon as possible after the launch event and contain, at a minimum, the following information:

- 5.5.11.1. (b)(1) USSC [redacted]
- 5.5.11.2. (b)(1) USSC [redacted]
- 5.5.11.3. (b)(1) USSC [redacted]
- 5.5.11.4. (b)(1) USSC [redacted]
- 5.5.11.5. (b)(1) USSC [redacted]  
(b)(1) USSC [redacted]
- 5.5.11.6. (b)(1) USSC [redacted]

5.5.12. (U) TES Exercise Support.

5.5.12.1. (U) TES Exercise and Test Support. The Theater FMO is the focal point for all TES exercise and simulation support. The Theater FMO will review, coordinate, and approve all exercise tasking and exercise scripts, and will ensure the JSpOC is prepared as the real-time point of contact for short notice exercise and test issues such as changes, cancellations, or feedback.

5.5.12.2. (U) The MDST is the USSTRATCOM J31 TES model of choice and is a key component in TES exercise support; however, TES producers may emulate themselves for the purposes of participating in exercises and tests. MDST simulates SBIRS, (b)(1) USSC [redacted] missile events and can inject these events over LINK-16, IBS-S, and IBS-I and is capable of activating the FDFR conference. MDST is the only USSTRATCOM certified TES simulator.

5.5.12.3. (U) Exercise and Test Coordination. Coordination with all affected unified commands is required prior to TES elements or simulation systems injecting exercise messages over the IBS-S or IBS-I. IBS-S and IBS-I are the primary operational broadcast systems used to deliver TMW exercise event data to all theaters.

5.5.12.4. ~~(S//REL)~~ All missile event exercise traffic must be coordinated through the Theater FMO using the TES Consolidated Exercise Support Request (CESR) message at Attachment A2.2 at least 30 days prior to the start of the exercise scenario. The requesting agency must coordinate any events originating from or impacting in another theater AOR before requesting support from the Theater FMO. It is the responsibility of the requesting agency to ensure the technical accuracy of the TES exercise injects. (b)(1) USSC [redacted]

(b)(1) USSC [redacted]

(b)(1) USSC [redacted] The Theater FMO will determine whether a requested TES element can support the exercise request. The Theater FMO will coordinate with (b)(1) USSC [redacted]

(b)(1) USSC [redacted]

(b)(1) USSC [redacted] The TES elements will inform the

MWC via secure means using this timeline (b)(1) USSC

(b)(1) USSC

5.5.12.5. (~~S//REL~~) Once coordination of the CESR with all applicable TES elements has been accomplished, the Theater FMO will release a TES exercise support message (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The Theater FMO will review and approve/disapprove exceptions on a case-by-case basis. When within the 72-hour execution window, (and outside the Mon-Fri Theater FMO duty schedule) if termination of the exercise or events within an exercise is required or if a TES element is unable to support the exercise as tasked, the element must notify the

(b)(1) USSC

5.5.12.6. (U) On an exception basis, changes may be permitted within six hours of execution. The only producer permitted to make rapid changes under these circumstances is MDST. These exceptions will be detailed in the 232 message. The exceptions are granted for exercises requiring flexibility to make on-the-fly adjustments due to the dynamic nature of the training environment such as with Aegis.

5.5.12.7. (U) Exercise and Test Design. To the greatest extent possible, TES elements will use operational hardware, software, and operational procedures for exercises and tests. For each exercise or test requiring TES support, the Theater FMO will determine if the TES processor elements or a simulation device will support the exercise or test, taking into account the requirements of the requesting agency. The Theater FMO will provide the MWC and all participating TES elements or simulation organizations the missile launch scenario, voice reporting requirements, and templates, if different from real world.

5.5.12.8. (U) Exercise Methodology. The TES elements must keep exercise and real-world data separate and clearly identified. It should be noted that although TES elements use real world CIs for exercises, these messages are tagged and displayed as exercise. The MWC will normally have the theater representative's displays set to receive real-world data. Upon notification from the TES elements of an exercise, the MWC will ensure the PDS-M is configured to receive real-world and exercise data as appropriate. The requesting agency will specify in the CESR whether MDST or a TES Producer will initiate the FDFR Conference.

5.5.12.9. (U) The Theater FMO is also the primary coordinator for TES support of MDA live fire events. The Theater FMO will coordinate events and publish a 232

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message with the pertinent data for all participating TES elements. The FMO will coordinate with the JSpOC for tasking verbiage to be placed in the JSTO.

5.5.13. (U) DELOGs. Reference Section III, para 6.20.19 for additional information.

CHAPTER 6

STRATEGIC MISSILE WARNING

6. (U) Operations of the Integrated Tactical Warning and Attack Assessment (ITW/AA) System.

6.1. (U) ITW/AA System. The ITW/AA System consists of facilities, equipment, communications procedures, and personnel attributes essential to complete the mission. The primary mission of the ITW/AA System is to provide unambiguous, timely, accurate, and continuous warning and characterization information to the national leadership, Joint Staff, designated combatant commanders, NORAD, and other users for assessment of attacks through all levels of conflict. Additionally, data from the ITW/AA System will, to the greatest extent feasible, be made available for use to a broad range of users outside the traditional ITW/AA mission set at the appropriate classification level. Data ambiguity and operational impacts of data transmitted beyond the ITW/AA point of demarcation resides with the users of the data.

6.2. (U) Missile Warning Center. Strategic MW - The JFCC Space MWC supports the USSTRATCOM responsibility to CDDRs for providing unambiguous, timely, accurate, and continuous warning, and NUDET and space re-entry data. The MSD will pass this information to senior authorities in the NMCC, CFICC, UK SpOCC, U.S. combatant commands, and other key agencies.

6.2.1. (U) Alternate Relocation Facilities (no change of command and control).

6.2.1.1. (~~S//REL~~) Alternate Command Center (ACC). For situations requiring the

(b)(1) USSC

(b)(1) USSC

to the ACC without interruption of MW mission support. If the MW correlation function must be

(b)(1) USSC

6.2.1.2. (~~S//REL~~) (b)(1) USSC For situations requiring the MW mission to relocate (b)(1) USSC the MWC will immediately relocate to an alternate location within the (b)(1) USSC with minimal interruption of MW mission

(b)(1) USSC

6.2.1.3. (U) (b)(1) USSC

(b)(1) USSC

6.2.2. (U) Alternate Command and Control Facilities/Centers (change of command and control).

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6.2.2.1. (~~S//REL~~) (b)(1) USSC  
(b)(1) USSC  
(b)(1) USSC Reference para 6.7. for further information.

6.2.2.2. (~~S//REL~~) (b)(1) USSC if the appropriate CDR is unable.

6.2.2.3. (~~S//REL~~) The (b)(1) USSC is USSTRATCOM's (b)(1) USSC  
(b)(1) USSC

information, capabilities, and command relationships.

6.3. (U) ITW/AA Elements. The USSTRATCOM certified ITW/AA architecture consists of elements, both MW and NUDET, that fall within the following categories: Information Sources, Warning Nodes, Correlation Nodes, and Forward Users. (b)(1) USSC

(b)(1) USSC

Additionally, the following forward users have Missile Warning Display capability via the Situational Awareness Distribution System Secret Internet Protocol Router Network (SIPRNET) connectivity: (b)(1) USSC

(b)(1) USSC

6.4. (U) Survivable/Endurable (S/E).

6.4.1. (U) The ITW/AA survivable missions use facilities, equipment, and systems that are information sources, correlation nodes, forward user systems, personnel at those locations, and communications paths between all components. The ITW/AA survivable missions require unambiguous, accurate, and continuous information to the national leadership and forward users with potentially degraded timeliness until physically destroyed. (b)(1) USSC

(b)(1) USSC

6.4.2. (~~S//REL~~) The SMCS is one of the (b)(1) USSC SBIRS architecture and does not have DSP command capability. It processes three DSP

(b)(1) USSC  
(b)(1) USSC When activated, SMCS has a day-

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to-day peacetime role of processing up to (b)(1) DSP satellites. SMCS (b)(1) USSC  
(b)(1) USSC The SMCS is the peacetime processing and reporting component of the (b)(1) USSC The backup for the SMCS is the MGS.

6.4.3. (U) The ITW/AA endurable missions require unambiguous, timely, accurate, and continuous information. Endurable elements will endure through all phases of conflict with predictable and graceful performance degradation as the threat environment becomes increasingly hostile. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The ballistic missile warning/NUDET detection capabilities are required to have endurable elements.

6.4.4. (S//REL) (b)(1) USSC

(b)(1) USSC

6.5. (U) U.S. NUDET Detection System (USNDS). USNDS provides space-based sensor capability in support of pre-, trans-, and post-attack scenarios. It provides a

(b)(1) USSC

6.5.1. (U) Integrated Correlation and Display System (ICADS).

6.5.1.1. (S//REL) ICADS is the fixed site data processing and reporting system of the USNDS, which reports (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

6.5.1.2. (~~S//REL~~) (b)(1) USSC

(b)(1) USSC

that are sent to all Strategic MW users, AFTAC, and other selected users. Operation and maintenance of the ICADS is the responsibility of AFTAC.

6.5.1.3. (~~S//REL~~) NUDET Follow-On Reports. (b)(1) USSC

(b)(1) USSC

6.5.2. (~~S//REL~~) In the event (b)(1) USSC

(b)(1) USSC

#### 6.6. (U) Ground Based Sensors.

6.6.1. (U) Ground Based Radars are now comprised of two configurations: EWRs and UEWRs. In support of MD, these radars have received a major hardware and software upgrade. These upgrades allow the radars to perform all three missions (MW, MD, and SSA) simultaneously. (b)(1) USSC

(b)(1) USSC

The MW functionality remains unchanged. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

Eventually, the remaining EWRs will be upgraded with common UEWR software and hardware.

#### 6.6.2. (U) Early Warning Radars (EWR).

6.6.2.1. (U) The primary mission is to provide warning of SLBM or ICBM attack against the CONUS, Alaska, and Canada. The secondary mission is to provide space surveillance, tracking, reporting, and Space Object Identification (SOI) on Earth Satellite Vehicles (ESV) as collateral sensors of the Space Surveillance Network (SSN).

6.6.2.2. (U) EWRs consist of two AN/FPS-123 dual-faced phased array radars located at Clear AFS, AK, and Cape Cod AFS, MA. Both Cape Cod AFS and Clear AFS have (b)(1) USSC

(b)(1) USSC



6.6.3. (U) Upgraded Early Warning Radars (UEWR).

6.6.3.1. (U) The co-primary mission is two-fold; 1) provide warning and assessment of a ballistic missile attack against the CONUS, Alaska, and Canada; 2) provide state vector and covariance information for MD. Fylingdales has an additional mission to provide warning of a SLBM, IRBM, and/or MRBM against Great Britain and Europe. The secondary mission is to provide space surveillance, tracking, reporting, and SOI on ESV.

6.6.3.2. (U) UEWR sites are located at Thule Air Base, Greenland; Beale AFB, CA; and Royal Air Force (RAF) Station, Fylingdales, England. The 7 SWS operates Beale, the 12 SWS operates Thule and the RAF Air Command operates Fylingdales. Attachment 3, Figure A3.1. illustrates the radar coverage.

6.6.3.3. (U) UEWR consists of three Solid State Phased Array Radar Systems. AN/FPS-132 two-faced solid state phased array radars are at Beale and Thule. Both Beale and Thule have (b)(1) USSC

(b)(1) USSC Fylingdales is an AN/FPS-132 three-face solid state phased array radar. (b)(1) USSC  
(b)(1) USSC

6.6.4. (U) Perimeter Acquisition Radar Attack Characterization System (PARCS).

6.6.4.1. (U) Primary mission is to provide warning and attack characterization of an SLBM or ICBM attack against the CONUS, Alaska, and Canada. The secondary mission is to provide space surveillance, tracking, reporting, and SOI on ESV.

6.6.4.2. (S//REL) The PARCS radar (AN/FPQ-16) is a (b)(1) USSC

(b)(1) USSC It provides unique ICBM attack assessment information and radar coverage of SLBM (b)(1) USSC and provides support to the SSN. PARCS (b)(1) USSC

(b)(1) USSC PARCS has an elevation of (b)(1) USSC  
(b)(1) USSC Attachment 3, Figure A3.1. illustrates the radar coverage.

6.7. (S//REL) Mobile Ground System (MGS). The MGS is a strategic asset providing (b)(1) USSC space-based OPIR and NUDET ITW/AA reporting.

6.7.1. (S//REL) The (b)(1) USSC provide this capability. Each FPAK consists of a MGT (b)(1) USSC  
(b)(1) USSC

6.7.2. (S//REL) One FPAK can (b)(1) USSC In order to cover the global ITW/AA threat areas (Atlantic, Pacific, and East), a minimum of (b)(1) USSC FPAKs are required. The type and quality of event data reported by the MGT are limited due to (b)(1) USSC NUDET processing is limited to (b)(1) USSC The MGS can operate in peacetime, contingency, and wartime environments.

6.7.3. (U) MGS Peacetime Operations (Day-to-Day).

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6.7.3.1. (~~S//REL~~) The MGS (b)(1) USSC (b)(1) USSC Data is available to the MGT through DDL (b)(1) USSC (b)(1) USSC

6.7.3.2. (~~S//REL~~) For scheduled outages, the MGS (b)(1) USSC (b)(1) USSC OPIR and NUDET coverage. (b)(1) USSC (b)(1) USSC to adjust manning and provide the required coverage for the pre-determined time.

6.7.3.3. (~~S//REL~~) For unscheduled outages, the recall requirement for the first DSP FOV is no later than (b)(1) USSC (b)(1) USSC DSP FOV is no later than (b)(1) USSC and the third DSP FOV no later than (b)(1) USSC For unscheduled outages, (b)(1) USSC (b)(1) USSC DSP FOV coverage can be provided (b)(1) USSC (b)(1) USSC manning support. Any peacetime tasking (b)(1) USSC (b)(1) USSC manning.

6.7.3.4. (~~S//REL~~) The MGS will not be recalled to cover (b)(1) USSC (b)(1) USSC The MGS may receive tasking required to support contingency operations (e.g., maintaining IR SYSCAP GREEN, covering for a SBIRS site outage).

6.7.3.5. (~~S//REL~~) When not otherwise scheduled/tasked by JSpOC, the MGS may schedule live operations for crew proficiency training or in conjunction with scheduled (b)(1) USSC (b)(1) USSC The JSpOC will pass 24-hour advance notification of any scheduled MGS operations for training or proficiency purposes to the MSD and MWC crews.

6.7.4. (U) MGS Contingency Operations.

6.7.4.1. (~~S//REL~~) The MGS has Contingency Operating Locations (COL) at (b)(1) USSC (b)(1) USSC These facilities provide the MGS with the ability to receive (b)(1) USSC

6.7.4.2. (~~S//REL~~) COLs can be used in the event (b)(1) USSC (b)(1) USSC MGS assets need to be dispersed due to natural or enemy threats at the MOB, or while waiting for airlift to OCONUS locations.

6.7.5. (~~S//REL~~) MGS (b)(1) USSC (b)(1) USSC When deployed, the MGS fulfills a critical role in the (b)(1) USSC (b)(1) USSC By utilizing (b)(1) USSC

6.7.6. (U) MGS Wartime Operations.

6.7.6.1. (~~S//REL~~) The MGS primary wartime mission is to provide (b)(1) USSC (b)(1) USSC OPIR and NUDET operations for a (b)(1) USSC (b)(1) USSC

6.7.6.2. (~~S//REL~~) The MGS requires DDL data from (b)(1) USSC (b)(1) USSC OPIR/NUDET threat coverage. The required (b)(1) USSC (b)(1) USSC

pre-selected locations upon mobilization to meet data availability requirements.

6.7.6.3. (~~S//REL~~) One MGT (b)(1) USSC (b)(1) USSC

of communications, and to ensure the platform meets availability requirements. For (b)(1) USSC

6.7.6.4. (~~S//REL~~) The MGS will use (b)(1) USSC (b)(1) USSC command and control requirements during wartime operations. MGS may pass OPSCAPs, SYSCAPs, and site reports (b)(1) USSC (b)(1) USSC to MCCC or MWC. (During peacetime exercises, the MGS will pre-coordinate 24 hours in advance with both JSpOC and MWC (b)(1) USSC for ITW/AA reporting requirements).

6.7.6.5. (~~S//REL~~) (b)(1) USSC (b)(1) USSC USSTRATCOM or lower echelon operational commands will identify the requirement to (b)(1) USSC (b)(1) USSC (b)(1) USSC USSTRATCOM will validate force movement and schedule airlift with U.S. Transportation Command (USSTRANSCOM), as required.

6.7.6.6. (~~S//REL~~) When forces are not mobilized, the recall requirement for deployed operations is (b)(1) USSC from tasking to operational status at CONUS-based Forward Operating Locations (FOL), and (b)(1) USSC from tasking to operational status for deployment to OCONUS-based FOL. These times are contingent upon

USSTRATCOM validating and obtaining the necessary airlift priority from U.S. USTRANSCOM. For deployments starting from forces on alert status (mobilized), operation attainment times can be reduced to (b)(1) USSC for CONUS and (b)(1) USSC for OCONUS deployments.

6.8. (U) Communications Processing System (CPS). CPS is the communications processor for handling incoming sensor event data and distributing outbound correlated data. Fundamental to this design are message tracking and journaling mechanisms supporting message accountability, message aging control, message addressing functions (IP networking), communications protocol conversion functions, and duplicate message elimination (DME) capability. DME is a critical message handling function driven by the communications architecture. The communications architecture incorporates transmission of event data over multiple media/communications paths, with the understanding that by utilizing multiple media in parallel, message delivery probability is improved. These media are further characterized by degree of survivability and operating data rates. Primary day-to-day peacetime mission support is provided by the non-survivable path, which features higher data rates, while backup is provided by the slower data rate survivable path. Consequently, once the correlation center receives a high-speed message it is necessary to eliminate the duplicate message transmitted over the low speed survivable path and prevent it from being processed. DME accomplishes this function.

6.9. (~~S//REL~~) Missile Analysis Reporting System (MARS). MARS performs the MW Mission processing as part of the overall ITW/AA System. MARS, along with Combatant Commander's Integrated Command and Control System (CCIC2S) Common Domain services, (b)(1) USSC and event reporting (messaging). The (b)(1) USSC

(b)(1) USSC MARS also includes (b)(1) USSC processing capability and reporting, and cross-mission NUDET correlation, processing, and reporting. MARS is hosted on the CMAFS computer network infrastructure and in the (b)(1) USSC

6.10. (U) Strategic Threat Analysis and Reporting System (STARS). STARS is the mission processor for select USSTRATCOM missions using the same equipment and software developed for MARS as part of the Integrated Space Command and Control (ISC2) program. STARS uses the common missile code and provides a replacement for USSTRATCOM-Unique processing.

6.11. (U) Operational Capability (OPSCAP).

6.11.1. (~~S//REL~~) An outage is defined as any degradation or inability to detect, receive, process, or transmit mission information. When an outage occurs which exceeds, or is expected to exceed (b)(1) USSC it will result in a change to the system's OPSCAP. If a degradation is under investigation, sites will report the suspected or unconfirmed outage as worst case condition. If investigation reveals no degradation, units will provide correct status. OPSCAP is always the "Worst Case Condition" reported as one of four colors:

(U) GREEN. Little or no loss of capability.

(U) YELLOW. Significant loss of capability.

(U) RED. Complete or nearly complete loss of capability.

(U) WHITE. An off-line sensor or system recallable to OPSCAP GREEN (b)(1) USSC  
(b)(1) USSC

6.11.2. (~~S//REL~~) Outage Classification. Information about any on-going outage lasting longer than (b)(1) USSC in duration is classified and must be reported by secure means. Outages normally are declassified upon termination, unless trends or vulnerabilities may be determined (e.g., EMI).

6.11.3. (~~S//REL~~) OPSCAP Reporting. When an OPSCAP change occurs, site personnel will immediately report the outage, cause, and ETRO to the prime sensor manager via secure means. (b)(1) USSC

(b)(1) USSC

6.11.4. (U) OPSCAP determination. OPSCAP is composed of separate components applicable to the unit's configuration (e.g. Processors, Communications, Equipment, and Environment).

6.11.4.1. (~~S//REL~~) Processor (e.g., (b)(1) USSC). The processor component is GREEN if a processor is processing data and the operator is capable of releasing MW data. (b)(1) USSC

(b)(1) USSC

6.11.4.2. (~~S//REL~~) Communications (e.g., (b)(1) USSC). If both data and voice are available, the communications component is GREEN. (b)(1) USSC

(b)(1) USSC

6.11.4.2.1. (U) Communications OPSCAP (e.g., CPS). Determined by status of data connectivity to prime system only. (Attachment 4, Table A4.2.).

6.11.4.2.2. (U) Consider data lines operational when grounded if the expected recall is (b)(1) USSC

(b)(1) USSC

Consider the data lines degraded when the outage is recognized if (b)(1) USSC

(b)(1) USSC The OPSCAP degradation starts at the time of recall when reporting degraded lines. Consider voice lines operational if voice contact can be established with the command and control agency (b)(1) USSC

(b)(1) USSC

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6.11.4.3. (~~S//REL~~) Environment Status (e.g., (b)(1) USSC  
Environment status covers sensor degradation due to (b)(1) USSC  
(b)(1) USSC

Environmental color codes for Radar Systems are identified in Attachment 4, Table A4.3.

6.11.4.4. (~~S//REL~~) Equipment (e.g., radar systems). (b)(1) USSC  
(b)(1) USSC

6.11.5. (~~S//REL~~) Blanking Reporting. UEW and EWR report activation and deactivation of all site blanking to the JSPOC (b)(1) USSC  
(b)(1) USSC

6.11.6. (U) Scheduled Outages (e.g., ITW/AA). Pre-planned outages will be scheduled through the Combat Capabilities Assessment Schedule (CCAS) On-Line Tool (COLT) primarily or through the BMDS On-Line Tool (BOLT) if managing MD assets. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The prime sensor manager will reschedule remaining downtime as soon as possible if required to complete maintenance activities. Upon outage completion, all sites are required to coordinate data line restoration with the prime sensor manager. The site will also notify the prime sensor manager of the change in OPSCAP status.

6.12. (~~S//REL~~) Satellite Capability (SATCAP) and OPIR OPSCAP. SATCAP Description. Each OPIR satellite has an associated SATCAP based on the capability of detecting the minimum threat (b)(1) USSC

Detecting is defined as capturing enough data to provide minimum release criteria for an event (b)(1) USSC

(b)(1) USSC

For Strategic SATCAP Fully Mission Capable, the satellite must (b)(1) USSC

SATCAP Partially Mission Capable is (b)(1) USSC

Capable. SATCAP (b)(1) USSC does not directly affect site OPSCAP.

(b)(1) USSC three factors used in determining a site's OPSCAP; (b)(1) USSC

(b)(1) USSC SATCAP is not determined by the site, but is a technical analysis of the (b)(1) USSC missile.

Site procedures are not affected by SATCAP; however, ground processing at the mission processing locations will be configured for optimal Warning Coverage, SYSCAP, and Warning Times. (Attachment 4, Table A4.13.).

6.13. (U) Nuclear Detonation (NUDET) OPSCAP.

6.13.1. (~~S//REL~~) NUDET OPSCAP is reported, per site, as three OPSCAPs

(b)(1) USSC

Each OPSCAP (b)(1) USSC

(b)(1) USSC

with the OPSCAP

being (b)(1) USSC

(b)(1) USSC

If the online ICADS is nominally processing

data, and the operator is capable of releasing NUDET data, the ICADS component is GREEN. (b)(1) USSC

6.13.2. (U) NUDET Coverage. DSP and GPS SYSCAPs are used by the prime sensor manager to manually compute overall NUDET coverage. (Attachment 4, Table A4.16.).

6.14. (U) Electro Magnetic Interference (EMI)/Electronic Countermeasures Reporting (ECM) reporting. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

When the EMI can be defined as Radio Frequency Interference (deliberate EMI), the determination, extent of degradation, and specific source/location information helps determine the total threat. (b)(1) USSC

(b)(1) USSC

6.15. (U) System Capability (SYSCAP).

6.15.1. (U) SBIRS and radar SYSCAPs are determined and reported separately by the prime sensor manager.

6.15.2. (S//REL) Each site reports an OPSCAP to the prime sensor manager by

(b)(1) USSC

(b)(1) USSC

and DSP flights being processed (to include changes) to the prime sensor manager. The prime sensor manager

(b)(1) USSC

SYSCAP

of SBIRS and Radars to assess (b)(1) USSC

and forwards the information to the MWC. (b)(1) USSC coverage are identified in EAP CJCS Vol VI. Specific (b)(1) USSC will be identified by the individual units, depending on local processing limitations, and coordinated with the prime sensor manager for approval.

6.15.3. (S//REL) For SBIRS, a reporting area has a SYSCAP of GREEN if one or a combination of SBIRS sensors (b)(1) USSC of the strategic missile threat in the area open; a SBIRS SYSCAP of YELLOW if at (b)(1) USSC

(b)(1) USSC of the missile threat in the area is open; or a SYSCAP of RED if (b)(1) USSC (b)(1) USSC coverage will be included in the SYSCAP determination only

when specifically tasked to provide coverage by the MWC.

6.15.4. (S//REL) (b)(1) USSC is used to determine the radar SYSCAP. (b)(1) USSC uses the OPSCAPs reported by the (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

area. The Radar SYSCAP is GREEN, YELLOW, or RED, depending respectively on whether at least

(b)(1) USSC (GREEN), (b)(1) USSC (YELLOW), or (b)(1) USSC

(b)(1) USSC (RED) of the threat in an area is open. The following warning times are determined (b)(1) USSC based on radar coverage:

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6.15.4.1. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.15.4.2. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.15.4.3. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.15.4.4. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.15.5. (S//REL) Reporting to forward users. Changes in SBIRS SYSCAP and Radar SYSCAP will be reported to the forward users by the MWC. NMCC also requires notification from NORAD, executed by the MSD, whenever ITW/AA coverage is degraded (b)(1) USSC

(b)(1) USSC

6.15.6. (S//REL) Warning Coverage Determination and Reporting. ITW/AA warning coverage reports will reflect the capability of the ITW/AA system to (b)(1) USSC

(b)(1) USSC  
(b)(1) USSC Warning coverage will be  
(b)(1) USSC SYSCAPs. (Attachment 4, Table A4.17.).

6.15.7. (S//REL) Operations Support. Determination of (b)(1) USSC SYSCAPs by the prime sensor manager will be assisted by OPSCAP reports from all (b)(1) USSC

(b)(1) USSC

6.15.8. (S//REL) (b)(1) USSC will not be used as factors for determining OPSCAP. Instead, the prime sensor manager will receive voice/STNT (b)(1) USSC reports whenever a specific threat region is under (b)(1) USSC

(b)(1) USSC

(b)(1) USSC The prime sensor manager will receive voice/STNT reports whenever an (b)(1) USSC identified by (b)(1) USSC

(b)(1) USSC

6.15.8.1. (S//REL) Open. (b)(1) USSC over the entire threat area.



6.15.8.2. (~~S//REL~~) Degraded. (b)(1) USSC

(b)(1) USSC of the threat area.

6.15.8.3. (~~S//REL~~) Closed. (b)(1) USSC

of the threat area.

6.16. (U) Sensor Management Conference. The MSD ensures the Sensor Management Conference is convened as part of the shift changeover. The following items will be briefed by the prime sensor manager as they pertain to the coming 12-hour period (MSD crew shift plus four hours):

6.16.1. (U) Current and projected SBIRS/radar/NUDET sensor status, to include planning for scheduled outages.

6.16.2. (U) Upcoming sensor site line numbers for SBIRS/MGS/NUDET/radar, to include resulting warning time, SYSCAP warning, and NUDET coverage changes.

6.16.3. (~~S//REL~~) All pending event activity (b)(1) USSC

(b)(1) USSC

6.16.4. (~~S//REL~~) Estimated times of (b)(1) USSC

MW NUDET

(b)(1) USSC

6.16.5. (U) Exercise plan for conferees, to include ongoing position and crew evaluations.

6.16.6. (U) Prime sensor manager for real-world and exercise.

6.17. (~~S//REL~~) Sensor Management. The prime sensor manager will report all sensor management issues (e.g., OPSCAP changes, satellite configuration changes) on the Sensor Management Conference immediately while simultaneously attempting to mitigate the problem. (b)(1) USSC

(b)(1) USSC

When a sensor returns from green/red line numbers, or unscheduled outages, the prime sensor manager will notify the MSD Chief via the Sensor Management Conference immediately upon notification by the site. A message is sent via STNT to MWC before and after simulation media is on-line.

6.17.1. (~~S//REL~~) Asset Management. (b)(1) USSC

(b)(1) USSC

6.17.2. (U) Sensor Management. The on-duty Space Operations Mission Commander (SOMC) at the JSPOC is responsible for strategic MW sensor management. The SOMC is the final decision authority for sensor management in this capacity. With this responsibility comes the authority to direct actions or deny maintenance line numbers to ensure the required coverage is maintained. MWC will only recall an Air Force component sensor if they are unable to reach the prime sensor manager. The MWC will inform the prime sensor manager of any such actions taken as soon as possible. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

6.17.3. (U) Sensor management decisions will be made by aggressively balancing the risk to mission requirements and resources. (b)(1) USSC

(b)(1) USSC

6.17.4. (~~S//REL~~) JSpOC will work directly with JFCC IMD in coordination with the USNORTHCOM Missile Defense Officer (MDO) to maintain the directed Protection Capability (PROCAP) for those sensors supporting the Ballistic Missile Defense mission.

(b)(1) USSC

6.17.5. (U) Advance Waivers. Advance waivers are requests for preventive (scheduled) maintenance (downtime) that degrade coverage requirements as specified by JFCC Space.

6.17.6. (U) Waiver Request Submission. Waivers will be submitted for site scheduled downtimes, not already included on the COLT program, not meeting coverage requirements as specified in current CDR JFCC Space guidance. Waivers will be forwarded by AFSPC to JFCC Space for review. **Note:** Permanent site waivers previously authorized by USSPACECOM/J3 Memorandum dated 22 Jan 1998 for Thule and Clear are no longer authorized.

6.18. (U) System Configuration Management.

6.18.1. (U) The USSTRATCOM Battle Watch Commander monitors, and if necessary, coordinates the operational configuration of MW sensors, including configuration to support other CCDRs, to meet MW mission requirements. To support this function, the Battle Watch Commander/GOC receives operational information from strategic and theater sensor managers, MWC, MSD, and technical information from the Cheyenne Mountain Systems Center. MW sensor sites requiring critical maintenance request downtime from the prime sensor manager.

6.18.2. (~~S//REL~~) Real Time Changes. If the ITW/AA sensor site schedule must be modified (b)(1) USSC

(b)(1) USSC

6.18.3. (U) The JSpOC is delegated real time authority to approve or disapprove the downtime, after coordination with the MSD, if a requested configuration change conflicts with the policy in this SI. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The JSpOC, after coordination with the MSD, is also the real time approving authority for critical downtime requests.

6.18.4. (U) The MWC or the prime sensor manager provides operational information and recommendations to the JSpOC in order to support decisions for the operational system configuration. The JSpOC monitors the MW system configuration (b)(1) USSC

(b)(1) USSC

6.18.5. (U) Planning and Scheduling MW Sensor Downtime. Planned sensor downtime for multi-mission assets will be managed using either COLT or BOLT, for MW and MD, respectively. Direct scheduling questions to the JSpOC for Strategic MW or JFCC-IMD for MD.

6.18.6. (~~S//REL~~) Strategic AOI Coverage Criteria. ITW/AA capability determination and reporting will be accomplished for the following threat areas: (b)(1) USSC

(b)(1) USSC The prime sensor manager determines and reports the Warning Coverage

(b)(1) USSC

(b)(1) USSC the prime sensor manager. Intelligence ITW/AA Support Data establishes the (b)(1) USSC

(b)(1) USSC

6.18.6.1. (U) For TACs and Fixed Sites see Attachment 5.

6.18.6.2. (~~S//REL~~) CONUS Threats. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

Due to constant emerging and changing threats, current intelligence will determine which threats to track at applicable areas/sites.

6.19. (~~S//REL~~) Commander Re-typing of Computer Generated Missile Types. SBIRS will establish procedures allowing the ability for site CDRs to re-type computer generated missile types prior to release, time permitting, to ensure the most accurate data possible is passed to the forward users. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC In all cases when strategic event retyping occurs, the MWC will be informed of the released computer type, the CDR's type and the reason for the change as part of the Site Report (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The Strategic Missile Type will subsequently be changed as soon as possible (ASAP) using an appropriate missile update type and applicable site report.

6.20. (U) Reports and Procedures.

6.20.1. (U) National Event Conference. While the FDFR Conference is occurring, the MSD will request activation of the National Event Conference from the NMCC. The purpose of this conference is to alert and inform command centers and senior leadership

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of potentially threatening events and convey AOR assessments. This conference also provides closure on the event and eliminates the MWC "verification" call. TES elements have no role in this conference.

6.20.2. (U) Asset Management Conference. Refer to SI 538-1 Vol 1 for further information.

6.20.3. (U) Sensor VOICE TELL.

6.20.3.1. ~~(S//REL)~~ General. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

VOICE TELL of event information to the MWC must be provided as soon as possible after event data is available to site personnel. (b)(1) USSC

(b)(1) USSC

6.20.3.2. ~~(S//REL)~~ Formats. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC The formats identified below are divided into two basic groups; those used by phased array radar sensors (UEWR, EWR, and PARCS) and those used by the SBIRS ground stations. Formats include the most detailed information available.

6.20.3.2.1. (U) Radar Event/Summary Format (Phased Array).

(b)(1) USSC

6.20.3.2.2. (U) SBIRS Event/Summary Formats. Secure Voice or Secure Teletype Available.

6.20.3.2.2.1. (U) Single Event.

(b)(1) USSC

6.20.3.2.2.2. (U) Single NUDET.

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

6.20.3.2.2.3. (U) Multiple IR/NUDET Events.

|             |
|-------------|
| (b)(1) USSC |
|-------------|

6.20.3.4. (~~S//REL~~) Nonsecure Voice-Only Environment. (b)(1) USSC

|             |
|-------------|
| (b)(1) USSC |
|-------------|

6.20.3.5. (~~S//REL~~) Clear Voice Reporting. (b)(1) USSC

|             |
|-------------|
| (b)(1) USSC |
|-------------|

|             |                   |
|-------------|-------------------|
| (b)(1) USSC | Use the following |
|-------------|-------------------|

format:

|             |
|-------------|
| (b)(1) USSC |
|-------------|

6.20.4. (U) Strategic Event Reporting Criteria.

6.20.4.1. (U) Event Reporting Criteria. CDRNORAD assesses each missile event and NUDET IAW applicable CJCSIs, EAP-CJCS Vol VI, and NORAD Instructions, per References in Attachment 1. CDRNORAD can also provide an overall situation assessment if there are multiple missile events. Each NUDET event must be assessed regardless of whether previous strategic missile events or NUDETs were assessed as

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YES. CDRNORAD assesses attacks on North America only. Designated combatant commanders provide situation updates on attacks to U.S. forces, national security interests, and allies within their respective area of responsibility. CDRUSSTRATCOM assesses attacks on U.S. spacecraft, exoatmospheric nuclear detonations, and the likelihood that a space event is in progress or has occurred. Refer to applicable CJCSIs, Vol VI, and separate USSTRATCOM and NORAD instructions for additional details on assessments. CDRUSSTRATCOM will assume the assessment role if the appropriate COCOM is unable to provide missile event and NUDET assessments.

6.20.4.2. (U) A missile event is any processed or voice-told ITW/AA or TES missile warning of a ballistic missile, surface-to-air missile, antiballistic missile, space launch, or space reentry object.

6.20.4.3. (S//REL) A reportable missile event for the IR systems is released using the following specific mission reports: (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

6.20.4.4. (U) A reportable missile event for MW radar systems is defined as the generation of any non-boost phase L&PI message by the site computer.

6.20.4.5. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.5.1. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.5.2. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.6. (S//REL) Release Criteria (b)(1) USSC The SBIRS CDR/Crew Chief considers the following when assessing an event for release: (b)(1) USSC

(b)(1) USSC

6.20.4.7. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.8. (S//REL) Late Event Reporting. (b)(1) USSC

(b)(1) USSC

6.20.4.9. (S//REL) (b)(1) USSC

reports are used to report (b)(1) USSC

(b)(1) USSC

6.20.4.10. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.11. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.12. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.4.13. (S//REL) (b)(1) USSC

(b)(1) USSC

(b)(1) USSC Updates

may be sent using the same track identifier initially released. (b)(1) USSC

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(b)(1) USSC

(b)(1) USSC when requested by MSD or at the discretion of the on-duty CDR.

6.20.4.14. (S//REL) (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

6.20.4.15. (S//REL) Quick ALERTS (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

6.20.4.16. (S//REL) Transmission of DSP (b)(1) USSC

(b)(1) USSC

6.20.4.17. (S//REL) (b)(1) USSC is a technique used to determine the possibility of (b)(1) USSC

(b)(1) USSC

6.20.4.18. (S//REL) MWC Event Notification to Ground Based Radars. (b)(1) USSC

(b)(1) USSC

6.20.5. (U) Strategic Report Release Modes.

6.20.5.1. (S//REL) AUTO. (b)(1) USSC

(b)(1) USSC

6.20.5.2. (S//REL) MANUAL. (b)(1) USSC

(b)(1) USSC

6.20.5.3. (S//REL) (b)(1) USSC

(b)(1) USSC



(b)(1) USSC

6.20.5.4. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.20.6. (U) AUTO Release Launch Detection Criteria (strategic systems only).

6.20.6.1. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.20.6.2. (S//REL) Criterion 1 (b)(1) USSC  
(b)(1) USSC

6.20.6.3. (S//REL) Criterion 2 (b)(1) USSC  
combination of (b)(1) USSC  
(b)(1) USSC A threat class missile is defined as a missile capable of delivering a weapon of mass destruction to North America (SLBM/ICBM/IRBM/MRBM included).

6.20.6.4. (S//REL) Criterion 3 (b)(1) USSC  
(b)(1) USSC

6.20.6.5. (U) Returning to MANUAL Release Option. The site CDR will return to manual release mode when any one of the following conditions occurs. (b)(1) USSC  
(b)(1) USSC

6.20.6.5.1. (U) When directed by CDRUSSTRATCOM or CDRNORAD.

6.20.6.5.2. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.20.6.5.3. (S//REL) When (b)(1) USSC  
(b)(1) USSC generate anomalous reports.

6.20.6.5.4. (S//REL) When there is a (b)(1) USSC  
(b)(1) USSC.

6.20.6.5.5. (S//REL) When (b)(1) USSC  
(b)(1) USSC

6.20.7. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.20.8. (S//REL) (b)(1) USSC

(b)(1) USSC

6.20.9. (U) Site Report. Site reporting applies to all sensors having a MW or NUDET reporting mission. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The MWC may implement site reporting with any or all sensors at any time. (b)(1) USSC

(b)(1) USSC

Amplifying information will be provided as soon as possible.

6.20.9.1. (U) Anomalous (ANM). In the judgment of site operations personnel, the data does not exhibit characteristics of an actual event and/or site personnel actions, hardware performance, software performance, and/or environmental conditions are not within established system operating specifications. Post analysis is conducted, as required.

6.20.9.2. (U) Under Investigation (UI). In the judgment of site operations personnel, the data characteristics do not meet all phenomena parameters of an actual event and/or site personnel actions, hardware performance, software performance, and/or environmental conditions may not be operating within established system operating specifications. Further investigation is required to validate the event. (b)(1) USSC

(b)(1) USSC

6.20.9.3. (U) Valid (VAL). In the judgment of site operations personnel, the data exhibits characteristics consistent with known phenomena attributed to an actual event. Site personnel actions, hardware performance, software performance, and environmental conditions are within established system operating specifications. Investigation is complete.

6.20.9.4. (U) All Clear. Used only in response to MWC-directed site reporting. This term indicates that investigation is complete and no events exist which have not been previously site reported. (b)(1) USSC

(b)(1) USSC

6.20.9.5. (U) Cancel Site Reporting. When a site has erroneously initiated site reporting, the site will issue the statement "Cancel Site Reporting" followed by amplifying remarks.

6.20.10. (U) Site report determination is the most important and time-critical function performed at each MW sensor. The site report is critical because it is the first step in the overall event evaluation process. Site reports undergo further evaluation in the MSD and contribute to the determination of a System Report. Site reporting makes no assumptions as to the validity of an event and is not a threat assessment or a decision a missile attack is or is not in progress. The site report only indicates if, in site personnel judgment, the event meets actual predetermined criteria or whether the event was caused by a known

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anomalous source, such as personnel error, equipment malfunction, or environmental conditions.

6.20.11. (U) Site personnel (b)(1) USSC

(b)(1) USSC must immediately initiate site reporting with the MWC upon generation (ground-based radars) or release (space-based warning) of a Missile/Reentry/NUDET event, or when directed by the MWC, regardless of site OPSCAP. Multiple L&PI messages associated with a single missile do not require separate site reports unless requested by the MWC. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

Site reporting is not initiated for events deliberately generated as a result of any of the following:

6.20.11.1. (U) Maintenance activities (preventive maintenance or corrective maintenance), unless the event is inadvertently transmitted over HSD lines.

6.20.11.2. (U) Site simulation media activity, unless the event is inadvertently transmitted over HSD lines.

6.20.11.3. (U) Planned tests precoordinated with the MWC expected to receive event indications IAW the test plan.

6.20.12. (U) Site report timeline. The site report is determined and passed in its entirety to the MWC as soon as possible (b)(1) USSC

(b)(1) USSC after an event is generated by a ground based radar; (b)(1) USSC

(b)(1) USSC

after an event is released by the SBIRS MCS/SMCS/IMCSB; (b)(1) USSC after an event is generated by the MGS; or within 60 seconds when a site report is directed by the MWC.

6.20.13. (U) Site report VOICE TELL. Site personnel will contact the MWC to determine if the event data was received. Site personnel will pass the site report and other information as requested if the MWC received the event data. The site will initiate reporting using VOICE TELL formats if the MWC did not receive the site's event data.

(b)(1) USSC

6.20.14. (U) Site reporting without secure comms. (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The site report is passed as soon as voice communications are restored. **Note:** Under the conditions of VOICE TELL or during lost or impaired voice communications, the time limit for the site report may not be met. The site report will be "Under Investigation" if the VOICE TELL report of event information is complete before a site report has been determined. The MWC will not process VOICE TELL reports from sites operating uncertified software.

6.20.15. (U) Equipment evaluation. Site operations and maintenance personnel establish procedures to evaluate all critical equipment immediately upon event generation. The initial site report determination is based on evaluation of site Missile Warning Operations Center or Space Control Center indications, equipment, displays,

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and personnel actions if report responses cannot be received from work centers because of communications problems.

6.20.16. (U) System Report. The system report is the N2C2 CCD assessment of the validity of the radar or satellite data. System reports are based on factors such as site reports, intelligence information, and other data and are recommended by the MSD and approved by the CCD. The CCD directs the MSD to transmit the system report to the forward users by automated MW system output messages as soon as possible after the missile event (to additionally include non-threat reentry events) when event data is present in the ITW/AA system computers. The CCD ensures the system report is voicetold on the appropriate event conference. The System Report verifies that a sensor's reported indications are the direct result of an actual missile launch, reentering object, or NUDET. It does not validate the parameters reported by a sensor (e.g., launch location, launch time, azimuth, missile type, detonation yield) but only confirms that an event has or has not occurred. The following terms are used to pass system reports to the users:

6.20.16.1. (U) ANM. In the judgment of MSD personnel, an actual ballistic missile or space launch, reentering object, or NUDET did not occur. The event was caused by hardware or software malfunction, environmental conditions, or personnel error. On the post-event analysis of anomalous events, the sensor sites support as necessary, headquarters record keeping to categorize events as either Valid, Environmental (reference section III, para 6.20.18.2), or False.

6.20.16.2. (U) UI. Preliminary investigation reveals the event may not have been an actual ballistic missile or space launch, reentering object, or NUDET. Investigation is continuing.

6.20.16.3. (U) VAL. Investigation is complete and in the judgment of MW personnel, the event was an actual ballistic missile or space launch, reentering object, or NUDET.

6.20.17. (~~S//REL~~) CDRNORAD Assessment (Missile Event). (b)(1) USSC

(b)(1) USSC

(b)(1) USSC

The following terms are used to pass CDRNORAD Assessment for missile events to the users. (b)(1) USSC

(b)(1) USSC

6.20.17.1. (U) No. In the judgment of CDRNORAD, a missile attack against North America is not in progress.

6.20.17.2. (U) Concern. In the judgment of CDRNORAD, a missile attack against North America may be in progress. CDRNORAD is still assessing the situation. Precautionary measures to enhance responsiveness or survivability are recommended.

6.20.17.3. (U) Yes. In the judgment of CDRNORAD, a missile attack against North America is in progress.

6.20.18. (U) CDRUSSTRATCOM/CDRNORAD Assessment (NUDET Event). CDRUSSTRATCOM assesses all space events and NUDETs detonating (b)(1) USSC

(b)(1) USSC above the Earth's surface while CDRNORAD assesses missile, NUDET, and air events to characterize the likelihood North America is under attack. If the assessment is not provided over the OPS LOOP, the MWC will query the USSTRATCOM GOC to attain CDRUSSTRATCOM assessment. The following terms apply:

6.20.18.1. (U) No. In the judgment of CDRUSSTRATCOM the NUDET(s) does not constitute an attack against U.S. space assets. In the judgment of CDRNORAD the NUDET(s) does not constitute an attack against North America.

6.20.18.2. (U) Concern. In the judgment of CDRUSSTRATCOM the NUDET(s) may constitute an attack against U.S. space assets. In the judgment of CDRNORAD, the NUDET(s) may constitute an attack against North America. CDRUSSTRATCOM/CDRNORAD is still assessing the situation and recommends precautionary measures to enhance responsiveness and survivability.

6.20.18.3. (U) Yes. In the judgment of CDRUSSTRATCOM/CDRNORAD the NUDET(s) constitute an attack against U.S. space assets or North America.

6.20.18.4. (U) Pending. The judgment of CDRUSSTRATCOM will be provided as soon as possible. No assessment is available at this time. There is inadequate information available to assess whether a space system is, or may be, under attack.

6.20.19. (U) Post-analysis Reporting. The sensor sites provide an updated site report to support MWC categorization of events upon completion of analysis of ANM or UI events, as defined below.

6.20.19.1. (U) Valid. In the judgment of site operations personnel, the data exhibited characteristics consistent with known phenomena attributed to an actual event. Site personnel actions, hardware performance, software performance, and environmental conditions were within established system operating specifications. Investigation is complete.

6.20.19.2. (U) Environmental. Events may have been generated by environmental conditions external to the sensor (e.g., aurora, solar glare, radar ducting). Personnel error may have also contributed to this type of event.

6.20.19.3. (U) False. Events were generated internally by sensor or command center hardware or software malfunction. Personnel error, such as failure to properly configure the system to prevent transmission of simulation media off-site, may have also contributed to this type of event.

6.21. (S//REL) (b)(1) USSC support to USSTRATCOM's MW mission.

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6.21.1. (S//REL) (b)(1) USSC  
(b)(1) USSC provide to USSTRATCOM. NGA

6.21.2. (U) Preemption and Priority 1.

6.21.2.1. (S//REL) Preemption and Priority 1 tasking (b)(1) USSC  
(b)(1) USSC  
(b)(1) USSC

6.21.2.2. (S//REL) (b)(1) USSC  
(b)(1) USSC  
(b)(1) USSC

6.22. (U) DELOGs. A DELOG is the process of reviewing post-mission data to look at past events for additional IR data not previously observed or reported. All MW elements have the ability to perform DELOGs. However, due to specific site restrictions turn-around time will differ from each MW element. Some DELOG turn around times are outlined in the categories below.

6.22.1. (U) DELOG Categories. DELOGs are divided into two categories: Emergency and Routine.

6.22.1.1. (S//REL) Emergency DELOG. Emergency DELOG requests require immediate action and completion (b)(1) USSC This category is reserved for those DELOGs of the utmost importance.

6.22.1.2. (S//REL) Routine DELOG. Routine DELOG requests require a turn-around (b)(1) USSC This category covers most DELOG requests. Each DELOG request should be (b)(1) USSC  
(b)(1) USSC

6.22.2. (S//REL) DELOG Support. (b)(1) USSC  
(b)(1) USSC  
(b)(1) USSC

6.22.3. (U) DELOG Request Format. Requests will include the following information:

6.22.3.1. (S//REL) (b)(1) USSC  
(b)(1) USSC

6.22.3.2. (U) DELOG Type. Emergency or routine.

6.22.3.3. (U) DELOG Time Window. Each request should define no more than a 30 minute window.

6.22.3.4. (U) Location. Latitude and Longitude of event.

6.22.4. (U) DELOG Result Format. Results will be reported in the following format:

6.22.4.1. (U) DELOG Result. Positive or negative. No other information is required if negative. Provide amplifying data (e.g., number of scans, maximum kilowatts if positive).

6.22.4.2. (U) DELOG Event DTG.

6.22.4.3. (U) DELOG Event Location. Latitude and Longitude.

6.22.4.4. (U) Satellite(s) (Flight Number) detecting event, number of scans, and maximum intensity detected on each.

6.22.4.5. (U) Report if motion was detected on each satellite.

6.22.4.6. (U) Comments. Any pertinent comments associated with the DELOG request.

6.23. (S//REL) (b)(1) USSC

(b)(1) USSC

WILLIAM F. GRIMSLEY  
Major General, USA  
Chief of Staff

ATTACHMENT 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

*References*

(U) AFI 33-324, *The Information Collections and Reports Program; Collecting Internal, Public, and Interagency Air Force Information Collections* (U), 1 June 2000

(U) AFSPC 003-94 1, *Common Operational Requirements Document (ORD): Space-BASED UNITED STATES NUCLEAR DETONATION (NUDET) DETECTION SYSTEM (USNDS)* (U), 21 January 2004

(U) *Change to TES Producer AOI Policy and Authorization to Implement Revised AOIs*, DTG 011820Z Feb10 (S//REL TO USA, FVEY)

(U) CJCSI 3222.01, *CJCS Prioritization of C3 Nodes and Systems for High Altitude Electromagnetic Pulse Protection* (S), 8 October 1993

(U) CJCSI 6210.02B, *Information and Operational Architecture of the Integrated Tactical Warning and Attack Assessment System* (S//REL), 1 October 2007

(U) CJCSI 6811.01B, *Nuclear Command and Control System Technical Performance Criteria* (S), 2 July 2007

(U) *CONOPS for USSTRATCOM DC2N* (S), 12 September 2007

(U) *DC2N Security Classification Guide (SCG)* (S), 11 August 2008

DODD S-5210.81, (U) *United States Nuclear Weapons Command and Control, Safety and Security* (S), 8 August 2005

(U) *DSP and SBIRS HEO Operations SCG* (U), 1 October 2009

(U) *DSP and SBIRS HEO Operations SCG Appendix 1* (S//REL), 1 October 2009

(U) *DSP and SBIRS HEO Operations SCG Appendix 2* (S//REL TO USA, AUS), 1 October 2009

(U) *DSP and SBIRS HEO Operations SCG Appendix 3* (S//US Only), 1 October 2009

(U) *EAP-CJCS Vol VI, Volume VI of the Emergency Action Procedures of the Chairman of the Joint Chiefs of Staff Volume VI* (S//REL), 1 September 2008

(U) *GPS SCG* (U//FOUO), 30 September 2008

(U) *Ground-Based Radar Missile Warning System SCG* (U//FOUO), 1 September 2003

(U) *Ground Data System Interface Definitions Interface Control Document HZ-232660 for the Defense Support Program (DSP) and the Space Based Infrared System (SBIRS) Increment 1 to ITW/AA* (S), 29 January 2004

(U) *Integrated Broadcast Service Producer Guide* (S), 1 August 1999

(U) *Integrated Broadcast Users' Guide (IBUG)* (S//REL TO USA, FVEY), 3 June 2009

(U) *ITW/AA SCG* (U), 22 September 2000



- (U) *NSPD-28, United States Nuclear Weapons, Command and Control, Safety, and Security* (S), 20 June 2003
- (U) *SBIRS SCG* (U//FOUO), 15 June 2007
- (U) *SCG for SBIRS Appendix 1* (S), 30 July 2008
- (U) *SD 505-1 Vol I, Space Surveillance Operations – Basic Operations* (S), 13 February 2004
- (U) *SD 505-1 Vol II, Space Surveillance Operations – Event Processing* (S), 13 February 2004
- (U) *SD 505-07, Change Control Management for Theater Missile Warning* (U), 26 May 2005
- (U) *SI 507-04, Integrated Asset Management* (S//REL) (Draft)
- (U) *SI 534-22, Mission Integrity, Change Control Management and Test Control for the ITW/AA System* (U), 25 March 2011
- (U) *SI 538-01, BMDS Description and Asset Management* (S//REL), V1, 22 June 2007

***Abbreviations and Acronyms***

- (U) AAR—After Action Report
- (U) ABM—Anti-Ballistic Missile
- (U) ACC—Alternate Command Center
- (U) AF—Air Force
- (U) AFB—Air Force Base
- (U) AFSPC—Air Force Space Command
- (U) AFSTRAT—Air Forces Strategic
- (U) AFTAC—Air Force Technical Applications Center
- (U) AIG—Address Indicator Group
- (U) ALU—Array Logic Unit
- (U) AMWC—Alternate Missile Warning Center
- (U) ANM—Anomalous
- (U) AOI—Area of Interest
- (U) AOR—Area of Responsibility
- (U) ASAP—As soon as possible
- (U) ASAT—Anti-Satellite
- (U) ATH—Above The Horizon
- (U) AWC—Advanced Warning Capability
- (U) AWG—Analysis Working Group
- (U) BA—Battlespace Awareness
- (U) BMDS—Ballistic Missile Defense System

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- (U) BOLT—BMDS On-Line Tool
- (U) BTH—Below The Horizon
- (U) C2—Command and Control
- (U) C3—Command, Control and Communications
- (U) CB-E —Cobra Brass-Echo
- (U) CB-F —Cobra Brass-Foxtrot
- (U) CCB—Configuration Control Board
- (U) CCLT—Computer Calculated Launch Time
- (U) CCD—Command Center Director
- (U) CCDR—Combatant Commander
- (U) CDR—Commander
- (U) CDRNORAD—Commander, NORAD
- (U) CDRUSSTRATCOM—Commander, USSTRATCOM
- (U) CESR—Consolidated Exercise Support Request
- (U) CEW—Combined Early Warning
- (U) CFICC—Canadian Forces Integrated Command Centre
- (U) CI—Correlation Indices
- (U) CJCS—Chairman Joint Chiefs of Staff
- (U) CJCSI—Chairman Joint Chiefs of Staff Instruction
- (U) CMAFS—Cheyenne Mountain Air Force Station
- (U) CMDR—Commander
- (U) COCOM—Combatant Command
- (U) COL—Contingency Operating Locations
- (U) COLT—Combat Capabilities Assessment Schedule (CCAS) On-Line Tool
- (U) CONOPS—Concept of Operations
- (U) CONUS—Continental United States
- (U) COP—Common Operating Picture
- (U) CPS—Communications Processing System
- (U) CSAR—Combat Search and Rescue
- (U) CSAT—Constellation Sustainment Assessment Team
- (U) CTF—Combined Task Force
- (U) CTT—Commander's Tactical Terminal

- (U) DC2N—Distributive Command and Control Network
- (U) DEFCON — Defense Readiness Condition
- (U) DDL—Direct Downlink
- (U) DME—Duplicate Message Elimination
- (U) DOD—Department of Defense
- (U) DODD—DOD Directive
- (U) DSCS—Defense Satellite Communications System
- (U) DSP—Defense Support Program
- (S//REL) (b)(1) USSC
- (U) DTG—Date Time Group
- (U) EAP—Emergency Action Procedures
- (U) ECM—EMI/Electronic Countermeasures Reporting
- (U) EMI—Electro Magnetic Interference
- (U) ENTR—Embedded National Tactical Receiver
- (U) ERS—European Relay Station
- (U) ESV—Earth Satellite Vehicle
- (U) ETRO—Estimated Time of Return to Operations
- (U) EWR—Early Warning Radar
- (U) FA—Focused Area
- (U) FDFR—First Detect First Report
- (U) FMO—Functional Managers Office
- (U) FOED—Follow-On Event Data
- (U) FOL—Forward Operating Location
- (U) FOV—Field of View
- (U) FPAK—Force Package
- (U) FTS—Frequency Time Standard
- (U) GCCS—Global Command and Control System
- (U) GCCS-J—GCCS-Joint
- (U) GCN—Ground Communications Network
- (U) GEO—Geostationary Orbit
- (U) GMD—Ground-Based Midcourse Defense
- (U) GOC—Global Operations Center

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- (U) GPS—Global Positioning System
- (U) GSM—Global Summary Message
- (U) HEMP—High-Altitude Electro Magnetic Pulse
- (U) HEO—Highly Elliptical Orbit
- (U) HQ—Headquarters
- (U) HSD—High-Speed Data
- (U) HSG—HEO Station Ground
- (U) IAW—In Accordance With
- (U) IBS—Integrated Broadcast Service
- (U) IBS-I—Integrated Broadcast Service - Interactive
- (U) IBS-N—Integrated Broadcast System - Network
- (U) IBS-S—Integrated Broadcast Service - Simplex
- (U) IBSSO—Integrated Broadcast Service Support Office
- (U) IBUG—Integrated Broadcast Users' Guide
- (U) ICADS—Integrated Correlation and Display System
- (U) ICBM—Intercontinental Ballistic Missile
- (U) IMCSB—Interim Mission Control Station Backup
- (U) IMD—Integrated Missile Defense
- (U) IMUG—IBS Monthly Users Guide
- (U) IR—Infrared
- (U) IRBM—Intermediate Range Ballistic Missile
- (U) ITC—Interim Test Center
- (U) ITW/AA—Integrated Tactical Warning and Attack Assessment
- (U) IWAN—ICADS Wide Area Network
- (U) JC2 MW WG—Joint Command and Control Missile Warning Working Group
- (U) JDEP—Joint Distributed Engineering Plant
- (U) JEWL—Joint Early Warning Lab
- (U) JFCC—Joint Functional Component Command
- (U) JFCC Space—Joint Functional Component Command for Space
- (U) JFCC Space J34—Missile Warning and OPIR Division
- (U) JIAMD—Joint Integrated Air and Missile Defense Organization
- (U) JOPC—Joint OPIR Planning Cell

- (U) JOPF—Joint OPIR Priority Framework
- (U) JRSC—Jam-Resistant Secure Communications
- (U) JSTO—Joint Space Tasking Order
- (U) JTAGS—Joint Tactical Ground Station
- (U) JTAGS-CEN—JTAGS - CENTCOM
- (U) JTAGS-EUR—JTAGS - Europe
- (U) JTAGS-JPN—JTAGS - Japan
- (U) JTAGS-KOR—JTAGS - Korea
- (U) JTF—Joint Task Force
- (U) JTT—Joint Tactical Terminal
- (U) KW/sr—Kilowatts/Steradian
- (U) L&PI—Launch and Predicted Impact
- (U) LOS—Line of Sight
- (U) LSM—Local Summary Message
- (U) LTR—Less Than Release
- (U) MARS—Missile Analysis and Reporting System
- (U) MATT—Multi-Mission Advanced Tactical Terminal
- (U) MCCC—Mobile Consolidated Command Center
- (U) MCS—Mission Control Station
- (U) MCSB-H—Mission Control Station Backup-HEO
- (U) MD—Missile Defense
- (U) MDA—Missile Defense Agency
- (U) MDO—Missile Defense Officer
- (U) MDS—Minimum Detectable Signal
- (U) MDST—Missile Defense Space Warning Tool
- (U) MGS—Mobile Ground System
- (U) MGT—Mobile Ground Terminal
- (U) MN—Mass NUDET
- (U) MOB—Main Operating Base
- (U) MRBM—Medium Range Ballistic Missile
- (U) MSD—Missile and Space Domain
- (U) MW—Missile Warning

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(U) MWC—Missile Warning Center  
(U) MWC2D—Missile Warning Command and Control Data  
(U) MWFM—Missile Warning Functional Managers Office  
(U) MWIR—Medium Wave Infrared  
(U) N2C2—NORAD—NORTHCOM Command Center  
(U) NASIC—National Air and Space Intelligence Center  
(U) NDS—Nuclear Detection (NUDET) Detection System  
(U) NGA—National Geospatial-Intelligence Agency  
(U) NGA-D—National Geospatial-Intelligence Agency - Denver  
(U) NGA/S—NGA Source Operations and Management Directorate  
(U) NMCC—National Military Command Center  
(U) NLT—No Later Than  
(U) NORAD—North American Aerospace Defense Command  
(U) NROC—National Reconnaissance Operations Center  
(U) NSPD—National Security Presidential Directive  
(U) NUDET—Nuclear Detonation  
(U) OCONUS—Outside CONUS  
(U) OIW—Operations Intelligence Watch  
(U) OPIR—Overhead Persistent Infrared  
(U) OPORD—Operations Order  
(U) OPSCAP—Operational Capability  
(U) PARCS—Perimeter Acquisition Radar Attack Characterization system  
(U) Pd—Probability of Detection  
(U) PDS-M—Processing and Display Subsystem Migration  
(U) POI—Period of Interest  
(U) POTUS—President of the United States  
(U) PROCAP—Protection Capability  
(U) PWG—Profile Working Group  
(U) RADEC—Radiation Detection Capability  
(U) RAF—Royal Air Force  
(U) RCL—Radar Controller  
(U) RDP—RADEC Data Processor

- (U) REM—Radar Energy Management
- (U) RGS—Relay Ground Station
- (U) RGS-B—Relay Ground Station -MCSB
- (U) RGS-C—Relay Ground Station - Contractor
- (U) RGS-E—Relay Ground Station - Europe
- (U) RGS-H—Relay Ground Station - HEO
- (U) RGS-M—Relay Ground Station Mission Control Station
- (U) RGS-P—Relay Ground Station - Pacific
- (U) SAF/IA—Secretary of the Air Force/International Affairs
- (U) SAM—Surface to Air Missile
- (U) SATCAP—Satellite Capability
- (U) SATCOM—Satellite Communication
- (U) SBIRS—Space Based Infrared System
- (U) SCG—Security Classification Guide
- (U) SD—USSTRATCOM Directive
- (U) S/E—Survivable and Endurable
- (U) SE—Special Event
- (U) SECDEF—Secretary of Defense
- (U) SENSOREP—Sensor Report
- (U) SEW—Shared Early Warning
- (U) SEWS—Shared Early Warning System
- (U) SEWS-R—Shared Early Warning System - Radar
- (U) SEWS-S—Shared Early Warning System - Space
- (U) SI—USSTRATCOM Instruction
- (U) SIPRNET—Secret Internet Protocol Router Network
- (U) SITREP—Situation Report
- (U) SLBM—Submarine Launched Ballistic Missile
- (U) SLV—Space Launch Vehicle
- (U) SMCS—Survivable Mission Control Station
- (U) SOH—State-of-Health
- (U) SOI—Space Object Identification
- (U) SOMC—Space Operations Mission Commander

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- (U) SRBM—Short Range Ballistic Missile
- (U) SRGS—Survivable Relay Ground Station
- (U) SRS—Satellite Readout Station
- (U) SSA—Space Situational Awareness
- (U) SSBN—Ballistic Missile Submarine (Nuclear Powered)
- (U) SSN—Space Surveillance Network
- (U) STARS—Strategic Threat Analysis and Reporting System
- (U) STNT—Subscriber Terminal Network Terminal
- (U) SW—Space Wing
- (U) SWS—Space Warning Squadron
- (U) SYSCAP—Systems Capability
- (U) TAC—Threat Area Coverage
- (U) (b)(1) USSC
- (U) TBM—Theater Ballistic Missile
- (U) TD-2—Taepo Dong-2
- (U) TDIMF—Tactical Data Inter-Computer Message Format
- (U) TDP—Tactical Data Processor
- (U) TES—Theater Event System
- (U) TESCAP—TES Capability
- (U) TMW—Theater Missile Warning
- (U) TRS—Tactical Receive Suite
- (U) TT&C—Telemetry, Tracking and Commanding
- (U) UCP—Unified Command Plan
- (U) UEWR—Upgraded Early Warning Radar
- (U) UFO—UHF Follow-On
- (U) UHF—Ultra High Frequency
- (U) UI—Under Investigation
- (U) UK SpOCC —United Kingdom Space Operations Coordination Centre
- (U) USAFRICOM—United States Africa Command
- (U) USASMD/ARSTRAT—U.S. Army Space and Missile Defense Command/Army Forces Strategic Command
- (U) USCENTCOM—United States Central Command



- (U) USEUCOM—United States European Command
- (U) USNDS—United States NUDET Detection System
- (U) USNORTHCOM—United States Northern Command
- (U) USPACOM—United States Pacific Command
- (U) USSOUTHCOM—United States Southern Command
- (U) USSTRATCOM—United States Strategic Command
- (U) USTRANSCOM—United States Transportation Command
- (U) VAL—Valid

**Terms**

(S//REL) (b)(1) USSC

(b)(1) USSC

(U) **Attack Assessment**—An evaluation of information to determine the potential or actual nature and objectives of an attack for the purpose of providing information for timely decisions.

(U) **Battlespace Awareness**—Battlespace Awareness provides reliable, accurate, and timely data to support development of non-ballistic missile threat warning, battle damage indications, space surveillance operations and joint intelligence preparation of the operational environment (for land, sea, air, and space). BA contributes to a variety of battle management and situational awareness applications.

(U) **Certification**—An independent, systematic process to determine whether a system or a system of systems achieves the mission capabilities for which it is intended without adversely impacting or degrading system integrity.

(U) **Combined Early Warning (CEW)**—CEW provides the CCDRs the ability to receive situation awareness information of all strategic class missile events that originate from, threaten to impact in, or transit through their AOR.

(S//REL) (b)(1) USSC

(U) **Constraint**—A factor which must be considered (waived) before approving scheduled or unscheduled downtime for MW units.

(U) **Corrective Maintenance**—Unscheduled maintenance performed to restore mission equipment from a non-operational to an operational status. Corrective maintenance results from outages not scheduled in COLT or BOLT (to include critical maintenance).

(U) **Critical Maintenance**—Maintenance (downtime) which must be available within 24 hours of request to prevent damage or mission deterioration. Critical maintenance will be requested real-time through the prime sensor manager.

(S//REL) (b)(1) USSC

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(U) **Downtime**—An operational OPSCAP RED or YELLOW status resulting in loss or reduction of mission capability.

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(S//REL) (b)(1) USSC

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(U) **Electromagnetic Interference (EMI)**—Any electromagnetic disturbance, which interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics or electrical equipment. It can occur intentionally, as in some forms of electronic warfare, or unintentionally, as a result of spurious emissions and response, intermodulation products, and the like. Other terms related to EMI include: Meaconing, Interference, Jamming, and Intrusion.

(U) (b)(1) USSC

(b)(1) USSC

(U) **Launch Types**—Domestic and cooperative launches are classed according to the following categories:

(U) **Type 1 Launch:** A domestic or cooperative launch which could become a reportable event whose detection by AFSPC sensors is probable.

(U) **Type 2 Launch:** A domestic or cooperative launch not having the capability to become a reportable event, whose detection by AFSPC sensors is probable.

(U) **Type 3 Launch: (Sounding/Research Rockets):** A domestic or cooperative launch whose detection by AFSPC sensors is not expected but possible.

(U) **Limb**—The outer edge of the apparent disk of a celestial body.

(S//REL) (b)(1) USSC

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(U) **Missile Event (Domestic)**—Any pre-planned, U.S. or Canadian missile event originating in the U.S. or Canada or from a U.S. or Canadian platform. Controlled manned re-entry vehicles of domestic origin (e.g., Space Shuttles) will be processed as Domestic Missile Events. Domestic Missile Events also include scheduled foreign launches employing U.S. or Canadian test ranges.

(U) **Missile Threat**—A missile threat is any missile event that could potentially threaten North America and areas within 100 nautical miles (nm) of its coast, Hawaii, U.S. forces, national security interests, or allies.

(U) **Non-Threat Missile Event**—A non-threat missile event is any missile event that does not satisfy the criteria of a missile threat (i.e., does not threaten North America, Hawaii, U.S. forces, national security interests, or allies).

(U) **Non-CONUS Threat**—An event indicating an impact that is not a threat to the defined North America defended area.

(U) **NUDET**—A nuclear detonation in the Earth's (b)(1) USSC (b)(1) USSC. A NUDET event is defined as the detection, through any means, of a nuclear detonation.

(S//REL) (b)(1) USSC

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(U) **Operations Capability (OPSCAP)**—A determination of a sensor's capability to provide event data to CMC decided by the CMDR at the site. OPSCAP determination may be influenced by equipment status, satellite status, communication, natural environment factors, electromagnetic interference, and/or the effects of electronic countermeasures. OPSCAP is described by color codes as follows: GREEN – little or no loss of warning capability; YELLOW – significant loss of warning capability; RED – complete or nearly complete loss of warning capability; WHITE – An off-line sensor or system that can be recalled to OPSCAP GREEN within two minutes (i.e. SBIRS SMCS will normally be identified as OPSCAP WHITE).

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(U) **Orbital Element Sets**—A collection of mathematical terms describing the orbital paths of known satellites or space debris. All MW radars perform space surveillance as a secondary mission and data from these radars is used by the JSpOC to produce and update orbital element sets. These element sets make up the database for known satellites and space debris. Updated element sets are sent daily by dedicated data circuits to ITW/AA sensor computers. They are stored for real-time comparisons of all detections in the sensors' coverage. When detection fails to correlate to the element sets in the database, an uncorrelated target report is generated. If the element set is old or inaccurate, satellite detection could appear to have the flight characteristics of a missile event and an anomalous event could be generated by a sensor site's computer. Orbital element sets play an important role in preventing anomalous ITW/AA reports.

(S//REL) (b)(1) USSC

(b)(1) USSC

(U) **Preventive Maintenance**—Scheduled maintenance performed to (1) restore mission equipment to an operational status or (2) extend the life expectancy of mission equipment. Downtime for preventive maintenance is scheduled and approved in COLT/BOLT.

(U) **Solar Impacts**—Solar activity such as proton events, flares, or RF bursts, that may impact satellite communications or attitude control of the satellite.

(U) **Special Event (SE)**—Fires, explosions, static points, and other events of interest.

(U) **Strategic Warning**—A notification that enemy-initiated hostilities may be imminent. It may be received minutes, hours, days, or longer before the start of hostilities. Intelligence sources would probably give this notification.

(U) **Surveillance**—The observation of aerospace and surface areas using portions of the electromagnetic spectrum. The roles in providing surveillance include operation of sensors to maintain maximum coverage of the assigned area; evaluation of data to give threat detection and event identification; reliable data transmission to named agencies for ITW/AA and other mission requirements; and receipt verification of required data.

(U) **SYSCAP**—SYSCAP is the capability of a system (IR, NUDET or Radar) to cover a defined threat area. It is determined by the primary sensor manager and is categorized as Red, Yellow or Green. Red means less than 25 percent of the threat area is covered, Yellow means 25 to 74.9 percent of the threat area is covered and Green means 75 percent or greater of the threat area is covered.

(U) **Tactical Warning (TW)** —Warning after initiation of a threat event based on an evaluation of information from all available sources.

(U) **Theater Ballistic Missile (TBM)** —Land-based or near land-based missiles generally having a range of less than 3,500 kilometers (km) designed to operate within a theater of operations.

(U) **Tier I Node**—CCDR designated site(s), which are the first independent recipients of missile warning data and voice warning.

(U) **TMW Producer**—A TMW Producer is any USSTRATCOM-approved system capable of detecting a threat missile, processing the missile launch data, and disseminating TMW information. This information includes launch location/time, missile type, azimuth, geographical

area at risk, and/or estimated impact point/impact time, and is disseminated to command centers and the warfighter via established and approved TES data and voice communications architectures using standardized message sets, standard data elements, and common protocols. TMW producers are defined as either dedicated, collateral or contributing.

(U) Dedicated producers are those with a primary mission of missile warning support (e.g., MCS, JTAGS).

(U) Collateral producers are subordinate to USSTRATCOM but with a primary mission other than missile warning support (none to date).

(U) Contributing producers are non-USSTRATCOM producers under contract or agreement to support the TMW mission (b)(1) USSC

(S//REL) (b)(1) USSC

(b)(1) USSC

(U) **Uncertified**—a system that has not yet achieved certification.

(U) **VOICE TELL**—Mission event data verbally passed in prescribed formats from the sensor units to the MWC if data lines or Cheyenne Mountain computer systems are inoperative.

(U) **Walkers.**

(S//REL) (b)(1) USSC

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(U) **Warning Coverage**—Warning Coverage is a reflection of the capability of the ITW/AA system to provide dual phenomenology detection of ICBM and SLBM launches. It is based on the IR and Radar SYSCAPs.

(U) **Warning Roles**—There are three warning roles. Each role has a relationship between the ability to accomplish the role and its anomalous report rate. This relationship is adjustable but the anomalous report potential can never be eliminated. The three roles are:

(U) Detection—The identification of a mission event (missile launch, NUDET, etc.) against a background of noise (Aurora, solar glare, interference, etc.), and the known satellite population. If the detected noise or satellite resembles or exhibits the characteristics of a mission event, the sensor system and or operator could generate and release a notification to command centers. This notification would be based on mission event phenomenology. The optimum detection probability is achieved by recognizing mission event characteristics and eliminating anomalous event reporting.

(U) Discrimination—Analytical processing of mission event data to differentiate between those mission events exhibiting characteristics (azimuth, location, etc.) threatening U.S. interests worldwide and those that do not.

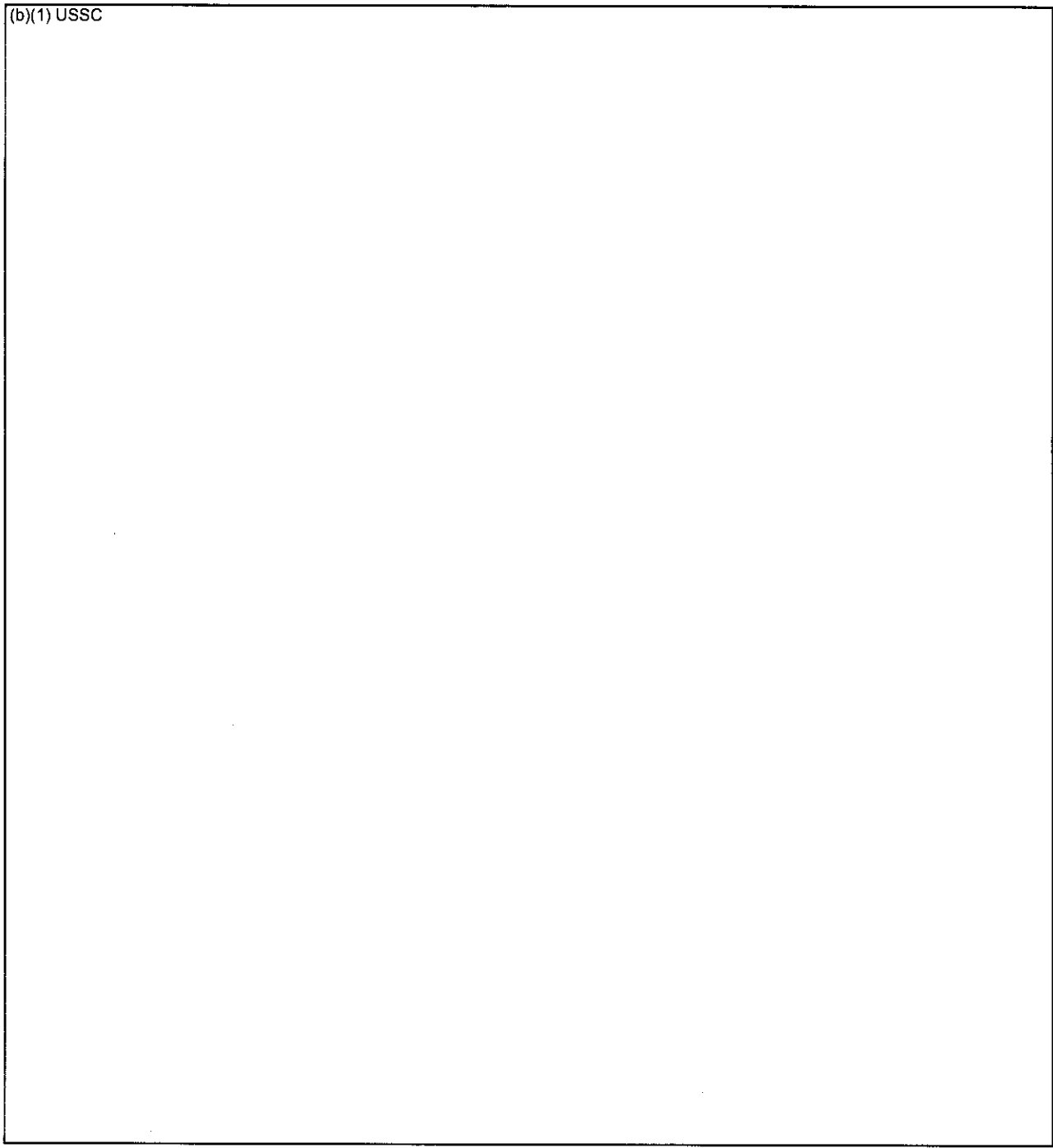
(U) Notification—The transmission of the results of detection and discrimination to command centers. This notification can be made in various ways, (computer-to-computer, voice, etc.); and is designed to provide command centers with the event characteristics (who, what, when, and where) necessary for decision making.

**ATTACHMENT 2  
REPORTS, CHARTS AND DIAGRAMS  
SAMPLE MESSAGE FORMATS**

A2.1. (~~S//REL~~) Sample situation report message format for use by strategic or TES units. Tailor report by mission area as appropriate.

~~SECRET//REL TO USA, ACGU~~

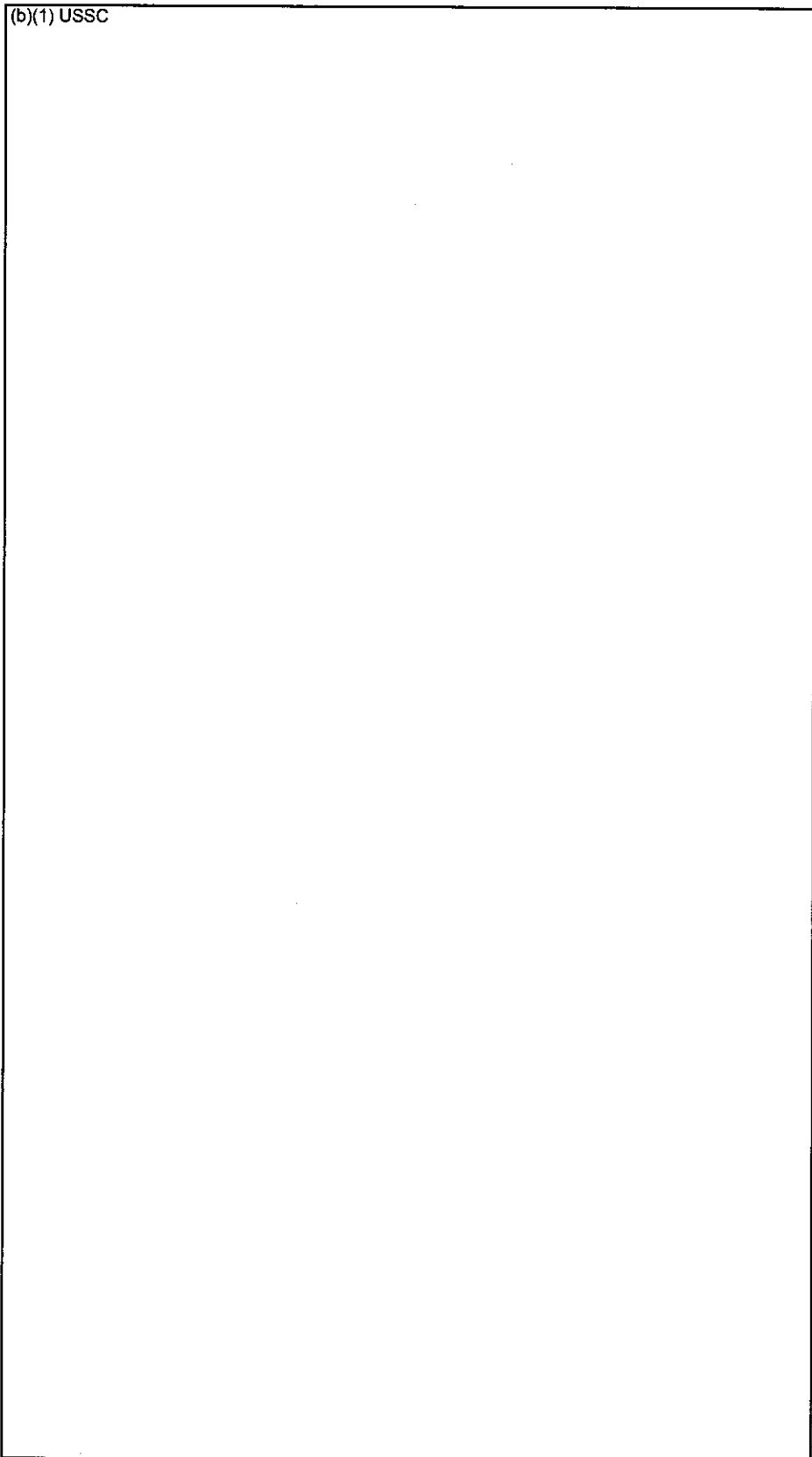
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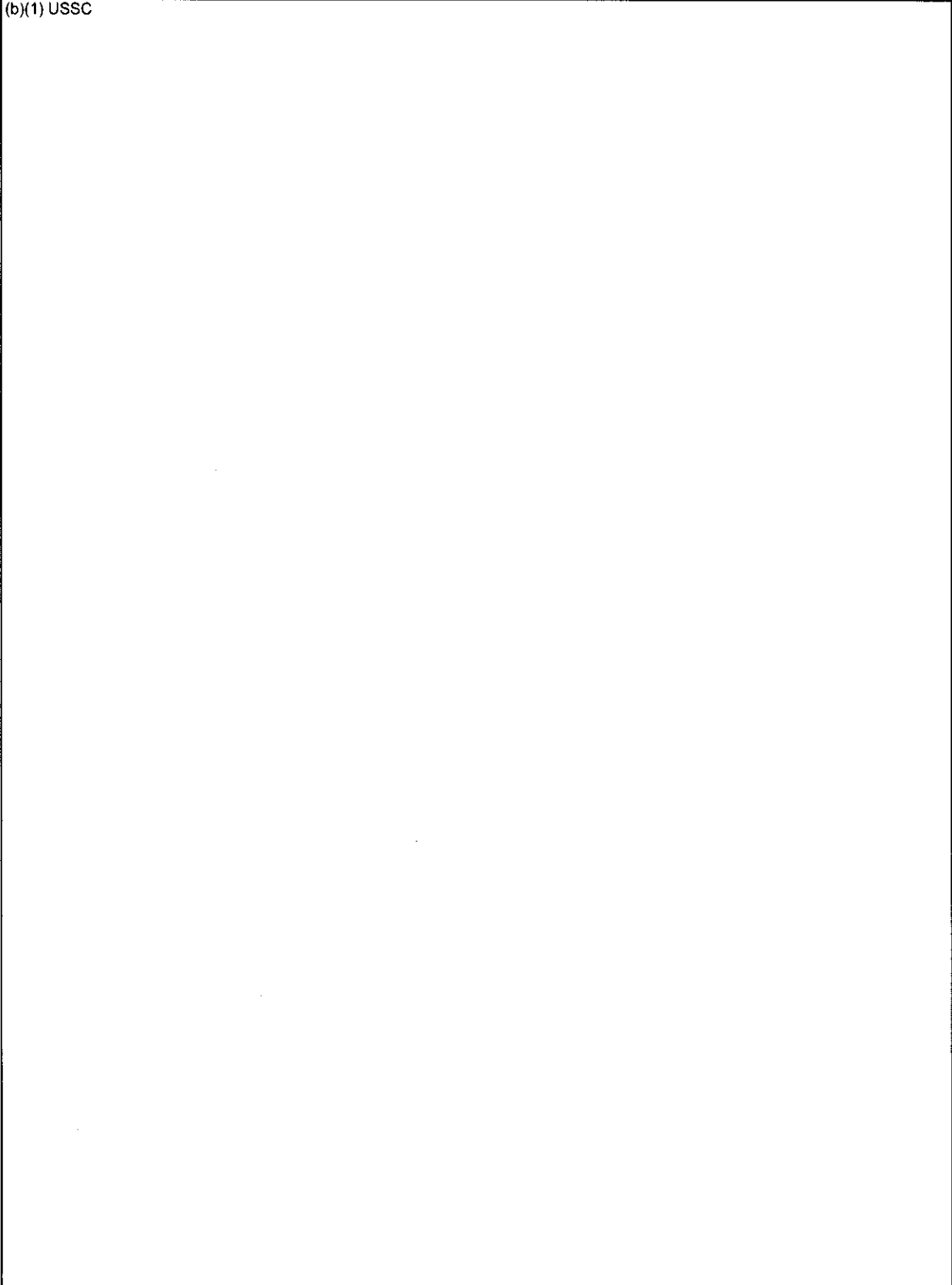
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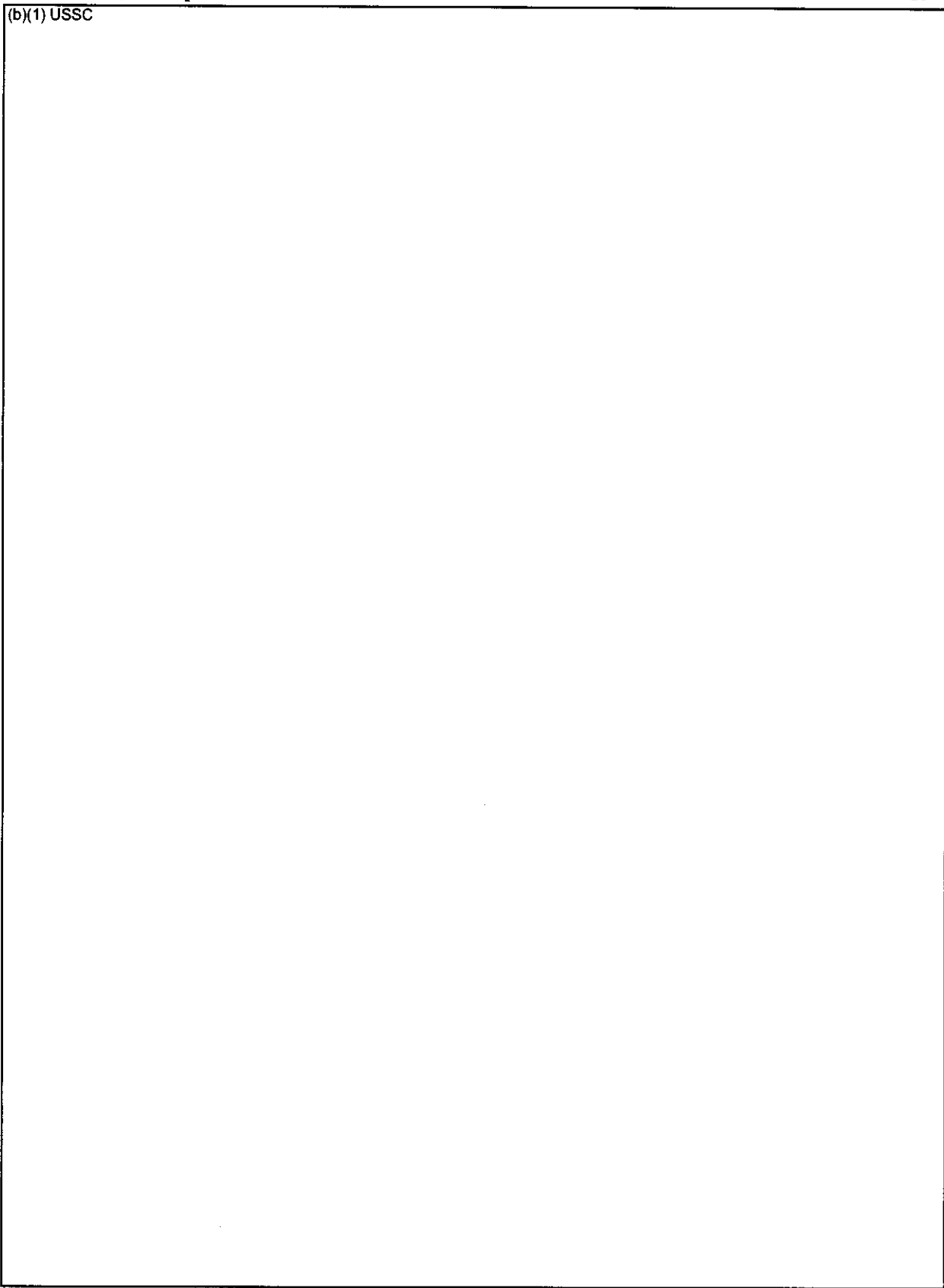
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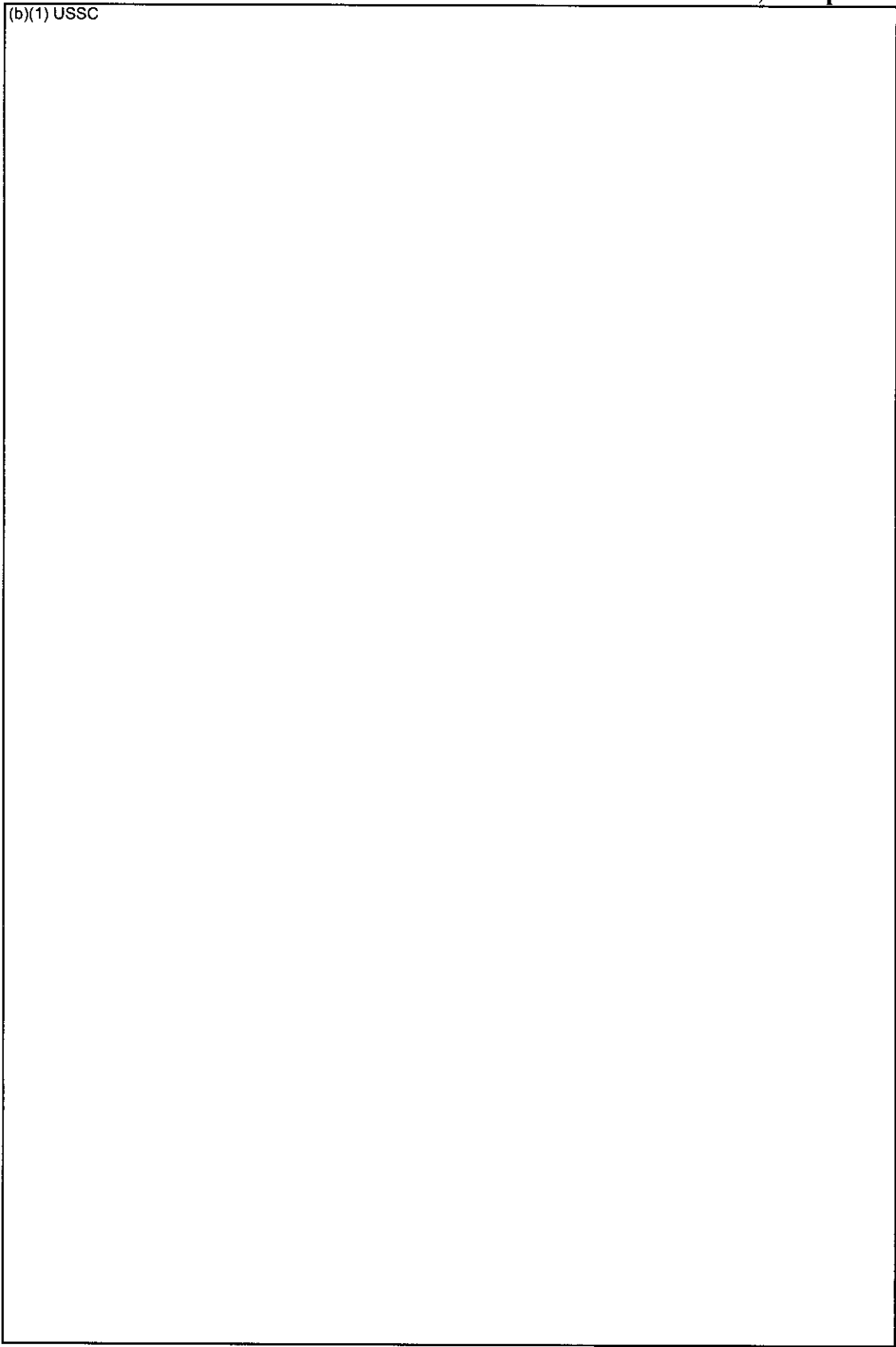
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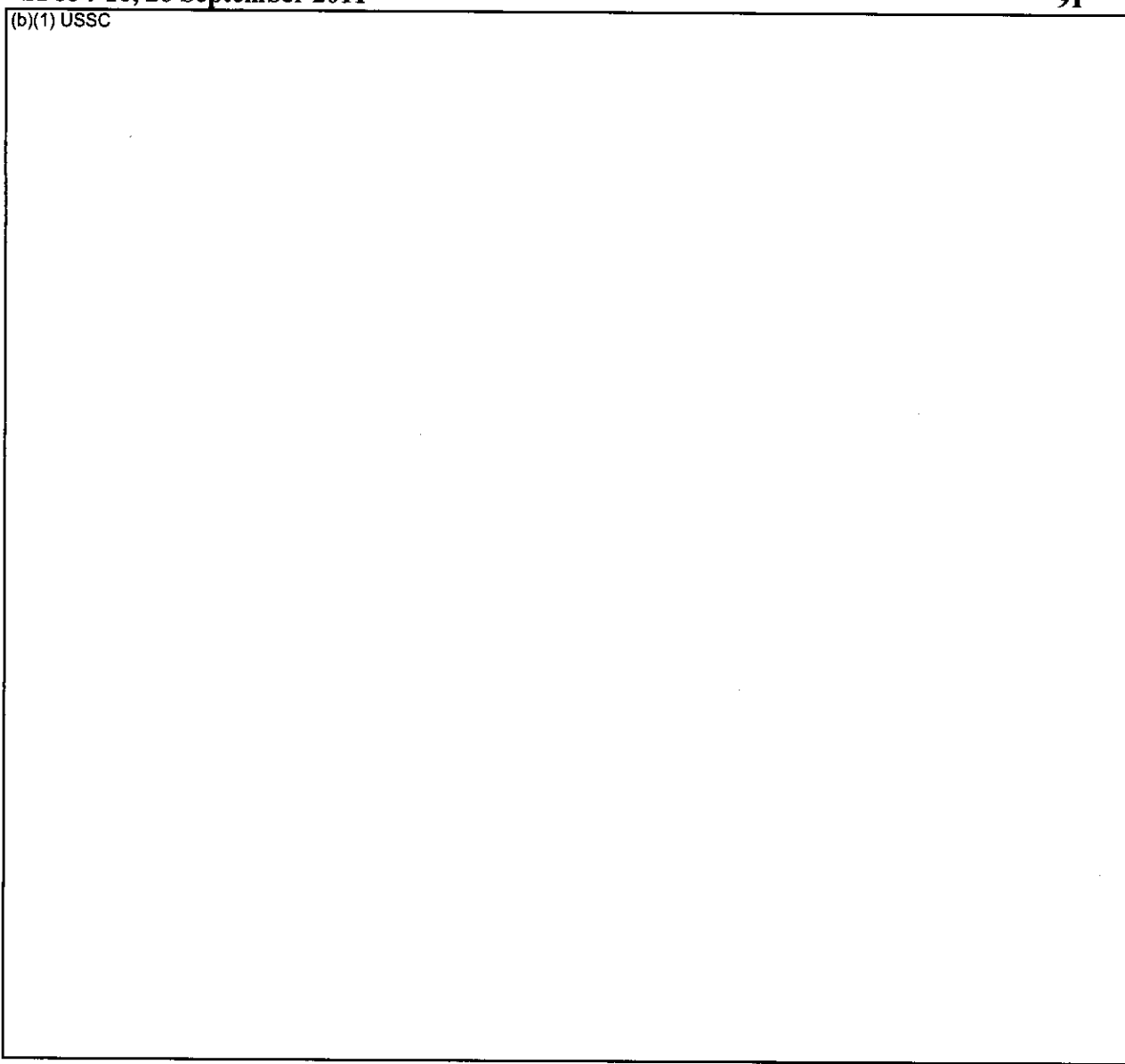
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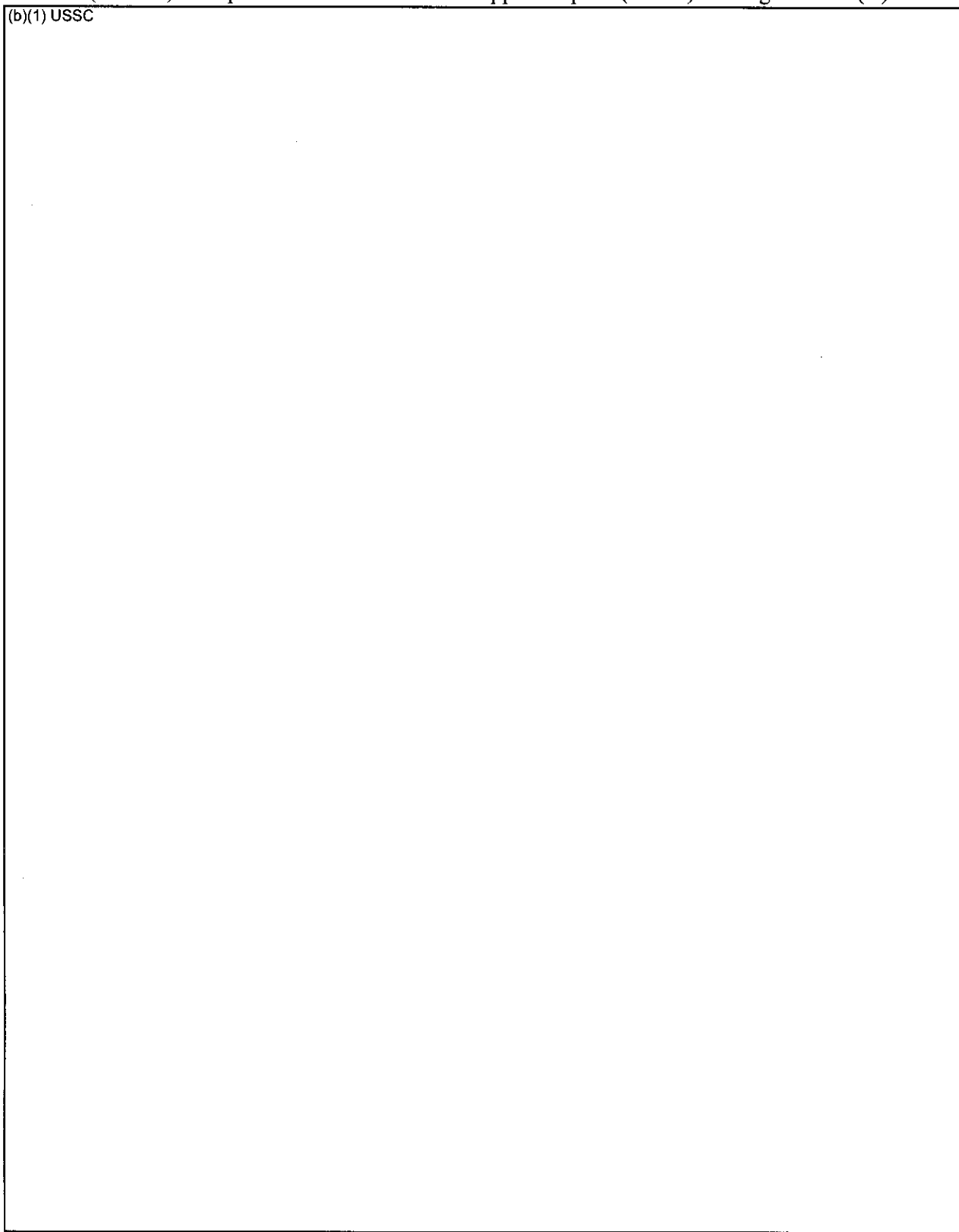


(b)(1) USSC

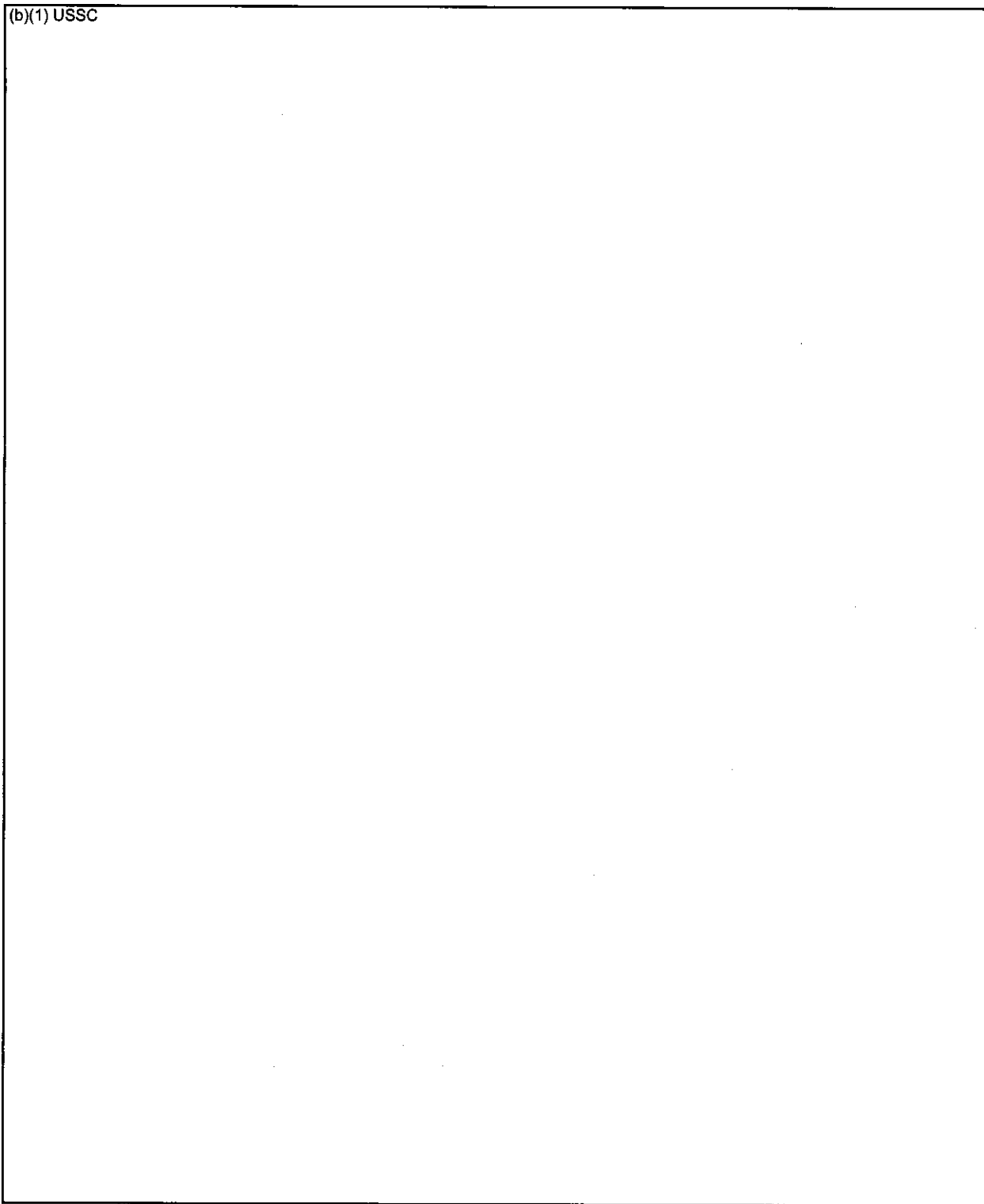


A2.2. (~~S//REL~~) Sample consolidated exercise support request (CESR) message format (U)

(b)(1) USSC



(b)(1) USSC



A2.3. (FOUO) Sample exercise support AIG 232 message format (U)

FM

HQ USSTRATCOM OFFUTT AFB NE//J31//

TO

{AIG 232 RECIPIENTS}//

MSGID/GENADMIN/HQ USSTRATCOM OFFUTT AFB NE//OP33//

SUBJ/TES SUPPORT DURING EXERCISE NAME (U)//

POC/NAME/RANK/PHONE NUMBER (DSN, COMMERCIAL)/E-MAIL ADDRESS (.MIL, .SMIL)//

REF//REQUESTOR MESSAGE//

AMPN//MESSAGE DTG//

RMKS/

1. (U) THIS MSG IS OF INTEREST TO (b)(1) USSC

(b)(1) USSC

SHOULD BE ADVISED OF BELOW INFORMATION VIA ESTABLISHED MECHANISMS FROM COGNIZANT HEADQUARTERS.

2. (ORIGINATOR CLASSIFY) EXERCISE DESCRIPTION. THIS MESSAGE ANNOUNCES THEATER EVENT SYSTEM (TES) SUPPORT FOR "EXERCISE NAME". PER REFERENCE A, A SCRIPTED SCENARIO FOR SHORT AND MEDIUM/INTERMEDIATE RANGE TACTICAL BALLISTIC MISSILES WILL BE PROVIDED BY MISSION CONTROL STATION (MCS) AND JOINT TACTICAL GROUND STATION (JTAGS) UNITS VIA THE IBS SIMPLEX AND IBS INTERACTIVE DATA NETWORKS AND FIRST DETECT-FIRST REPORT VOICE NETWORKS.

3. (U) DATA DISSEMINATION METHODS FOR ALL THEATERS.

A. (U) IBS SIMPLEX. SENSOREP FORMAT. THE SCENARIO IBS REPORTS WILL BE FLAGGED "EXER" AND WILL REQUIRE RECEIVER EQUIPMENT TO BE PROPERLY CONFIGURED IF THE SCENARIO IS TO BE RECEIVED. EXERCISE CI'S TO BE USED IN THIS SCENARIO ARE {LIST CI(S) TO BE USED FOR THIS EXERCISE}. TO AVOID RECEIVING EXERCISE DATA, IBS SIMPLEX BROADCAST SUBSCRIBERS SHOULD SELECT "REAL" WHEN LOGGING ONTO TACTICAL RECEIVERS.

AND/OR

B. (U) IBS INTERACTIVE. TDIMF FORMAT. IBS INTERACTIVE REPORTS WILL BE LABELED "TEST" AND "EXERCISE" IAW NORMAL IBS INTERACTIVE PROTOCOL. INITIAL AND UPDATE REPORTS WILL BE PROVIDED IN TIME SEQUENCE USING THE SAME MESSAGE NUMBER. MESSAGES WILL BE FORMATTED USING THE

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SYMBOL IDENTIFIERS FOUND IN SECTION 3 OF THE IBUG. IBS-I SUBNET ID CODES TO BE USED IN THIS SCENARIO ARE {LIST SUBNET IDS HERE}.

4. (ORIGINATOR CLASSIFY) VOICE REPORTING NETS REQUIRING ACTIVATION BY THEATER: AS REQUESTED

5. (ORIGINATOR CLASSIFY) SECTORS AT RISK REPORTING BY MCS AND JTAGS BY THEATER: AS REQUESTED

6. (ORIGINATOR CLASSIFY) SCRIPTED EVENTS: AS REQUESTED

7. (U) EXERCISE TERMINATION AND NON-SUPPORT NOTIFICATION INSTRUCTIONS: WITHIN 72 HOUR EXECUTION WINDOW, IF TERMINATION OF THE EXERCISE IS REQUIRED OR IF A TES ELEMENT IS UNABLE TO SUPPORT THE EXERCISE AS TASKED, CONTACT THE JSPOC. PROCEDURES FOR EXERCISE CHANGES OUTSIDE THE 72 HOUR POINT WILL CONTINUE IN ACCORDANCE WITH THE GUIDANCE IN SI 534-16 BY CONTACTING (b)(1) USSC

(b)(1) USSC

DERIVED FROM: CENTCOM/EUCOM/PACOM SOURCES

DECL/DDMMYY//





|             |             |
|-------------|-------------|
| (b)(1) USSC |             |
| * (S//REL)  | (b)(1) USSC |
| (b)(1) USSC |             |
| ** (S//REL) | (b)(1) USSC |
| (b)(1) USSC |             |
| Note:       | (b)(1) USSC |

**Table A2.3. ~~(S//REL)~~ Aircraft in Afterburner (IBS-S). (U)**

|             |             |
|-------------|-------------|
| (b)(1) USSC |             |
| * (S//REL)  | (b)(1) USSC |
| ** (S//REL) | (b)(1) USSC |
| (b)(1) USSC |             |

**Table A2.4. ~~(S//REL)~~ OPIR Special Events (IBS-S). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

**Table A2.5. ~~(S//REL)~~ Operational Status Reports (IBS-S). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

**Table A2.6. ~~(S//REL)~~ IBS Simplex Source Identification. (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

**Table A2.7. ~~(S//REL)~~ Theater Missiles (IBS-I). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

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**Table A2.8. ~~(S//REL)~~ Aircraft in Afterburner (IBS-I). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

**Table A2.9. ~~(S//REL)~~ Operational Status Reports (IBS-I). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

**Table A2.10. ~~(S//REL)~~ Subnet Ids (IBS-I). (U)**

|             |
|-------------|
| (b)(1) USSC |
|-------------|

|             |
|-------------|
| (b)(1) USSC |
|-------------|

Table A2.11. ~~(S//REL)~~ Voice Warning Call Signs\*. (U)

|             |
|-------------|
| (b)(1) USSC |
|-------------|

Table A2.12. ~~(S//REL)~~ Missile Criteria. (U)

|             |
|-------------|
| (b)(1) USSC |
|-------------|



ATTACHMENT 3

STRATEGIC DIAGRAMS AND CHARTS

Table A3.1. (U) Primary Strategic MW/NUDET System Components. (U)

|             |             |
|-------------|-------------|
| (b)(1) USSC |             |
|             | (b)(1) USSC |
| (b)(1) USSC |             |
| (b)(1) USSC |             |
| (b)(1) USSC |             |
| (b)(1) USSC |             |
| (b)(1) USSC |             |
| (b)(1) USSC |             |
| (b)(1) USSC |             |

COVERAGES

Figure A3.1. (U) Radar Coverage. (U)

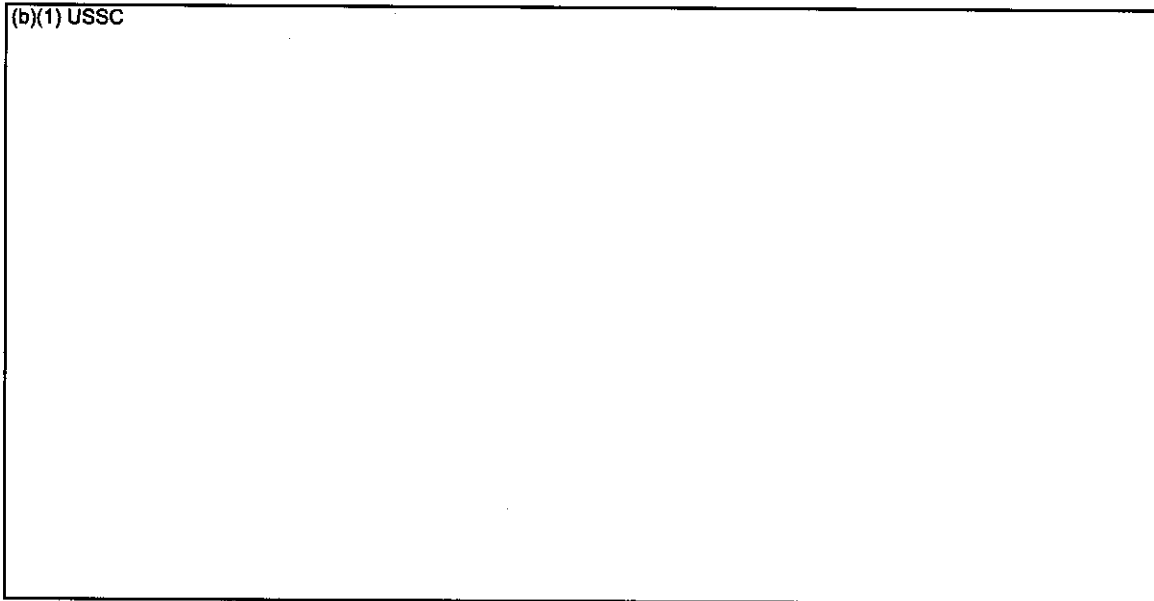


Figure A3.2. (~~S//REL~~) Approved DSP/SBIRS Sub-points (some may be unoccupied). (U)

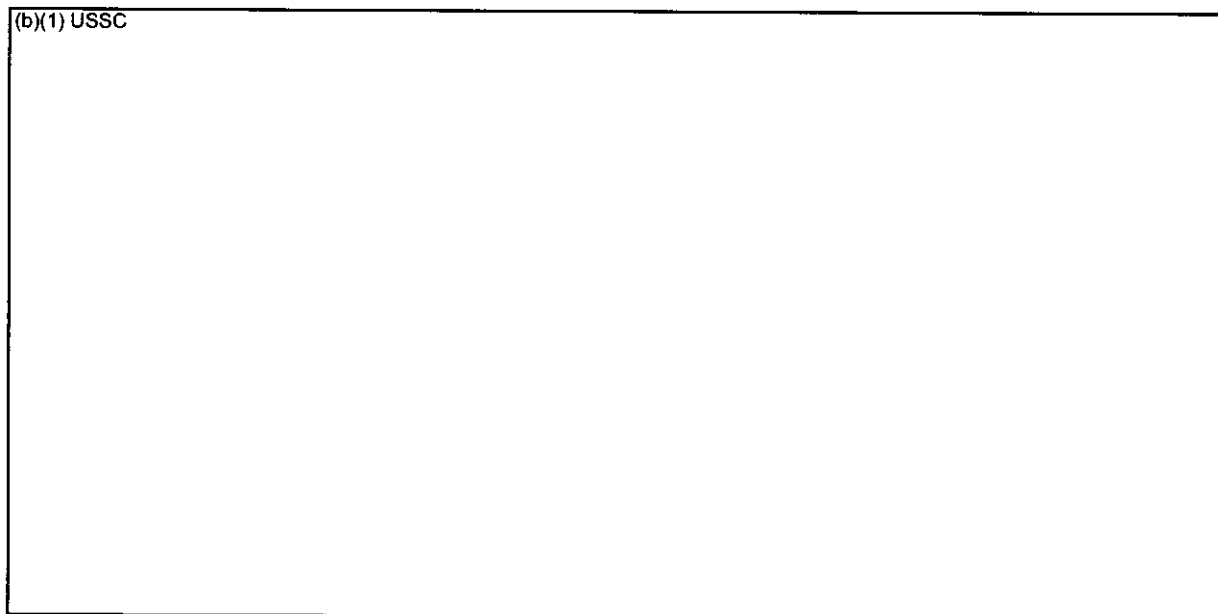
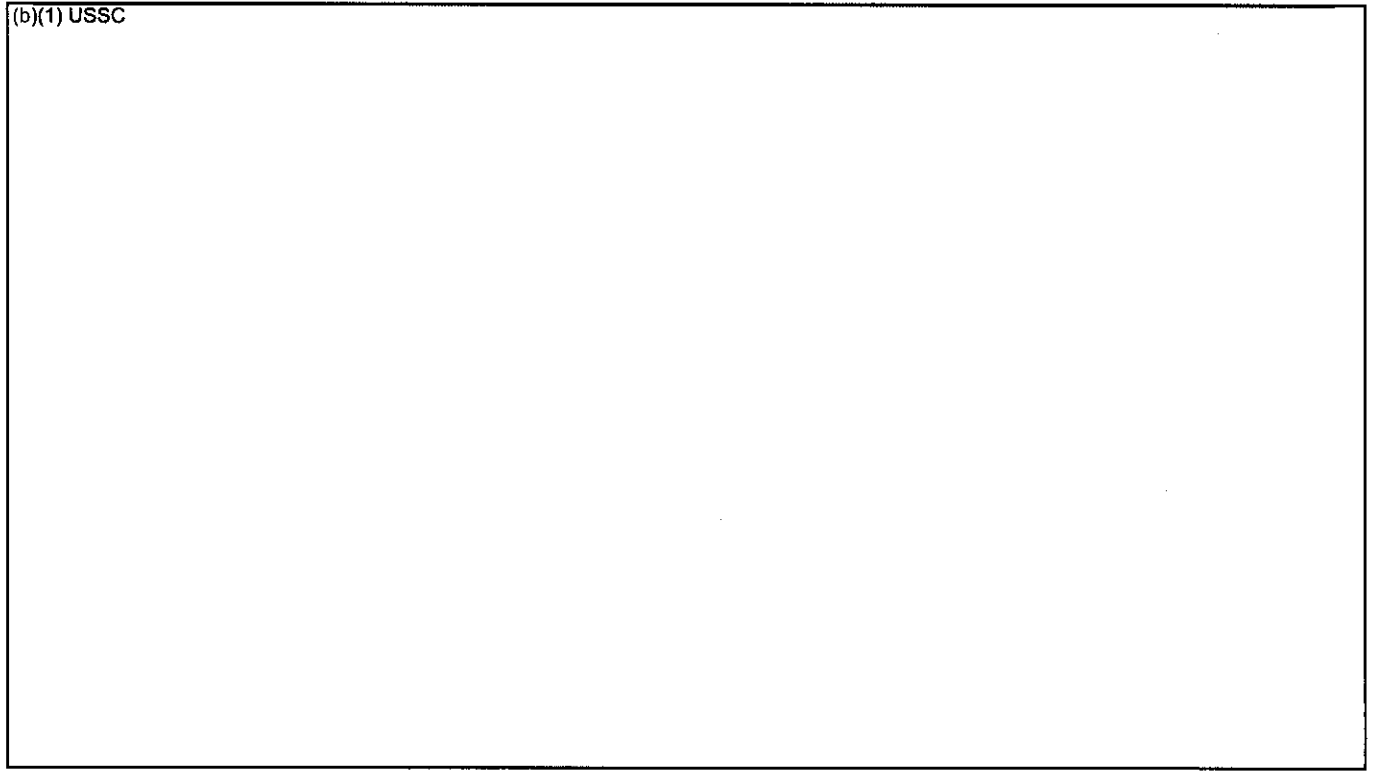




Figure A3.3. ~~(S//REL)~~ TES AOIs. (U)

(b)(1) USSC

A large rectangular box with a black border, representing a redacted figure. The text "(b)(1) USSC" is located in the top-left corner of the box.

ATTACHMENT 4

OPSCAPS

Table A4.1. ~~(S//REL)~~ Processor OPSCAP. (U)

(b)(1) USSC

Table A4.2. ~~(S//REL)~~ Communications OPSCAP. (U)

(b)(1) USSC

Table A4.3. ~~(S//REL)~~ Environmental OPSCAP. (U)

(b)(1) USSC

Table A4.4. ~~(S//REL)~~ Equipment OPSCAP. (U)

(b)(1) USSC

**Note:** (b)(1) USSC

(b)(1) USSC

**Note:** (b)(1) USSC

(b)(1) USSC

**Table A4.5. ~~(S//REL)~~ UEWR Equipment Status. (U)**

| SUBSYSTEM (units available-EQUIPMENT) | GREEN | YELLOW | RED |
|---------------------------------------|-------|--------|-----|
| (b)(1) USSC                           |       |        |     |

**Table A4.6. (U) EWR Processor Status. (U)**

| SUBSYSTEM (units available-PROCESSOR) | GREEN | YELLOW | RED |
|---------------------------------------|-------|--------|-----|
| (b)(1) USSC                           |       |        |     |

**Table A4.7. ~~(S//REL)~~ UEWR Environmental Status. (U)**

| CONDITION (ENVIRONMENT) | GREEN | YELLOW | RED |
|-------------------------|-------|--------|-----|
| (b)(1) USSC             |       |        |     |

**Table A4.8. (U) Site Communications Status. (U)**

| MEDIUM (COMMUNICATIONS) | GREEN | YELLOW | RED |
|-------------------------|-------|--------|-----|
| (b)(1) USSC             |       |        |     |
| MEDIUM COMBINATIONS     | AND   | AND    | AND |
| (b)(1) USSC             |       |        |     |

(b)(1) USSC

**Table A4.9. (U) Space-Only OPSCAP. (U)**

| Condition                              | OPSCAP |
|----------------------------------------|--------|
| (U) No Spacetrack Mission Plan         | RED    |
| (U) Spacetrack Catalog Unavailable     | RED    |
| (U) Not Generating Releasable Messages | RED    |
| (U) Any Delay in Data Transmission     | YELLOW |
| (U) Any Period of Data Loss            | RED    |

**Table A4.10. (U) Cavalier Equipment Status. (U)**

| SUBSYSTEM (units available-EQUIPMENT)   | GREEN                                                 | YELLOW                                 | RED                                                  |
|-----------------------------------------|-------------------------------------------------------|----------------------------------------|------------------------------------------------------|
| (U) Digital Data Group                  | At least simplex operation                            |                                        | Loss of DDG interface                                |
| (U) Exciter                             | 1 exciter and the power distribution unit operational |                                        | Loss of exciters or power distribution unit          |
| (U) Relative Sensitivity                | Class A test results report "operational"             | Class A test results report "degraded" | Class A test results report "down"                   |
| (U) Signal Processor/Waveform Generator | Signal Processor and 1 waveform generator available   |                                        | Loss of signal processor or both waveform generators |

**Table A4.11. (U) Cavalier Processor Status. (U)**

| SUBSYSTEM (PROCESSOR)             | GREEN                                                                              | YELLOW                        | RED                                                                                      |
|-----------------------------------|------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------|
| (U) Processor Units (PU)          | At least 3 of PU1 thru PU7                                                         | At least 2 of PU1 through PU7 | Less than 2 of PU1 thru PU7                                                              |
| (U) Program Stores (PS)           | Any 7 of PS0, PS1, PS2, PS3, PS6, PS8, PS9, and PS10                               | N/A                           | Less than 7 of PS0, PS1, PS2, PS3, PS6, PS8, PS9, and PS10 are available                 |
| (U) Variable Stores (VS)          | Any 12 of VS0, VS1, VS2, VS3, VS6, VS7, VS8, VS9, VS10, VS11, VS12, VS14, and VS15 | N/A                           | Less than 12 of VS0, VS1, VS2, VS3, VS6, VS7, VS8, VS9, VS10, VS11, VS12, VS14, and VS15 |
| (U) Precision Frequency           | 1, of 3 oscillator chains                                                          | N/A                           | 0 oscillator chains                                                                      |
| (U) Input/Output Controller (IOC) | 1 of 2 subsystems                                                                  | N/A                           | 0 subsystems                                                                             |
| (U) MWOC Consoles                 | At least 1 of consoles 7, 8, or 10                                                 | N/A                           | 0 consoles                                                                               |

|                         |                                      |     |                  |
|-------------------------|--------------------------------------|-----|------------------|
| (U) Tactical Disk Packs | At least 1 of A2 or B2 Tactical Pack | N/A | 0 Tactical Packs |
|-------------------------|--------------------------------------|-----|------------------|

**Note:** When an outage occurs in the data link carrying PARCS data, the CMDR coordinates with the MWC to ensure continued PARCS data transmission.

**Table A4.12. ~~(S//REL)~~ TESCAP Requirements. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

**Table A4.13. ~~(S//REL)~~ DSP SATCAP. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

**Table 4.14. ~~(S//REL)~~ Sensor OPSCAP. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

**Table A4.15. ~~(S//REL)~~ NUDET OPSCAP. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

|                       |             |
|-----------------------|-------------|
| <b>Note: (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC           |             |

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**Table A4.16. (~~S//REL~~) NUDET Coverage Determination. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

**Table A4.17. (~~S//REL~~) Warning Coverage Determination. (U)**

|             |  |
|-------------|--|
| (b)(1) USSC |  |
|-------------|--|

ATTACHMENT 5  
TACS AND FIXED SITES

|                       |             |
|-----------------------|-------------|
| <b>A5.1. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC           |             |

|                       |             |
|-----------------------|-------------|
| <b>A5.2. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC           |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.2.1. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.2.2. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.2.3. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.2.4. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                       |             |
|-----------------------|-------------|
| <b>A5.3. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC           |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.3.1. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.3.2. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.3.3. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.3.4. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

|                         |             |
|-------------------------|-------------|
| <b>A5.3.5. (S//REL)</b> | (b)(1) USSC |
| (b)(1) USSC             |             |

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#### A5.4. (U) Fixed Sites

A5.4.1. (S//REL) (b)(1) USSC

(b)(1) USSC

A5.4.2. (S//REL) (b)(1) USSC

(b)(1) USSC

A5.4.3. (S//REL) (b)(1) USSC

(b)(1) USSC

A5.4.4. (S//REL) (b)(1) USSC

(b)(1) USSC

A5.4.5. (S//REL) (b)(1) USSC

(b)(1) USSC

A5.4.6. (S//REL) (b)(1) USSC

(b)(1) USSC

**Figure A5.1. (S/REL) TACs and Fixed Sites. (U)**

(b)(1) USSC