

ANNEX M TO JTF-SFA OPORD DEEP FREEZE
GEOSPATIAL INFORMATION AND SERVICES

OPR: JTF-SFA/J2

- REFERENCES:
- (a) Joint Pub 2-03 *JTTP for Geospatial Information and Services (GI&S) support to Joint Operations*, 31 Mar 99
 - (b) CJCS Instruction 3901.01, *Requirements for Global Geospatial Information and Services*
 - (c) National Geospatial Intelligence Agency (NGA) List 805-1A, NGA List of Products and Services, Jan 97
 - (d) DLA e-Catalog of Maps, Charts, and Related Products
 - (e) USPACOM Instruction 3881.1F, *Geospatial Information and Services (GI&S) Policy Guidance*, 16 Aug 99
 - (f) Air Force Instruction 14-205, *Geospatial Information and Services (GI&S)*, May 2004. (U) and PACAF Supplement 1

1. Situation.

a. Purpose. This Geospatial annex provides planning guidance to USPACOM component commands and outlines interagency responsibilities between the DoD and the National Science Foundation (NSF) in support of Operation DEEP FREEZE (ODF). ODF requires coordinated geospatial support due to the extreme environmental conditions in Antarctica as well as the diverse organizations and forces involved.

b. Enemy. See Basic Plan.

c. Friendly Forces. See Basic Plan.

d. Assumptions.

1) The National Geospatial-Intelligence Agency (NGA) will provide GI&S products in support of this OPORD.

2) All units participating in operations as part of JTF-SFA OPORD are expected to arrive in theater with a 15-day basic load of GI&S products. SPAWAR Office of Polar Programs will provide all flight planning and operational FLIP products in both Christchurch, NZ and McMurdo Station.

e. Available Products. Appendix 7 to this annex contains a list of the types of GI&S products available from NGA.

2. Mission. To ensure adequate GI&S support is available to support JTF-SFA.

3. Execution.

a. Concept of GI&S Operations.

- 1) General. HQ PACAF/A2XA is the overall manager of PACAF GI&S programs. Units requiring GI&S materials will stock IAW JTF-SFA OPORD Annex M basic load of maps and charts supporting mission planning for the execution of the OPORD.
- 2) Deployment. Unless directed by CDRUSPACOM, no GI&S forces will deploy in support of this OPORD.
- 3) Employment. Unit-required GI&S material will be provided by using Basic Load or WRS. Units will be re-supplied with their pre-positioned, in-theater WRS upon notification that the Basic Load stock must be augmented. In addition, units may replenish GI&S products used during OPORD execution by contacting unit, 13 AF/A2O or PACAF NGA rep.
- 4) Interoperability.
 - a) Operation reference datum is WGS-84.
 - b) Units will transmit positions by referencing MGRS Coordinates (6 digit) or geographic coordinates (lat/long). Additionally, units will pass coordinates derived from global positioning system (GPS) systems with the term GPS and as a MGRS 6 digit coordinate.
 - c) Units will report positions in latitude/longitude as degrees/minutes/seconds (not degrees/minutes/decimal minutes). Include if GPS was used to derive the coordinate.

b. Tasks.

- 1) 13 AF/A2O directs and manages all mapping, charting, and related activities supporting this OPORD. 13 AF/A2O, through coordination with HQ PACAF/A2X, develops stocking and distribution plans to ensure the availability of all GI&S data required by USAF forces supporting this OPORD.
- 2) PACAF unit-level Senior Intelligence Officers will use contingency reserves and Basic Load material to meet aircrew mission needs. Units will ensure delivery of their Basic Load to forward operating locations, if required.

4. Administration and Logistics.

- a. Supply and Storage. Unit and Numbered Air Force (NAF) GI&S assistance, procedures and responsibilities are contained in reference h.
- b. Transportation. Administrative. 13 AF/A2O, with assistance from HQ PACAF/A2XA, are responsible for coordinating GI&S WRS transportation in their respective area of responsibilities, upon execution of this OPORD.

c. Support -Administrative. GI&S support requests must be coordinated through 13 AF/A2O.

d. Reports. None required.

5. Command and Control.

a. Command.

1) See Annex J for basic command relationships.

2) Use general service (GENSER) message channels for GI&S matters to maximum extent. The Plain Language Address Directory (PLAD) for message to the 13 AF GI&S Officer is 13 AF Hickam AFB HI//A2/A2O//.

Mailing Address is:

13 AF/A2O
ATTN: GI&S Officer
650 Hangar Ave Ste S-100
Hickam AFB, HI 96853

3) Telephone numbers are DSN 315 449-0413, commercial (808) 449-0413. Unclassified Fax is 315-449-0442. Secure Fax to 13 AF/A2 is 315-449-0431.

4) 13 AF/A2O email address: 13af.a2o@hickam.af.mil.

5) NGA Rep to PACAF on staff or unit support, 808-449-4467.

b. Command, Control, Communications, and Computer Systems. See Annex K.

///signed///
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Lieutenant General, USAF
Commander, JTF-Support Forces Antarctica

Appendix:

7. Imagery Requirements

OFFICIAL:

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APPENDIX 7 TO ANNEX M TO JTF-SFA DEEP FREEZE OPOD
Imagery Requirements

1. General - Purpose. To outline national policy and procedures and define procedures for requesting and disseminating imagery for in support of Operation DEEP FREEZE.

2. Situation - GI&S Requirements. The following standard GI&S products required to support safety of flight on the Antarctic continent.

a. Aerospace Products.

- 1) Global Navigation Charts (GNC), 1:5,000,000 scale.
- 2) Jet Navigation Charts (JNC), 1:2,000,000 scale.
- 3) Operational Navigation Charts (ONC), 1:1,000,000 scale.
- 4) Tactical Pilotage Charts (TPC), 1:500,000 scale.
- 5) Joint Operations Graphic-Air (JOG-A), Series 1501A, 1:250,000 scale.
- 6) Strip Charts (Route Charts), 1:500,000 scale.

b. Hydrographic Products.

- 1) Coastal charts of various scales.
- 2) Harbor and Approach charts of various scales.
- 3) Combat charts, 1:50,000 scale.
- 4) General nautical charts, various small scales.

c. Topographic Products.

- 1) Joint Operations Graphic-Air (JOG-A), Series 1501A, 1:250,000 scale.
- 2) Topographic Line Maps (TLM), 1:100,000 scale
- 3) City Graphics, various large scales.

d. Digital Data.

- 1) NGA Geospatial Intelligence Feature Database (GIFD).
 - 2) Vector Smart Map (VMAP) Level 1.
 - 3) Interim Terrain Data (ITD).
 - 4) Digital Topographic Products (prototype) (DTOP), Levels 1-5.
 - 5) Littoral Warfare Data (prototype) (LWD).
- e. Additional standard GI&S product lines available from NGA include:
- 1) Joint Operations Graphic-Ground (JOG-G), Series 1501X and/or Joint Operations Graphic-Combined (JOG-C), Series 1501C; 1:250,000 scale.
 - 2) Evasion Charts (EVC).
 - 3) Navigational Film Strips.
 - 4) Flight Information Publications (FLIP).
- f. Other standard NGA products may apply.
3. Assumptions. Refer to the Basic Plan.
4. Responsibilities.
- a. National Science Foundation. Consolidated various scientific requests for support and refines list to the location to be used for the next scientific year.
 - b. 109th Air National Guard Wing. Forward the list of proposed new put in sites to the 613 Air Operations Center (613 AOC), Intelligence, Surveillance and Reconnaissance Division (IRD).
 - c. 613 AOC/IRD.
 - 1) Review, research, validate, submit, and monitor the status of time-sensitive and non time-sensitive collection requirements to meet the military needs of JTF-SFA.
 - 2) Submit requirements that cannot be satisfied with existing imagery to Pacific JIOC via the Requirements Management System (RMS) or Production Management Alternative Architecture (PMAA) via COLISEUM according to the procedures outlined in the PTPP.

- 3) Monitor the overall satisfaction of validated IMINT requirements and production requests, and other specialized imagery-associated requests for information. Modify existing or create new collection strategies to increase imagery satisfaction for customers.
- 4) Monitor operational status of theater and national imagery intelligence systems, as required.
- 5) Navy Research Labs (NRL). Will take the nationally collected imagery and using special processes and software identify crevasse and potential safe landing areas in the new research support sites. The NRL will identify the potential dangerous areas on an imagery derived product (IDP) that can be forwarded to the flying unit.

5. Concept of Operations for Imagery Collection, Analysis, and Distribution.

- a. Imagery Collection. Figure B-7-1 summarizes the normal routing of imagery requests, based on responsibilities and procedures set forth in the references.
- b. Imagery Analysis. JTF-SFA depends on NRL for imagery analysis.
- c. Imagery Distribution. Figure B-7-1 summarizes the normal routing of imagery requests, based on responsibilities and procedures set forth in the references.

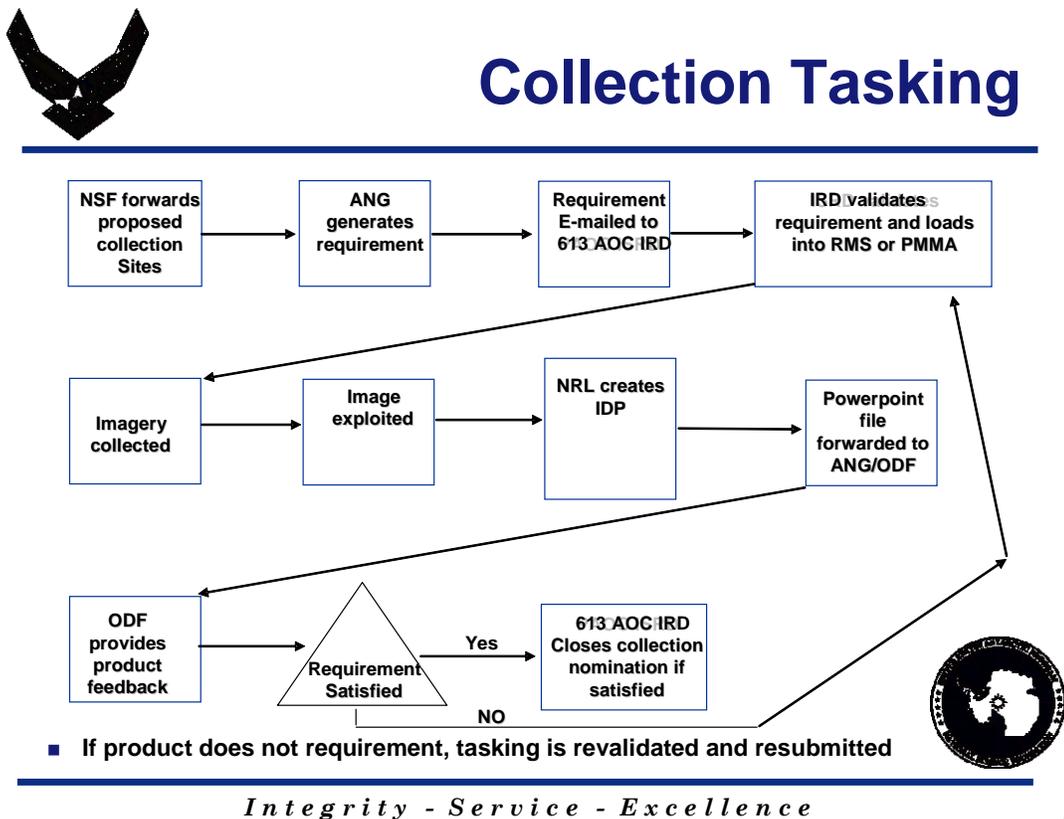


Figure B-7-1 – Imagery Request Process