

DRAFT

9310
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Date

COMMAND POLICY LETTER NO. X-03

From: Commanding General

Subj: MARINE CORPS SYSTEMS COMMAND IMPLEMENTATION OF DEPARTMENT
OF THE NAVY (DON) POLICY ON THE NAVAL LITHIUM BATTERY
SAFETY PROGRAM

Ref: (a) NAVSEA Instruction 9310.1B
(b) TM S9310-AQ-SAF-010, Batteries, Navy Lithium Safety
Program Responsibilities and Procedures
(c) NAVORDCEN INDIAN HEAD MD msg 280655Z Jun 99

Encl: (1) Format for Request for Lithium Battery Safety
Certification for USMC Developmental/Other
Services' Items
(2) Format For Request For Lithium Battery
Safety Certification For Commercial-Off-The-
Shelf/Non-Developmental Items (COTS/NDI)
Using Lithium Ion Rechargeable Batteries

1. Purpose. To issue policy, guidance and responsibilities in applying the Navy Lithium Battery Safety Program to all Marine Corps acquisition programs and procurement programs in accordance with paragraph 6.d of reference (a).

2. Scope. This policy applies to all equipment and devices utilizing lithium batteries intended for use or transport on Navy or Marine Corps facilities, ships, and aircraft, regardless of source.

3. Background. Lithium batteries provide extended energy and life characteristics to power present and future devices. Each design differs in its level of performance and hazards. The Navy Lithium Battery Safety Program ensures the safety of the user, the equipment and the transporting vehicle (i.e., wheeled/tracked ground vehicle, ship, or aircraft) when a lithium battery is used and transported within the DON.

4. Policy

a. All lithium batteries and every system (end item) using a lithium battery must be reviewed, tested (when required), and

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receive approval in accordance with references (a) and (b) before test, prototype or production units are introduced into the Fleet. Review, testing, and recommendation for approval to Naval Ordnance Safety and Security Activity (NOSSA Code N311) can be obtained from either of the following:

(1) Commander, Naval Surface Warfare Center, Carderock Division (J. Banner, Code 644) 9500 MacArthur Blvd., West Bethesda, MD 20817-5700

(2) Commander, Naval Surface Warfare Center, Crane Division (D. Mains, Code 609A) 300 Highway 361, Crane, IN 47522-5001

b. Only lithium batteries that have been approved for a specific end item application shall be procured for Fleet use and they shall be used solely for that application. Special provisions for using lithium ion rechargeable batteries as power sources for commercial off the shelf consumer electronic items such as laptops, PDAs, and cellular phones are contained in reference (c).

5. Responsibilities

a. Safety. As a normal part of your program oversight, verify the completion of safety certifications for all lithium batteries and equipment powered by such batteries.

b. Product Group Directors (PGDs)/Program Managers (PMs)

(1) If feasible, utilize currently available primary (non-rechargeable) and secondary (rechargeable) lithium batteries to satisfy requisite program power requirements before pursuing development of new types of lithium batteries.

(2) Ensure that all lithium batteries, regardless of size, and equipment powered by such batteries complete the lithium battery safety certification approval procedures in accordance with Enclosures (1) and/or (2), as appropriate. In accordance with references (a) and (b), the information required in each data package should address the proposed battery design, a description of lithium battery-powered equipment, logistical and operational use, functional and environmental test performed

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including the test parameters, all safety testing performed to date and the proposed Safety Testing Program plan. Enclosure (1) contains a sample letter requesting a safety review and certification of a lithium battery that is part of a USMC developmental effort or for the USMC implementation of devices/equipment from the other Services. Enclosure (2) provides a sample for safety review of COTS/NDI equipment that uses lithium ion rechargeable batteries.

(3) Plan and fund for the safety studies (to include probability and consequence analysis), tests, and prepare the battery data package required for lithium battery safety certification approval procedures in accordance with Enclosure (1). Included should be early discussion with test facilities so that tailored testing (where appropriate) can be performed.

(4) Prior to procurement of any lithium battery or equipment containing lithium batteries, directly from a source outside of DOD, inquire if safety certification approval in accordance with the references has been received for that purpose. Inquiries concerning safety certifications of batteries should be made to either of the following points of contact:

(a) NSWC, Carderock; Julie Banner, (301) 227-1853, DSN 287-1853 OR via e-mail BANNERJA@NSWCCD.NAVY.MIL

(b) NSWC, Crane; Don Mains, (812) 854-3112, DSN 482-3112, or via e-mail MAINS_DON@CRANE.NAVY.MIL.

(c) PM EPS, GTES, MARCORSYSCOM; Joanne Martin, (703)432-3584, or via e-mail martinjm@mcsc.usmc.mil.

b. PM, Expeditionary Power Systems

(1) Provide technical support to PGDs and PMs and assist them in obtaining safety certifications for developmental or production lithium batteries, either primary and/or secondary batteries.

(2) Coordinate and facilitate the completion of safety certifications for all lithium batteries and equipment powered by such batteries.

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(3) Maintain a list of completed USMC battery safety certifications.

(4) On an annual basis, solicit from PMs/PGDs future lithium battery needs and intentions for consolidated testing, where practical and cost effective.

(5) Subject to funding availability, conduct battery safety testing for new batteries that have broad application across multiple PGDs/PMs.

(6) Coordinate with using units in the Fleet to ensure that any procurement of lithium batteries consists of batteries that have been safety certified and approved for Fleet use.

(7) Provide for Project Teams, program analysts, logisticians, and engineers Lithium Battery Safety awareness training on policy, issues, risks, and procedures.

6. Action. The responsibilities assigned in this policy are effective immediately. PGDs/PMs will ensure that all of their products and projects comply with this policy to include those currently in the acquisition cycle.

7. Applicability. This policy is applicable to the Marine Corps Tactical Systems Support Activity (MCTSSA).

WILLIAM D. CATTO

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FORMAT FOR REQUEST FOR LITHIUM BATTERY SAFETY
CERTIFICATION FOR USMC DEVELOPMENTAL/OTHER SERVICES'
ITEMS

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PGD/PM
Date

From: Commanding General, Marine Corps Systems Command
(PGD-XX), Quantico, Virginia 22134-5010
To: Commander, Naval Surface Warfare Center, Carderock
Division (J. Banner, Code 644) 9500 MacArthur Blvd., West
Bethesda, MD 20817-5700

or Commander, Naval Surface Warfare Center, Crane Division
(D. Mains, Code 609A) 300 Highway 361, Crane, IN
47522-5001

Via: Program Manager, Expeditionary Power Systems, Marine
Corps Systems Command (PMM 153), Quantico, VA 22134-5010

Subj: REVIEW OF LITHIUM-BASED BATTERY CONTAINED IN ... **(your
system/equipment)**

Ref: (a) NAVSEA Technical Manual S9310-AQ-SAF-010, Navy
Lithium Safety Program Responsibilities and
Procedures (20 July 1988)
(b) NAVSEA Instruction 9310.1B (13 June 91)
(c) NAVORDCEN INDIAN HEAD MD msg 280655Z Jun 99

Encl: (1) **Battery Data Package for ... (your system/equipment)**

1. The Product Group Director (PGD - XX) for ..., requests that the Power Systems Branch (Code 644/609A) of the Naval Surface Warfare Center, **(Carderock/Crane)** Division conduct a safety review of the **(model or part number)** as used in the **(system battery goes in)** in accordance with reference (a) as required by reference (b). A data package describing the battery, its proposed application, and the system it is to be used in is included as **Enclosure (1)**.

2. **Briefly describe the battery and the system, who will be using it, where it will be used, etc.** (i.e., The XYZ battery used in the ABC system is a primary/rechargeable lithium/thionyl chloride battery manufactured by DCB Battery manufacturers, Inc. The battery is a single cell, hermetically sealed

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Enclosure (1)

lithium/thionyl chloride system with a mechanical activation mechanism. The system is currently in development by the Army and is proposed for use by Navy SEALs. Total theoretical capacity is 0.314 amp-hours (approximately one-sixth the capacity of a bobbin construction "AA" Li/SOCl₂ cell). The manufacturer's rated capacity is 0.280 amp-hours under 0.5 amp load at room temperature. Limited safety testing has been conducted on the XYZ battery in support of the ABC Program. These results are included in the enclosed data package).

3. The Product Group Director (**PGD - XX**) **for ...**, requests that this package be reviewed, and a response be returned by (**date**). Any questions concerning this review should be addressed to (**POC, email address, phone number, fax number...**).

/s/
By direction

FIRST ENDORSEMENT on PGD 1XX ltr 9310 PGD/PM dtd 000000

From: Commander, Marine Corps Systems Command, PM Expeditionary Power Systems (PMM 153), Quantico, VA 22134-5010

To: Commander, Naval Surface Warfare Center, Carderock Division (J. Banner, Code 644, 9500 MacArthur Blvd., West Bethesda, MD 20817-5700

or Commander, Naval Surface Warfare Center, Crane Division (D. Mains, Code 609A) 300 Highway 361, Crane, IN 47522-5001

1. This Command supports appropriate testing and/or assessment to determine the mishap risk associated with the subject battery and its proposed application. In addition to providing the requesting PGD/PM with any findings, please provide a courtesy copy to the Marine Corps Systems Command, Program Manager for Expeditionary Power Systems, PMM-153. Any questions concerning this matter can be addressed to Ms. Joanne Martin (703) 432-3584 or fax 703 432-3532.

/s/PM, EPS
By direction

Enclosure (1)

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FORMAT FOR REQUEST FOR LITHIUM BATTERY SAFETY CERTIFICATION FOR COMMERCIAL-OF-THE-SHELF/NON-DEVELOPMENTAL ITEMS (COTS/NDI) USING LITHIUM ION RECHARGEABLE BATTERIES

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Date

From: Commanding General, Marine Corps Systems Command
(PGD-XX), Quantico, Virginia 22134-5010
To: Commander, Naval Surface Warfare Center, Crane Division
(D. Mains, Code 609A) 300 Highway 361, Crane, IN
47522-5001
Subj: LITHIUM-ION BASED RECHARGEABLE BATTERY CONTAINED IN
COMMERCIAL-OFF-THE SHELF/NON-DEVELOPMENTAL EQUIPMENT
Ref: (a) NAVSEA Instruction 9310.1B
(b) NAVORDCEN INDIAN HD MD msg 280655Z JUN 99

1. Marine Corps Systems Command has procured (**device procured - laptop computers**) as part of the (**program - Navy/Marine Corps Intranet (NMCI) program**). To comply with reference (a) and in accordance with reference (b) the following information is provided to report the use of lithium batteries in commercial off the shelf devices.

a. General info: **These computers are the same as those for NMCI.**

b. Manufacturer/Brand name: **Dell**

c. Model numbers:

Laptop model number:

Keep-alive battery part number:

Rechargeable battery part number:

d. Scenario/environment: **For office and portable computing while on official travel in various locations. May be used on commercial planes or military ships, not anticipated for submarine use.**

e. Point of Contact: **Marine Corps POC (e.g., Project Manager/Project Officer)**

Enclosure (2)

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2. Any questions concerning this matter should be directed to the point of contact _____, phone _____, e-mail _____.

/s/
By Direction

Copy to:
PMM-153

Enclosure (2)