UNITED STATES MARINE CORPS
MARINE CORPS SYSTEMS COMMAND
2200 LESTER ST
QUANTICO, VIRGINIA 22134-6050

IN REPLY REFER TO:
9310
00T/EPS
17 Aug 04

ACQUISITION POLICY LETTER NO. 3-04

From: Commanding General

Subj: MARINE CORPS SYSTEMS COMMAND IMPLEMENTATION OF DEPARTMENT OF THE NAVY LITHIUM BATTERY SAFETY PROGRAM

Ref: (a) NAVSEA Instruction 9310.1B
(b) Command Policy Letter 10-03 of 11 Nov 03
(c) Develop and Demonstrate Process Handbook
(d) MCSC Milestone Decision Process Guide of Sept 02
(e) MCSCO 5100.29 Safety and Ready Certifications and Safety Releases of 1 Aug 03
(f) TM S9310-AQ-SAF-010, Batteries, Navy Lithium Safety Program Responsibilities and Procedures
(g) 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 Systems Command acquisition programs and procurement programs in accordance with paragraph 6.d of reference (a).

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

3. Discussion. Reference (a) requires that lithium batteries be certified by the Naval Ordnance Safety and Security Activity before introduction to the Fleet.

a. Program Integrated Product Team (IPT). The Program IPT structure is the primary forum for addressing lithium battery safety issues. Reference (b) describes the relationship between, and responsibilities of, "supported" and "supporting" Program Managers (PMs) working in an IPT environment. For the purposes of lithium battery safety the PM procuring the system requiring a lithium battery is the "supported" PM and PM Expeditionary Power Systems (EPS) is the "supporting" PM.

b. Develop and Demonstrate (D&D) Process. Reference (c) discusses lithium battery certification as part of the systems engineering process, and provides information on integrating lithium battery certification into the D&D process.

c. Milestone Decision Process. In executing reference (d), the Milestone Assessment Team will ensure that the requirements of reference (a) have been implemented.

d. Safe and Ready Certification and Safety Releases. Reference (e) describes how Lithium Battery Certification will be considered as part of the Safety Release and Safe and Ready Certification processes.

4. Policy. PMs shall use only lithium batteries that NOSSA has certified safe for usage and only in the applications for which NOSSA has certified them in accordance with reference (f), whether the selection of a lithium battery occurred in a Marine Corps development or a joint other-service-lead program. In addition, PMs shall comply with the provisions of reference (g) when procuring COTS consumer electronic items that require lithium ion rechargeable batteries. PMs shall include lithium battery considerations as part of the normal activities of the Program IPT, and shall consider using PM EPS as the entry point for obtaining certification. PMs shall obtain lithium battery certification, or interim approval, as part of the safety certification process prior to DT and OT if Fleet Marines are to participate in those events.

5. Action.

a. Safety Office (00T).

(1) Verify the completion of safety certifications for

all lithium batteries and systems that use lithium batteries.

(2) Support PM EPS to determine a path forward in the event that a lithium battery, or system that uses a lithium battery is denied certification.

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

(1) If feasible, use currently available (lithium batteries) to satisfy requisite program power requirements before pursuing development of new types of lithium batteries.

(2) Ensure that all lithium batteries and every system using a lithium battery is reviewed, tested, and approved in accordance with references (a), (f) and (g) before the system shall be permitted to advance to the next stage of development and before test, prototype or production units are introduced into the Fleet. 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. Included should be early discussion with test facilities so that tailored testing (where appropriate) can be performed.

(4) Ensure that all lithium batteries and every system using a lithium battery that is procured directly from a source outside of DON meets the same requirements of references (a), (f) and (g) before test, prototype, or production units are introduced to the Fleet. Inquiries concerning safety certifications of batteries and systems should be made to one of the following points of contact:

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

(b) NSWC, Carderock; Julie Banner, (301) 227-1853,

DSN 287-1853 OR via e-mail bannerja@nswcdd.navy.mil

(c) NSWC, Crane; Don Mains, (812) 854-3112, DSN 482-3112, or via e-mail mains_don@crane.navy.mil.

(5) Coordinate with PM EPS and 00T determine a path forward in the event that a lithium battery, or system that uses a lithium battery is denied certification.

(6) Develop a path forward in the event that a lithium battery, or system that uses a lithium battery is denied certification.

c. 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.

(3) Maintain a database 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, manage and sponsor battery safety testing for new batteries that have broad application across multiple PGDs/PMs.

(6) Coordinate with PGDs, PMs, and 00T to determine a path forward in the event that a lithium battery, or system that uses a lithium battery is denied certification.

(7) 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.

(8) Provide for Project Teams, program analysts,

logisticians, and engineers Lithium Battery Safety awareness training on policy, issues, risks, and procedures.

(9) Serve as "supporting" PM in accordance with reference (d) on program IPTs for the purpose of advising on lithium battery certification.

William D. Catto

WILLIAM D. CATTO

Distribution:

TIGER Library
NOSSA
HQMC(SD)

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

9310

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

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/$SOCl_2$ 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)

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

9310
00T/EPS
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)

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)