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DEPARTMENT OF THE NAVY

Memorandum

05E3/AM
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Ser 61

DATE: JUN 23 1981

MIL-D-3135 type III

FROM SEA 05E

TO SEA 04H

SUBJ NAVSEA's Asbestos Elimination/Substitution/Personnel Protection Program, status report on

ENCL (1) Asbestos Quarterly Status Report (with attachment-1 Milestone Charts)
(2) Summary Status Report
(3) Rationale for Milestone Slippages

1. Enclosure (1) is the third quarterly status report on the subject program for FY 81.

2. As explained in the previous status report, enclosure (2) is a new addition to these reports and represents a more comprehensive milestone status report than enclosure (1) reflecting SEA 05E's responsibility for life cycle material management.

3. Enclosure (3) provides a rationale for enclosure (1) milestone task slippages.

4. Because of frequent inquiries from field activities for updating of NAVSEA approved asbestos-free materials, their applicable specifications and central supply status, SEA 05E is planning to widely promulgate a pertinent advisory by mid July 1981.

5. The present funding status for the subject program is:

	($K) FY 81 QUARTER				
	1	2	3	4	TOTAL
BUDGETED	179	150	123.2	48	500.2
OBLIGATED	179	150	123.2	0	452.2
AVAILABLE	0	0	0	48	48.0

6. The planned budget for the subject program for FY 82 is $437K.

J. W. Colangelo

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Copy to:

NAVSEES, Philadelphia (053B) w/encl (1), (2) and (3)
DTNSRDC, Annapolis (2833, 2272) w/encl (1)
NAVSUP (0311E, 0981V) w/encl. (1)
SPCC (5641) w/encl (1), (2) and (3)
FLENATSUPPO (9142) w/encl (2)
SEA 04F w/o encl
05E(RF) w/encl (1), (2) and (3)
05E1 w/encl (1), (2) and (3)
05E4 w/encl (1)
05R2 w/ encl (1)
073CB w/encl (1)
08R w/encl (1), (2) and (3)
3112 w/encl (1) and (2)
3222 w/encl (1)
5153 w/encl (1) and (2)
5141 w/encl (1)
5142 w/encl (1)
5143 w/encl (1)
5222 w/encl (1) and (2)
5243 w/encl (1)
5244 w/encl (1)
5252 w/encl (1) and (2)
531 w/encl (1) and (2)
5323 w/encl (1) and (2)
534 w/encl (1)
5431 w/encl (1) and (2)
5434 w/encl (1) and (2)
5444 w/encl (1)
PMS 301 w/encl (1) and (2)

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ASBESTOS QUARTERLY STATUS REPORT

(WITH ATTACHMENT (1) MAJOR MILESTONES)

PART A - MATERIALS

1. PACKING AND GASKETS (P/G)

a. Machinery/Piping Applications (other than spiral wound)

1) DOCUMENT REVISIONS

Draft amendments which prohibit asbestos currently are being circulated within NAVSEA for MIL-P-21099, "Packing Assemblies, Hydraulic Conical and V Types, Fire Resistant Type Hydraulic Fluids," and MIL-P-2911," Packing, Assembly, Hydraulic Conical and V Types."

2) SUBSTITUTE GASKETS FOR GAS TURBINE EXHAUST AND BLEED VALVE OUTLETS, PLUS DIESEL ENGINE EXHAUST

SPCC, Mechanicsburg has been requested to assign a stock number to "FERRATEX 25," manufactured by the Claremont Company, Inc. This material has been approved for use on the 16V149T1 diesel engine, the LM-2500 gas turbine exhaust and the LM-2500 air bleed outlet on FFG-7 class ships only. Testing to qualify this material for additional applications will be conducted concurrently with the fourth quarter FY 81 tests described in sub-para 3) following.

3) ASBESTOS-FREE SUBSTITUTE FOR COMPRESSED ASBESTOS SHEET MATERIAL

A comprehensive test plan for substitute products for asbestos sheet materials procured under Federal Specification HH-P-46 has been developed and circulated to cognizant NAVSEA codes for for review and comment. Funding is being provided to Facilities Engineering Support Office, Port Hueneme, California to conduct a portion of the laboratory tests in fourth quarter, FY 81. The balance of the tests will be initiated in FY 82. Initial materials to be tested are as follows:

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Trade Name	Manufacturer
Ferratex 25	The Claremont Co., Inc.
Thermo Tork TN-9000	Armstrong Corporation
Clean Leaf	Anchor Packing Company
Blue Gard	Garlock Corporation
Fawn Gylon	Garlock Corporation
Klingersil	Richard Klinger Inc.
Grafoil	Crane Packing Co.
Graph Lock	Garlock Corporation

A sample of asbestos sheet gasket material procured under Federal Specification HH-P-46 also will be tested, to provide a baseline for comparison.

4) ASBESTOS-FREE SUBSTITUTE FOR ASBESTOS GASKETS IN DIVER'S BREATHING AIR SYSTEMS

A draft NAVSEA notice currently is being reviewed within NAVSEA, which identifies Blue Gylon, Code No. 35120 manufactured by the Garlock Co. as the approved substitute for asbestos gaskets in diver's breathing air systems. The notice directs the use of Blue Gylon in new construction ships and craft or shore installations, and provides a timetable for replacement of gaskets in existing systems. SPCC has been requested to assign a stock number for procurement on a proprietary basis.

b. Piping and Boiler Applications

1) SPIRAL WOUND GASKETS

Tests of two candidate spiral wound gasket materials have been in progress since March 1981 at the Great Lakes Hot Plant facility. These gaskets have applications for boiler manholes, boiler handholes and piping systems components. Performance of the installed gaskets is being monitored by Navy boiler operating personnel; duration of test is six months. To date, the gaskets have been performing satisfactorily.

2) BOILER AIR CASING GASKETS (FLAT AND TADPOLE)

Contractor support has been obtained to develop a draft procurement specification for flat and Tadpole non-asbestos gaskets for boiler air casings. A preliminary draft of the specification has been completed; anticipate delivery of a final draft during June 1981. In the interim, a NAVSEA advisory approving the use of the proprietary non-asbestos material is ready for promulgation. Contractor support is now available to revise Buships Drawing S5102-C-841624 on Tadpole gaskets. Anticipate completion during fourth quarter FY 81.

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3) PIPE HANGER LINERS

Completed

4) DECK TILE

Draft amendments to eleven (11) procurement specifications for deck tiles and related materials have been completed and currently are being reviewed within NAVSEA. The amendments prohibit asbestos-containing materials and require a certificate of compliance to that effect from the manufacturer. Companies on the Qualified Products List (QPL) for materials procured under these Military Specifications were contacted to assess the impact of this action. All except one company stated that they had already eliminated asbestos from their products. The remaining company has not eliminated asbestos, but could do so. In this particular instance, two other companies are on the QPL for the specific product.

5) DECK UNDERLAYMENT

A draft revision of MIL-D-3135 has been prepared and forwarded to SEA 3112 for review.

6) ELECTRICAL

a) Electrical Cable. MIL-C-915 currently is being revised to prohibit the use of asbestos. Anticipate completion during fourth quarter FY 81.

b) The Institute of Electrical and Electronic Engineers (IEEE) Marine Transportation Committee is considering a proposal to eliminate asbestos from IEEE Standard No. 45 on cable. In the interim, IEEE cables are required to be asbestos free when invoked in Ship Specifications.

c) Electrical Insulation. Manufacturers of molded plastic materials have been queried regarding the availability of non-asbestos substitute products. Some responses have been received; anticipate complete reporting by August 1981. MIL-M-14 will be revised based on the availability and nature of substitute materials.

- Measures have been taken to cancel MIL-I-3053, "Insulation, Electrical, Asbestos-fiber, Treated and Untreated."
- MIL-E-917 currently is being revised to eliminate reference to MIL-I-3053. Anticipate completion during fourth quarter FY 81.

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- Revision of MIL-E-2212 on motor controllers is expected to be completed by October 1981.

- MIL-T-7221, MIL-T-16315, CTR 28 and CTR 15109 on transformers are being revised to eliminate asbestos; anticipate completion by November 1981.

d) Miscellaneous.

- MIL-G-3124, which covers AC generators, currently is being revised to prohibit asbestos. Completion is scheduled for October 1981.

- Contractor support has recently been made available to assist SEA 54 in the asbestos elimination program. It is anticipated that several of the projected task completion times can be shortened somewhat.

7. GLOVES/MITTENS (FOR HOT WORK)

Completed.

8. GASKETS (FOR FIRE-ZONE BULKHEAD DOORS)

Completed.

9. LINING, ELECTRICAL WIRE INSULATION AND GASKETS (FOR INDUSTRIAL OVENS)

Contractor support was made available in this area at the end of May 1981. SPCC has been asked to determine whether stock numbers are available for any of several types of industrial ovens. Most are known to be procured on a proprietary basis. A plan of action and milestones has been developed to deal with this task, which includes (1) a review and modification as required of procurement specifications; (2) development of a NAVSEA instruction to procurement activities, shipyards, repair activites and Type Commanders which will outline procurement policies on industrial ovens; and (3) a review and modification as necessary of NSTM and the General Specifications.

10) PACKING (FOR EXPLOSION-PROOF LIGHTING)

No Change.

11) PACKING (FOR BULKHEAD STUFFING TUBES)

No Change.

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12) BRAKE LININGS/CLUTCH FACINGS

A report covering state-of-the-art in development of non-asbestos substitute friction materials for brake linings and clutch facings has been received and currently is being reviewed within NAVSEA. Industry has been involved in research and development of improved brake lining materials for at least the past 20 years. Initial research concentrated on semi-metallic (semimet) substances, using steel fibers and powder metallurgy techniques for durability and strength. Semimets meet requirements for high temperature heavy duty operations, but have several disadvantages, including noisy operation and corrosion. More recent research and development has concentrated on organic materials using alternate fibers and modifiers. Results are promising; non-asbestos friction products currently are available. A test program will be prepared to qualify materials for shipboard use.

13) TECHNICAL TALC

Completed.

14) NDT DYE PENETRANT DEVELOPER

Completed.

15) DEHUMIDIFIER DRUMS (ASBESTOS LINING)

This task is essentially completed, except for preparation of an amendment to the procurement specification, MIL-D-24322, to prohibit the use of asbestos. There presently are only two sources of supply for D/H machines procured under this specification. One of the manufacturers still uses asbestos in this equipment. Prohibiting asbestos in the procurement specification will place the Navy in a sole source procurement situation; however, discussions with SEA 5311 indicate that this is preferable to continuing use of an asbestos product in this instance.

16. GASKET (FOR OXYGEN CANDLE FURNACE)

No Change.

17. DIAPHRAGM FOR OXYGEN GENERATOR

This is a new task undertaken by NSRDC Annapolis near the end of third quarter FY 81; there is no progress to report on this recently initiated task.

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18. WIRE-REINFORCED GLASS CLOTH*

A new task was initiated in FY 81 to evaluate candidate substitutes for asbestos wire-reinforced glass cloth. Results to date appear very promising. Shipyard and Shipboard evaluations will commence next quarter. If successful, considerable material and labor savings could result, since the wire-reinforced glass cloth could be a replacement for stainless steel wire mesh in removable pads for steam lines where temperatures exceed 450° F.

*New task in FY 81

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PART B - EQUIPMENT

1. RESPIRATORS (AABA)

A Military Specification for procurement of Ambient Air Breathing Apparatus (AABA) which will cover both air-driven compressors and electric-driven compressors is currently being prepared. Anticipate a final draft will be available in August 1981.

PART C - MISCELLANEOUS

1. DOCUMENTATION

a. Water - Injection (Rip-out Procedure)

Full-scale tests have been conducted to verify the injection rip-out procedure, using a barge at Long Beach Naval Shipyard. One test used R & D injection equipment; a second used production equipment. Both were highly successful. Another test currently is scheduled for 24-25 June 1981, using improved production equipment. The procedure appears to be sound. Refinements of this basic procedure will be continued through fourth quarter FY 81.

2. FIBROUS GLASS HAZARD

No Change. Since there currently are no standards regarding personnel exposure to fibrous glass, coupled with the fact that this is not strictly an "asbestos" problem, this task will be deleted from enclosures (1) and (2) in future reports. Significant developments will be addressed in the basic document.

3. RAPID ON-SITE IDENTIFICATION (OF ASBESTOS)

a. Bulk Sampling

A final report has been received and is being reviewed. NAVSEA is awaiting a response from NEHC regarding NAVSEA's intention to proceed on a trial basis, using one or two shipyards to validate the system under production conditions.

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b. Airborne Fiber Monitoring

A final laboratory report on the correlation between Fibrous Aerosol Monitor (FAM) and the present OSHA standard test procedure employing cassettes and phase contrast microscopy has been completed by NSRDC Annapolis, and will be distributed to BUMED, NEHC and appropriate codes within NAVSEA. The report recommends use of the FAM as an alternative standard. However, additional production data from shipyards is needed to obtain better correlation, especially in the low range below 0.5 fibers per cubic centimeter. Additional work is scheduled for fourth quarter FY 81 to attempt to improve the FAM calibration. The equipment cannot now be calibrated on-site.

4. COLOR CODE SYSTEM (FOR LAGGING CLOTH)

a. Thermal Insulation System

Completed.

b. Red Lagging Cloth

An ACN to NSTM has been issued, which authorizes the use of red lagging cloth in addition to the presently authorized red adhesive system. The applicable procurement specification, MIL-C-20079 will be modified during fourth quarter FY 81 to reflect this change.

5. PACKAGING/MARKING/LABELING

A letter has been sent to DARCOM, Tobyhanna, PA, as preparing activity for MIL-STD-129, recommending a change which will bring marking requirements into line with those of OSHA. The MIL-STD-129 statement on marking currently exceeds the intent of the OSHA regulation, which exempts from labeling those asbestos items which have been modified by a bonding agent so that they will not emit dust in excess of the exposure limits.

6. UPDATED LISTING AND LIFE CYCLE MANAGEMENT OF ASBESTOS-FREE ITEMS

See enclosure (2).

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7. PROTECTIVE CLOTHING (FOR RIP-OUT)

The "Philadelphia" suit is still in the process of gaining approval as an alternative standard to the present regulations. NAVSEA currently is awaiting a request for approval from Philadelphia Naval Shipyard. A new type of lightweight helmet with a type C respirator has been authorized for use with the protective suit currently in use.

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