FILE FOLDER

DESCRIPTION ON TAB:

Asbestos

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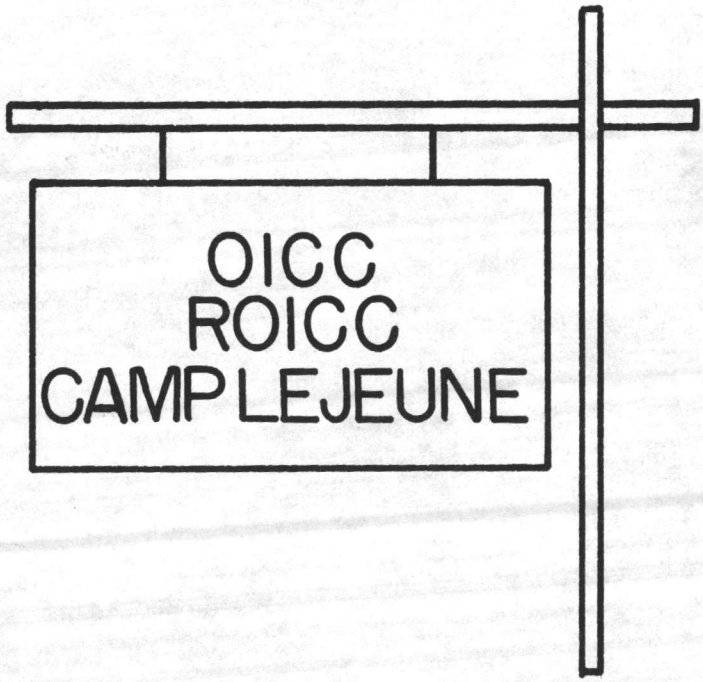
***Scanned as next image**

Confidential Records Management, Inc.
New Bern, NC
1-888-622-4425
9/08

ASBESTOS REMOVAL & DISPOSAL ABOARD CAMP LEJEUNE



INTRODUCTION

Many construction contracts aboard the Marine Corps Base, Camp Lejeune Complex involves the removal and disposal of construction materials containing asbestos in various forms. Friable asbestos is found in materials such as pipe and duct insulation in which the asbestos fibers easily become airborne when disturbed. Friable asbestos is considered to be an extremely dangerous material and the ROICC office is legally mandated to ensure that such materials are removed and disposed of properly and safely. Other materials, such as cement asbestos siding and wallboard, are not considered friable if they are removed and disposed of properly. Removal of such materials, however, must be accomplished in a manner so as not to free bonded fibers, and all debris must be disposed of in accordance with NIOSH and Marine Corps Base regulations. This pamphlet is provided to answer questions contractors may have regarding asbestos demolition and disposal and should be read in its entirety before required asbestos plans are submitted. Nothing in this pamphlet should be construed as modifying or superceding the contract documents.

G.R.Horne

FRIABLE ASBESTOS

Contracts requiring the removal and disposal of friable asbestos will provide specific and detailed requirements for such work in Section 02075 of the specifications. The "Description of Work" paragraph will usually explain where the asbestos is expected to be found, what type of materials is present, if known, and will also establish the control zone requirements.

Section 02075 should be read carefully before any submittals relating to this section are forwarded. Special attention should be directed toward ensuring the Asbestos Plan is complete and accurate. No demolition work will be allowed to commence until all required submittals are approved and no AROICC or Construction Representative has the authority to waive any or all requirements addressed in Section 02075.

Disposal:

Contracts require that friable asbestos be deposited at an EPA approved disposal site. The Base Sanitary Landfill is the State sanctioned site. The landfill is the only approved disposable site on base and is available for use by contractors provided the following requirements are satisfied:

a. The ROICC must be informed at least five working days in advance of the anticipated delivery date of the asbestos material to the landfill. On larger projects, the notification should be accompanied by a cubic yard estimate of the anticipated volume, updated weekly if the disposal period extends for more than one week. This will give the landfill operators a rough idea of the size and location of the trenches which must be dug to accept the materials. The Government will be responsible for digging the trenches and covering the debris at the end of the working day. Debris will not accepted before 9:00am or after 3:00pm, except in an emergency situation.

b. Asbestos will be accepted only if doubled bagged in heavy-duty plastic bags which are clearly marked "Asbestos". If a contractor desires to handle the asbestos in a manner other than double-bagging, written application, along with a description of the proposed deviation, must be submitted to the ROICC for approval.

NON-FRIABLE ASBESTOS

Demolition of non-friable asbestos construction materials, such as asbestos-cement siding and shingles, must be accomplished in a careful manner to prevent asbestos fibers from breaking bond and becoming airborne. The ROICC may require monitoring if it is felt that removal is not being handled in a safe manner.

The ROICC must be given at least five working days notice of the initial delivery of asbestos-cement siding or shingles along with a cubic yard volume estimate. A volume estimate should be provided weekly for multi-week demolition projects. The volume estimates will be used by the landfill operators to dig sufficiently sized trenches to accept all materials delivered the following week.

Disposal:

The disposal requirements for non-friable asbestos differ from friable asbestos in that it is not required to bag the debris. The following regulations apply, however, if the materials are to be disposed of at the Base Sanitary Landfill:

a) The asbestos-cement siding, wallboard, shingles, or other non-friable materials is free of lumber and other debris and refuse.

b) The asbestos debris is thoroughly moistened.

c) Trucks are securely covered with tarpaulin or equivalent to prevent discharge of asbestos dust or debris during transportation.

d) The contractor will submit the vehicle(s) to inspection by a landfill operator prior to uncovering.

e) Contractors will dump the debris where directed by the landfill operators. After dumping, vehicle(s) will not be moved until securely recovered.

The landfill operator will normally cover the trenches at 3:00 PM. Debris dumped between 9:00 AM and 2:30 PM must be covered with polyethylene sheets by the contractor to prevent release of dust prior to covering by the landfill operator. Debris will not be accepted after 3:00 PM sharp.

c. Asbestos insulated steam and condensate piping with the asbestos insulation intact will be accepted if the following requirements are met:

-The pipe is cut in ten foot or shorter lengths.
-The ends of the insulated pipe must be thoroughly wetted and covered in a double layer of plastic wrapping. The entire length of the pipe need not be bagged unless the pipe jacket is damaged.
-The pipe is placed in the burial trenches in an orderly, compact fashion with the lengths of pipe all oriented in the same direction and horizontal to the bottom of the pit.

d. Asbestos disposal is restricted to one designated location in the landfill and the landfill operators must be informed of and direct each delivery. Trucks hauling asbestos must be properly covered with tarpaulins or equivalent. Trucks not covered or not covered properly must be parked until approval by the ROICC of corrective actions.

SPILL CLEANUP AND REPORTING

Contractor(s) will clean up any asbestos materials improperly dumped or spilled during tranporting or disposal. Any vehicle discovered to be discharging asbestos will be immediately parked and the ROICC will be immediately notified. (451-2581). The vehicle(s) will not be moved until properly secured and inspected by the ROICC.

Any questions or deviation request from the requirements discussed in this pamphlet should be submitted to the OICC/ROICC sufficiently in advance of demolition to prevent delays or misunderstandings.

DEPARTMENT OF THE NAVY

OFFICER IN CHARGE/RESIDENT OFFICER IN CHARGE
JACKSONVILLE NORTH CAROLINA AREA
NAVAL FACILITIES ENGINEERING COMMAND
CAMP LEJEUNE, NORTH CAROLINA 28542-5000

TELEPHONE:

IN REPLY REFER TO:
N62470-88-C-3757
JAX/0015f/mp
14 April 1988

MEMORANDUM FOR: Distribution

SUBJECT: PREPERFORMANCE CONFERENCE:
CONTRACT N62470-88-C-3757, INSULATION SAMPLING, TESTING, AND REPORTING AT MCB, CLNC, MCAS NEW RIVER, JACKSONVILLE, NC, AND NH, CLNC

1. The prepreformance conference for this contract will be held in our Conference Room in Building 1005, Marine Corps Base on

Tuesday, 19 April 1988 at 0900 Hours

You are invited to attend or to be represented.

2. The Contractor for this project is:

Roberts Envionmental Services, Inc.
P. O. Box 308
Swansboro, NC 28584

G S Johnson Jr.
G. S. JOHNSON, JR
FACILITIES SUPPORT CONTRACTS MANAGER

Distribution:

BMO, Inspection Br.
AC/S, Fac, EnvEng
Fire Chief
Safety Manager
PWO, Design Div. (Code 04)

N. C. Employment Security Commission
106 College Plaza
Jacksonville, NC 28540

Copies to:

JAX/02
QAE
FSCM
Contractor
10S

RECEIVED
APR 15 1988

6280/3
FAC

JAN 0 6 1988

Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina 28542-5001
Base Maintenance Officer
Resident Officer in Charge of Construction

REVISED PROCEDURE FOR FILING NOTICES OF ASBESTOS REMOVAL

Ref: (a) Mtg btwn Mr. Wayne Cook, NC Air Quality Section, Wilmington Regional Office, and Mr. Bob Alexander, MCB Facilities, dtd 18 Oct 87
(b) CG MCB CamLej ltr P6280/3 FAC dtd 29 Oct 87

1. Per reference (a), request the following addressees be provided asbestos removal notices being filed for operations at Camp Lejeune and MCAS, New River:

Original to: Mr. Wayne Cook
NC Department of Natural Resources
and Community Development
Division of Environmental Management
7225 Wrightsville Avenue
Wilmington, NC 28420

Copies to: Mr. Pat Curran
Occupational Health Branch
Division of Health Services
Cooper Memorial Building
225 North McDonell Street
P.O. Box 2091
Raleigh, NC 27611

Mr. Ogden Gerald
Division of Environmental Management
Department of Human Resources
and Community Development
Archdale Building
Raleigh, NC 27611

Mail the original to the address shown for the Wilmington Office and copies to the Raleigh office.

2. As described in reference (b), our proposed revisions to procedures for filing notices have not been evaluated by the State office. Mr. Cook indicated that they seem to be

Subj: REVISED PROCEDURE FOR FILING NOTICES OF ASBESTOS REMOVAL

favorable to allowing the contractors' notices in lieu of notices by ROICC personnel, but have not given us written concurrence. Base Maintenance projects would continue to be covered by the notice procedures currently used.

3. Mr. Cook indicated the State air quality concerns are primarily related to their site visits being recorded after the asbestos removal has started. He requested that we assist in a monthly visit by Mr. Ron Edwards of their office in order to document that State personnel had been on the scene after an asbestos project notice had been sent in. The State is evaluated by EPA for asbestos removal inspections. Mr. Cook requested that we assist them by providing to Mr. Edwards during his monthly visits information regarding the date asbestos projects had been started and the date that asbestos projects are completed. Mr. Edwards will contact either Mr. Horne, ROICC, or Mr. Jewell, Base Maintenance, for these data.

4. POC of this matter is Bob Alexander, extension 3034.

T. J. DALZELL

Copy to:
LANTDIV (Code 09A)

Blind copy to:
BSAF
NAvHosp
Industrial Hygienist
EnvEngr

P6280/3
FAC
OCT 2 9 1987

Mr. Charles Wakild
North Carolina Department of Natural
Resources and Community Development
Division of Environmental Management
7225 Wrightsville Avenue
Wilmington, North Carolina 28403-3696

RE: PROCEDURES FOR SUBMITTING
ASBESTOS NOTICES

Dear Mr. Wakild:

We request your concurrence in revising our procedures for submitting the subject notices. In the future we propose that the notices given for asbestos removal by Navy contractors operating aboard Camp Lejeune will represent the only notice being provided. As discussed between Mr. Wayne Cook of your office and Mr. Bob Alexander, Marine Corps Base Environmental Engineer, on 21 October, this procedure will eliminate the duplicate notices which are currently filed by both the contractor and by the Resident Officer in Charge of Construction.

Contractors' notices are usually submitted approximately 60 days in advance of the work. This complies with the minimum notice of 10 days in accordance with the EPA regulations. As in the past, Contracting Office personnel will review with the contractor the asbestos removal plan to ensure it complies with air emissions standards and personnel safety policies. Further, during inspections of removal sites by your office, contractor personnel are available to assist you in any way you may need.

If this policy meets with your approval, please let us know and we will advise Navy contracting personnel to implement this change immediately.

Sincerely,

T. J. DALZELL
Colonel, U. S. Marine Corps
Assistant Chief of Staff, Facilities
By direction of the Commanding General

Copy to:
ROICC JAX NC Area
LANTDIV (Code 09A)

Blind copy to:
PWO
EnvEngr

OCT 2 9 1987

J. Core

UNITED STATES MARINE CORPS
Base Maintenance Division
Marine Corps Base
Camp Lejeune, North Carolina 28542

IN REPLY REFER TO

MAIN/RES/jik
5100/140

FEB 2 1984

Memorandum

From: Base Maintenance Officer
To: Distribution List

Subj: Asbestos Control Program

Ref: (a) BMO Memo MAIN/RES/jik 5100/140 dtd 26Jul83
(b) OPNAVINST 6260.1B
(c) BMO Ltr MAIN/RES/jik 5000 dtd 8Dec83
(d) BO 6262.1

1. General Instructions.

a. Reference (a) is cancelled.

b. Pending publication of a Base Order, the instructions contained herein will be followed.

2. Identification of Suspected Asbestos Materials

a. Any employee who suspects that materials subject to repair or rip-out contain asbestos will immediately report their suspicions to their supervisor who will notify the Inspection Section of the Operations Branch.

b. Repairs will be discontinued pending further evaluation of the worksite by Operations personnel. If emergency repairs are required to be performed, employees will institute protective measures as if asbestos were present.

3. Collection of Suspected Asbestos Materials

a. The Inspection Section, Operations Branch will be responsible for the collection of suspected asbestos samples in accordance with reference (b) and guidelines provided by the the Preventive Medicine Unit, Naval Hospital.

4. Identification and Scheduling of Repairs Involving Asbestos Materials

a. Upon notification from USNH that suspected asbestos samples have been confirmed, the Operations Branch will take the following actions:

(1) Annotate appropriate Job Orders to reflect asbestos material handling. This may also require reestimation of allotted manhours and materials to comply with the handling requirements outlined in reference (b).

Subj: Asbestos Control Program

(2) Notify work centers of any pending ticket work which now involves the handling/disposal of asbestos. Tickets should be annotated to show asbestos handling.

5. Reporting Requirements

a. The Director, Operations Branch will be responsible for initiating reports as required.

b The demolition/renovation of structures which involves asbestos handling will be reported to the AC/S, Facilities (with copy to the Asbestos Program Coordinator) at least 21 days prior to the scheduling of the demolition/renovation. The following information will be provided:

(1) Description of the facility to be demolished or renovated to include the size, age, and prior use of the structure.

(2) The approximate amount of friable asbestos materials present.

(3) Address or location of the facility.

(4) Scheduled starting and completion dates.

(5) Nature of planned demolition/renovation and methods to be employed.

(6) Procedures to be employed to meet the requirements of the reference.

6. Safety Equipment

a. The Pipefitter General Foreman, Steam Generation General Foreman and Emergency Service Shops Foremen will ensure that adequate types and quantities of protective clothing and equipment are available for employees.

b. The Property Management Section is responsible for maintaining an up-to-date listing of safety equipment certified for use around asbestos material.

7. Safety Precautions and Procedures

a. Under no circumstances will employees knowingly work around asbestos material without proper safeguards.

Subj: Asbestos Control Program

b. Whenever possible, asbestos will be thoroughly wet down prior to handling to preclude the transmission of fibers.

c. Appropriate measures will be taken to contain fiber emissions to the smallest possible area to preclude exposure by unprotected personnel.

d. An air sample must be taken and analyzed by the Industrial Hygienist to determine the Permissible Exposure Limits (PELS) of the work site. The PELS will determine the type of respiratory protection and protective clothing required for personnel working on the site. The Industrial Hygienist will approve the type of protective equipment/facilities to be used.

e. When repairs are required under emergency conditions which preclude awaiting the results of air samples, employees will be required to use a type "C" continuous-flow or pressure-demand supplied air respirator to assure adequate protection.

f. Caution signs will be errected at hazard locations as noted in reference (b).

g. Care will be taken during clean up to ensure that all materials are removed and that protective clothing is properly disposed of or cleaned.

8. Disposal Procedures

a. Asbestos waste will be collected in bags or other sealable containers and labeled in accordance with reference (b).

b. The waste will be delivered to the landfill where the landfill operator will be informed of the waste contents.

c. The transporter will be directed by the landfill operator as to where to dump the waste material. Transporter personnel will be responsible for unloading asbestos waste at the dump site.

d. After unloading, the asbestos will be immediately covered with dirt unless additional shipments are expected the same day.

MAIN/RES/jik
5100/140

Subj: Asbestos Control Program

9. Records Retention.

a. Reference (c) directed that branches/sections retain all records and documents (to include work tickets and job orders) originating in their respective sections.

b. Directors/Supervisors should ensure that file copies of correspondence are identified as asbestos related. Rubber stamps with the notation "SUBJECT TO OPNAV 5212.3" were issued to the branches to assist in this identification.

10. Medical Surveillance. Asbestos medical surveillance procedures and requirements to include monitoring and examinations are contained in reference (d).

J. T. MARSHALL

Distribution: B

DRAFT

DEPARTMENT OF THE ARMY
HEADQUARTERS XVIII AIRBORNE CORPS AND FORT BRAGG
Directorate of Engineering and Housing

SOP #9006

6 December 1985

Management of Asbestos Containing Material

1. References.

a. OSHA 1910.1001 and 1910.134, 1 Oct 79.

b. Department of the Army Circular 40-83-4, 15 Dec 83, Policy and Guidelines for Asbestos Management.

c. TR-883, Management Procedures for Assessment of Friable Asbestos Insulating Material, Dec 80.

d. EPA 600/M4-82-020, Test Method for Bulk Samples, Dec 82.

2. Purpose. To establish procedures for handling asbestos containing material.

3. General. Asbestos has been used in building construction and repair at Fort Bragg largely prior to 1976. Predominately, asbestos was used for pipes and boiler insulation and some asbestos was sprayed with ceiling materials as a fire rated plaster. Current medical evidence has prompted Federal agencies to designate all types of asbestos as a health hazard (carcinogenic). Fiber control, containment and worker protection is required in asbestos abatement work because the environment will be contaminated to some extent and the potential for harmful exposure is extremely high.

4. Responsibilities.

a. Environmental Office.

(1) Take bulk samples to support DEH in-house design projects.

(2) Maintain an asbestos analysis capability.

(3) Maintain a log of asbestos in facilities.

(4) Routinely notify the Engineering Division and Maintenance Division of any sample results.

(5) Notify Preventive Medicine, Womack Army Community Hospital, and the installation's Office of Safety/Loss Control if employees in buildings will or could be exposed to asbestos fibers.

(6) Provide an individual as the Fort Bragg Asbestos Control Officer (ACO). The ACO's responsibilities are as follows:

DRAFT

(a) Direct the Fort Bragg Asbestos Abatement Program.

(b) Develop a survey plan and coordinate with AE firms doing surveys through Engineering Division in order to publish and update the list of facilities with asbestos annually.

(c) Make up dates to FORSCOM outlining extent of asbestos present to comply with the DA Asbestos Abatement Program.

(d) Set the priorities for management of asbestos abatement requirements in facilities.

(e) Request funding for removal/enclosure/encapsulation.

(f) Provide construction inspection support of asbestos containment contracts by Engineering Division, DEH and the Savannah District Engineers. Maintain responsibility for the safety of asbestos abatement work at Fort Bragg regardless of the contracting agency, contractor, or Fort Bragg personnel involved.

(7) Provide an individual to oversee the operation of the DEH in-house asbestos crew to ensure proper personnel protection is being used. The overseer's responsibilities are as follows:

(a) Assure all crew personnel are trained on the use of respirators and have been medically evaluated for asbestos work.

(b) Make the selection for the type respirator to be used on each job.

(c) Make selection of the other types of protective clothing and equipment to be used.

(d) Set up and maintain proper barriers to control the asbestos removal area.

(e) Ensure asbestos containing material will be removed by the guidelines established in TR-883.

(f) Turn in proper paperwork to ACO for permanent records.

b. Maintenance Division.

(1) Maintain trained personnel and necessary equipment to perform asbestos abatement work (encapsulation, removal, clean-up).

(2) Provide sanitary landfill support for the disposal of asbestos waste for DEH in-house clean-up and contractors when approved by ACO.

(3) Notify the Environmental Office of suspected asbestos containing material for laboratory analysis once asbestos is suspected at a job. Maintenance personnel will not work on a job site until the ACO verifies no hazard exists.

(4) Notify ACO to coordinate with Preventive Medicine two (2) days in advance for air sampling of DEH in-house asbestos maintenance and removal projects. Preventive Medicine will do all air sampling for Maintenance Division in-house asbestos personnel.

(5) Notify DEH ACO for site inspection and approval before maintenance or removal of asbestos containing material begins. No asbestos abatement can proceed without approval of ACO.

c. Engineering Resource Management Division.

(1) Schedule work for in-house removal team according to set priorities.

(2) Coordinate all in-house asbestos removal or maintenance projects with occupants, if appropriate.

d. Engineering Division.

(1) Coordinate with AE firms to ensure all asbestos materials on projects are clearly identified on those plans possibly requiring asbestos abatement, and if not, the plans must indicate that "no asbestos is present".

(2) Request the Environmental Office to sample and analyze for asbestos for in-house design projects, if support is needed.

(3) Assure all projects are reviewed by the ACO.

(4) Ensure contract inspectors have familiarization with asbestos regulations and identification and that they request support of ACO for detailed investigations or inspections.

5. Proponent. The proponent of this SOP is the Environmental Office.

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

Base Maintenance forwarded a copy -

DEPARTMENT OF THE NAVY Bob

Memorandum

6280/1
MAIN

DATE: 1 JUL 1986

FROM: Base Maintenance Officer, Marine Corps Base, Camp Lejeune

TO: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune (Attn: Bob Alexander)

SUBJ: ASBESTOS REMOVAL

Encl: (1) NEESA-70.2-004 OICC/ROICC DECISION GUIDE

1. Public Works has recently advised us that they are currently working under EPA standards stating that notification to the state is necessary only when "the amount of material to be removed exceeds 80 meters (260 linear feet) of covered pipe or 15 square meters (160 sq ft) of a structrual member covering such as insulating material. The enclosure is provided for your information.

2. It is requested that you provided us with clarification in this matter as our attempts to obtain guidance has proved unsuccessful.

W. M. RICE
By direction

---

2 JULY 86

Encl (2) 40 CFR Part 61, Subpart M.

1. As shown in para 61.145 and 6 of the enclosure indicate, the notification should be sent:

- 10 days before demolition if amount is > 260 LF,
- 20 " " " " " " < 260 LF.

2. In our case, the N.C. Div. of Envir Mgmt. has EPA primacy for air pollution program, thus we send notice as in past.

Pls call if you still have ?'s.

V/R
Bob A.

NEESA 70.2-004 APRIL 1986

OICC/ROICC GUIDE FOR ASBESTOS ABATEMENT CONTRACTS

PREPARED BY:
ROBERT A. SPIELMAN, CIH
INDUSTRIAL HYGIENIST

ENVIRONMENTAL HEALTH AND ENGINEERING DEPARTMENT
NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
PORT HUENEME, CALIFORNIA 93043

Encl (1)

2.0 BACKGROUND: OICC/ROICC DECISION GUIDE

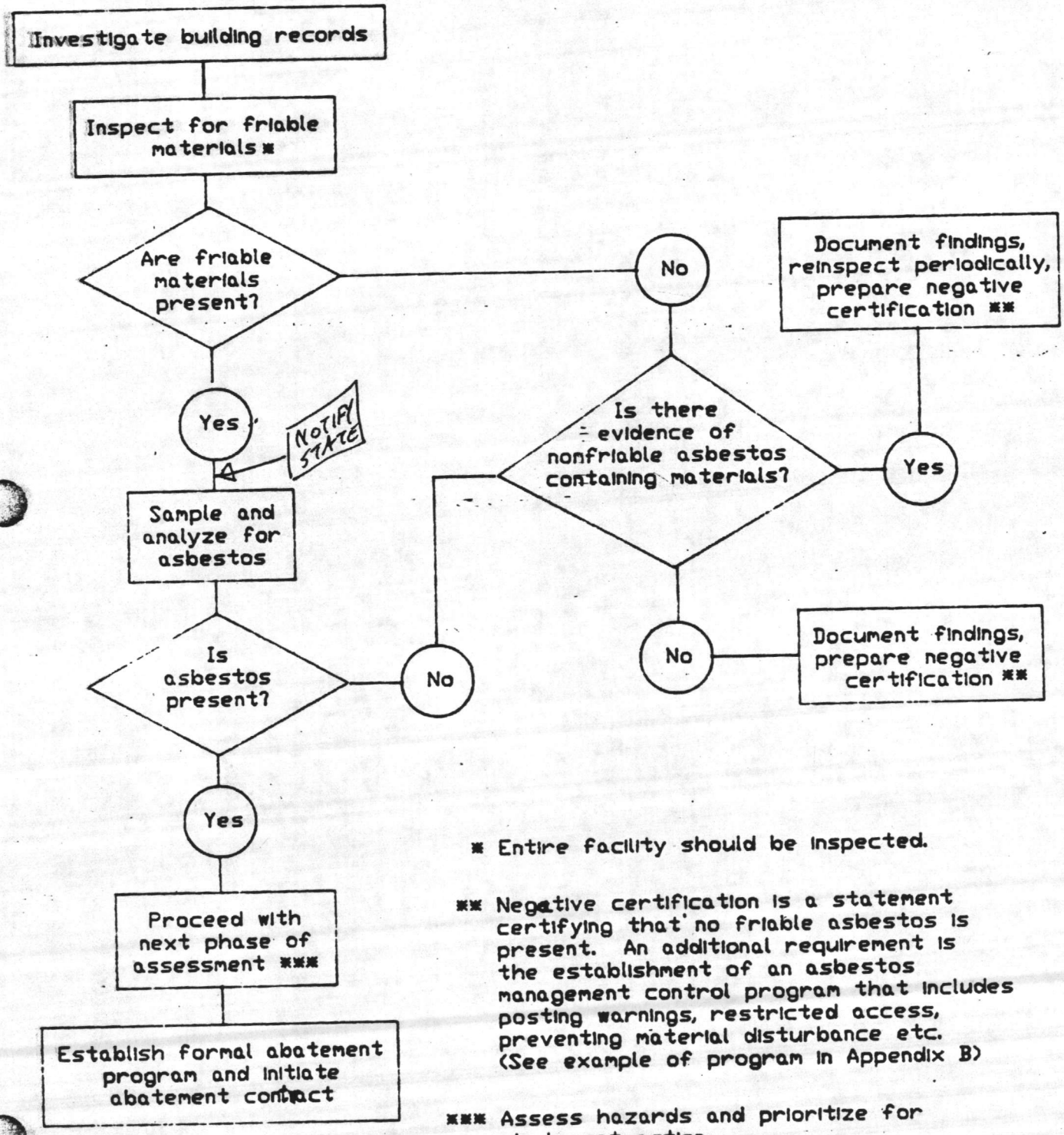
The hazards and disease-causing potential associated with exposure to airborne asbestos in industrial settings have been well documented over the past 20 years. Unfortunately, substantial scientific uncertainty accompanies many of the technical considerations in the assessment of exposure to airborne asbestos in the non-industrial environment. The success of any abatement program, therefore, often depends on surrounding circumstances, applicable governing regulations, and the manner of program implementation.

In general, fiber control, containment, and worker protection are necessary in asbestos abatement work because the environment can easily become contaminated regardless of the work method used. A considerable potential will exist not only for worker exposure but also for contamination of the facility, the community, and even workers' homes. In most operations, efforts are made to minimize asbestos contamination by complying with OSHA and EPA regulations and by additional control procedures as deemed appropriate. In general, OSHA regulations are effective in routine occupational asbestos exposure situations at a fixed location. EPA regulations cover emissions to the outside environment and disposal of waste material from job sites. The primary references for controlling asbestos emissions, and for protecting of personnel and the environment within naval facilities are (1) OSHA Standard 29 CFR 1910.1001, (2) OPNAVINST 5100.23 and (3) EPA Regulation 40 CFR 61. OPNAVINST 5100.23 primarily applies to naval personnel and federal employees. However this regulation also requires that private contractors working on asbestos projects take necessary precautions to protect both contracted employees and others in the surrounding environment. The above regulations are listed in part, along with others in Appendix C. Also note that pertinent sections of regulations may appear or be quoted in portions of the "discussion" sections of the Guide.

Contract specifications written for asbestos work should effectively complement OSHA, EPA, and local regulations and may also include specific requirements that may limit exposures and contamination potential. To comply with these requirements contract writers should clearly define contractor performance in asbestos work. NCEL Technical Report TR883, Feb 81, describes proper contracting elements to be considered; NFGS-02080, April 1985, is the applicable guide specification for Navy shoreside asbestos abatement. Specifications should include requirements for contractor compliance and demonstrated skill in all areas related to asbestos abatement projects. Additionally, knowledge of OSHA and EPA compliance programs, proper techniques for control of asbestos contamination, and proper sampling techniques for airborne asbestos are prerequisites for all contractors. Contract specifications should serve to essentially screen bidding contractors for those who know asbestos work and regulations. These qualifications in the specifications encourage and protect the competent contractor's investment in both equipment and training while concurrently protecting the government's best interest.

Typical contracts that will require an asbestos abatement program include (1) building demolition, (2) building modification, (3) repairs to heating systems, boilers, walls, and ceilings, and (4) situations where exposed asbestos materials are damaged or likely to release airborne fibers. In these types of projects, this Guide will prove helpful in assuring compliance with regulations while maintaining the health and safety of concerned personnel.

DECISION LOGIC

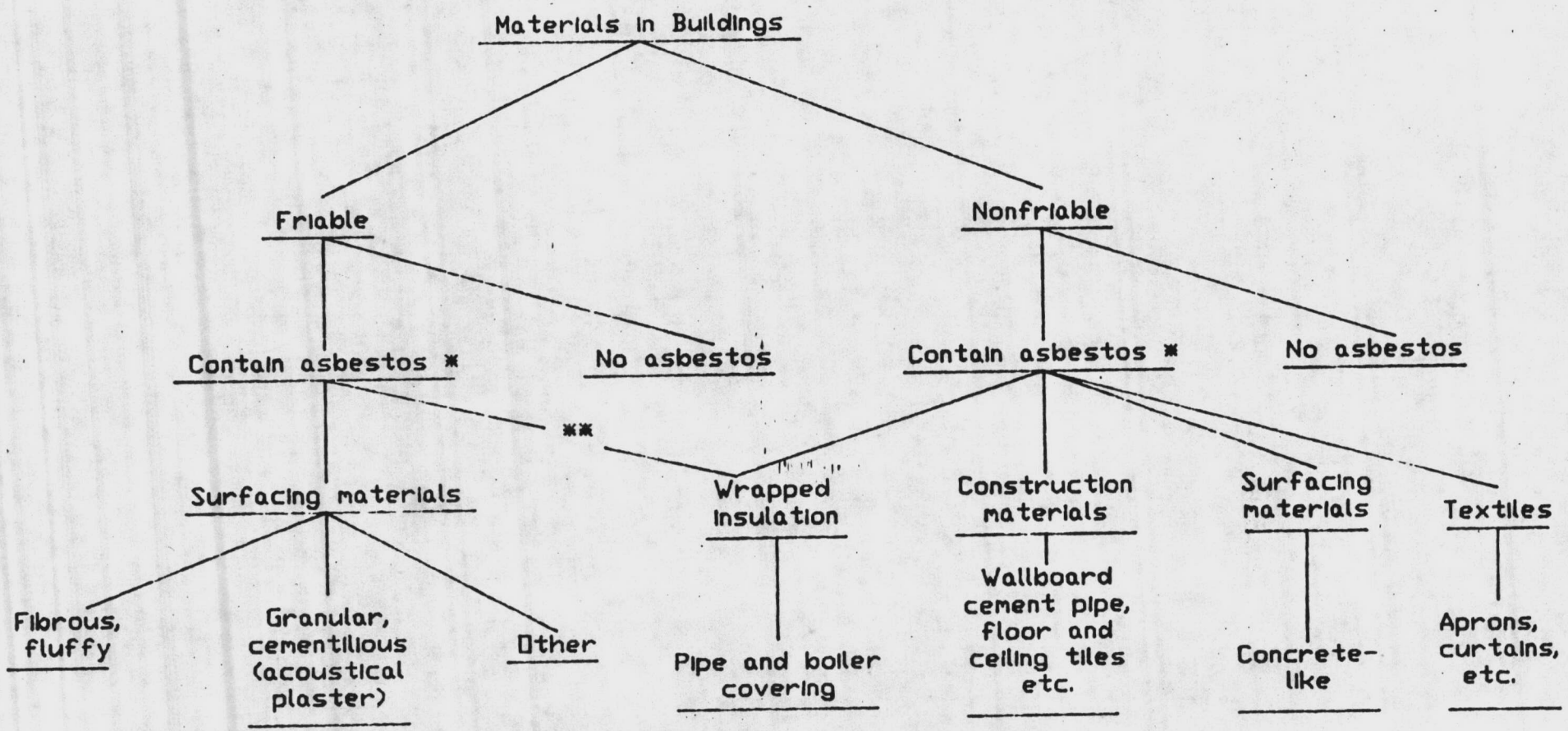


* Entire facility should be inspected.

** Negative certification is a statement certifying that no friable asbestos is present. An additional requirement is the establishment of an asbestos management control program that includes posting warnings, restricted access, preventing material disturbance etc. (See example of program in Appendix B)

*** Assess hazards and prioritize for abatement action.

Figure 2.1 Steps in investigating for the presence of asbestos.



* See Appendix A for a more complete description of Asbestos-containing materials.

** Sections of wrapped and pipe insulation that are damaged may be friable.

Figure 2.2 Types of building materials which could contain asbestos.

(b) An owner or operator may elect to comply with the requirements of §§ 61.243-1 and 61.243-2.

(c) An owner or operator may apply to the Administrator for a determination of an alternative means of emission limitation that achieves a reduction in emissions of benzene at least equivalent to the reduction in emissions of benzene achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of § 61.244.

Subparts K—L [Reserved]

Subpart M—National Emission Standard for Asbestos

AUTHORITY: Secs. 112 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7412, 7601(a)).

SOURCE: 49 FR 13661, Apr. 5, 1984, unless otherwise noted.

§ 61.140 Applicability.

The provisions of this subpart are applicable to those sources specified in §§ 61.142 through 61.153.

§ 61.141 Definitions.

All terms that are used in this subpart and are not defined below are given the same meaning as in the Act and in Subpart A of this part.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wetted means sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions.

Asbestos means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes asbestos mill tailings, asbestos waste from control devices, friable asbestos waste material, and bags or containers that previously contained commercial asbestos. However, as applied to demolition and renovation operations, this term includes only friable asbestos waste and asbestos waste from control devices.

Asbestos material means asbestos or any material containing asbestos.

Asbestos mill means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

Commercial asbestos means any asbestos that is extracted from asbestos ore.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event. This term includes operations necessitated by nonroutine failures of equipment.

Fabricating means any processing of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites for the construction or restoration of facilities.

Facility means any institutional, commercial, or industrial structure, installation, or building (excluding apartment buildings having no more than four dwelling units).

Facility component means any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility; or any structural member of a facility.

Friable asbestos material means any material containing more than 1 percent asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material will not be deposited and where the surface is not disturbed by vehicular traffic.

Manufacturing means the com of commercial asbestos—or, in t of woven friction products, th bining of textiles containing c cial asbestos—with any material(s), including commer bestos, and the processing of th bination into a product.

Outside air means the air buildings and structures.

Particulate asbestos material finely divided particles of asbes terial.

Planned renovation ope means a renovation operation number of such operations, in the amount of friable asbestos al that will be removed or s within a given period of time predicted. Individual nonschedu erations are included if a num such operations can be predic occur during a given period based on operating experience.

Remove means to take out fri bestos materials from any facili

Renovation means altering way one or more facility comp Operations in which load-sup structural members are wre taken out are excluded.

Roadways means surfaces on motor vehicles travel. This te cludes highways, roads, streets ing areas, and driveways.

Strip means to take off friabl tos materials from any part of- ty.

Structural member means an supporting member of a facili as beams and load supporting w any nonload-supporting membe as ceilings and nonload-sup walls.

Visible emissions means an sions containing particulate a material that are visually det without the aid of instrument does not include condensed bined water vapor.

[49 FR 13661, Apr. 5, 1984; 49 FR June 21, 1984]

§ 61.142 Standard for asbestos mill

Each owner or operator of an tos mill shall either discharge ble emissions to the outside a that asbestos mill or use the m specified by § 61.154 to clean em

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Manufacturing means the combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product.

Outside air means the air outside buildings and structures.

Particulate asbestos material means finely divided particles of asbestos material.

Planned renovation operations means a renovation operation, or a number of such operations, in which the amount of friable asbestos material that will be removed or stripped within a given period of time can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Remove means to take out friable asbestos materials from any facility.

Renovation means altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

Roadways means surfaces on which motor vehicles travel. This term includes highways, roads, streets, parking areas, and driveways.

Strip means to take off friable asbestos materials from any part of a facility.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions means any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.142 Standard for asbestos mills.

Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.143 Standard for roadways.

No person may surface a roadway with asbestos tailings or asbestos-containing waste material on that roadway, unless it is a temporary roadway on an area of asbestos ore deposits.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.144 Standard for manufacturing.

(a) *Applicability.* This section applies to the following manufacturing operations using commercial asbestos.

(1) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap, or other textile materials.

(2) The manufacture of cement products.

(3) The manufacture of fireproofing and insulating materials.

(4) The manufacture of friction products.

(5) The manufacture of paper, millboard, and felt.

(6) The manufacture of floor tile.

(7) The manufacture of paints, coatings, caulks, adhesives, and sealants.

(8) The manufacture of plastics and rubber materials.

(9) The manufacture of chlorine.

(10) The manufacture of shotgun shell wads.

(11) The manufacture of asphalt concrete.

(b) *Standard.* Each owner or operator of any of the manufacturing operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.145 Standard for demolition and renovation: Applicability.

The requirements of §§ 61.146 and 61.147 apply to each owner or operator

of a demolition or renovation operation as follows:

(a) If the amount of friable asbestos materials in a facility being demolished is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, all the requirements of §§ 61.146 and 61.147 apply, except as provided in paragraph (c) of this section.

(b) If the amount of friable asbestos materials in a facility being demolished is less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, only the requirements of paragraphs (a), (b), and (c) (1), (2), (3), (4), and (5) of § 61.146 apply.

(c) If the facility is being demolished under an order of a State or local governmental agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements in § 61.146 and in paragraphs (d), (e), (f), and (g) of § 61.147 apply.

(d) If at least 80 linear meters (260 linear feet) of friable asbestos materials on pipes or at least 15 square meters (160 square feet) of friable asbestos materials on other facility components are stripped or removed at a facility being renovated, all the requirements of §§ 61.146 and 61.147 apply.

(1) To determine whether paragraph (d) of this section applies to planned renovation operations involving individual nonscheduled operations, predict the additive amount of friable asbestos materials to be removed or stripped over the maximum period of time a prediction can be made, not to exceed 1 year.

(2) To determine whether paragraph (d) of this section applies to emergency renovation operations, estimate the amount of friable asbestos materials to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

(e) Owners or operators of demolition and renovation operations are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.146 Standard for demolition and renovation: Notification requirements.

Each owner or operator to which this section applies shall:

(a) Provide the Administrator with written notice of intention to demolish or renovate.

(b) Postmark or deliver the notice as follows:

(1) At least 10 days before demolition begins if the operation is described in § 61.145(a); > 260 LF

(2) At least 20 days before demolition begins if the operation is described in § 61.145(b); < 260 LF

(3) As early as possible before demolition begins if the operation is described in § 61.145(c);

(4) As early as possible before renovation begins.

(c) Include the following information in the notice:

(1) Name and address of owner or operator.

(2) Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.

(3) Estimate of the approximate amount of friable asbestos material present in the facility in terms of linear feet of pipe, and surface area on other facility components. For facilities described in § 61.145(b), explain techniques of estimation.

(4) Location of the facility being demolished or renovated.

(5) Scheduled starting and completion dates of demolition or renovation.

(6) Nature of planned demolition or renovation and method(s) to be used.

(7) Procedures to be used to comply with the requirements of this Subpart.

(8) Name and location of the waste disposal site where the friable asbestos waste material will be deposited.

(9) For facilities described in § 61.145(c), the name, title, and authority of the State or local governmental representative who has ordered the demolition.

(Approved by the Office of Management and Budget under control number 2000-0264.)

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.147 Standard for demolition and ovation: Procedures for asbestos e sion control.

Each owner or operator to wh this section applies shall comply the following procedures to pre emissions of particulate asbestos m rial to the outside air:

(a) Remove friable asbestos ma als from a facility being demolishe renovated before any wrecking o mantling that would break up the terials or preclude access to the rials for subsequent removal. How friable asbestos materials need n removed before demolition if:

(1) They are on a facility comp that is encased in concrete or similar material; and

(2) These materials are adeq wetted whenever exposed during olition.

(b) When a facility componen ered or coated with friable as materials is being taken out of cility as units or in sections:

(1) Adequately wet any friable tos materials exposed during or disjointing operations; and

(2) Carefully lower the units tions to ground level, not dr them or throwing them.

(c) Adequately wet friable a materials when they are stripped from facility comp before the members are remov the facility. In renovation ope wetting that would una damage equipment is not req the owner or operator:

(1) Asks the Administrator t mine whether wetting to com this paragraph would una damage equipment, and, befo ning to strip, supplies the Ad tor with adequate inform make this determination; and

(2) When the Administrato termine that equipment dama be unavoidable, uses a local ventilation and collection sy signed and operated to cap particulate asbestos material by the stripping and remov friable asbestos materials. Th must exhibit no visible em the outside air or be designe erated in accordance with th ments in § 61.154.

§ 61.147 Standard for demolition and renovation: Procedures for asbestos emission control.

Each owner or operator to whom this section applies shall comply with the following procedures to prevent emissions of particulate asbestos material to the outside air:

(a) Remove friable asbestos materials from a facility being demolished or renovated before any wrecking or dismantling that would break up the materials or preclude access to the materials for subsequent removal. However, friable asbestos materials need not be removed before demolition if:

(1) They are on a facility component that is encased in concrete or other similar material; and

(2) These materials are adequately wetted whenever exposed during demolition.

(b) When a facility component covered or coated with friable asbestos materials is being taken out of the facility as units or in sections:

(1) Adequately wet any friable asbestos materials exposed during cutting or disjointing operations; and

(2) Carefully lower the units or sections to ground level, not dropping them or throwing them.

(c) Adequately wet friable asbestos materials when they are being stripped from facility components before the members are removed from the facility. In renovation operations, wetting that would unavoidably damage equipment is not required if the owner or operator:

(1) Asks the Administrator to determine whether wetting to comply with this paragraph would unavoidably damage equipment, and, before beginning to strip, supplies the Administrator with adequate information to make this determination; and

(2) When the Administrator does determine that equipment damage would be unavoidable, uses a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the friable asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(d) After a facility component has been taken out of the facility as units or in sections, either:

(1) Adequately wet friable asbestos materials during stripping; or

(2) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(e) For friable asbestos materials that have been removed or stripped:

(1) Adequately wet the materials to ensure that they remain wet until they are collected for disposal in accordance with § 61.152; and

(2) Carefully lower the materials to the ground or a lower floor, not dropping or throwing them; and

(3) Transport the materials to the ground via dust-tight chutes or containers if they have been removed or stripped more than 50 feet above ground level and were not removed as units or in sections.

(f) When the temperature at the point of wetting is below 0°C (32°F):

(1) Comply with the requirements of paragraphs (d) and (e) of this section. The owner or operator need not comply with the other wetting requirements in this section; and

(2) Remove facility components coated or covered with friable asbestos materials as units or in sections to the maximum extent possible.

(g) For facilities described in § 61.145(c), adequately wet the portion of the facility that contains friable asbestos materials during the wrecking operation.

§ 61.148 Standard for spraying.

The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

(a) Use materials that contain 1 percent asbestos or less on a dry weight basis for spray-on application on buildings, structures, pipes, and conduits, except as provided in paragraph (c) of this section.

(b) For spray-on application of materials that contain more than 1 percent

asbestos on a dry weight basis on equipment and machinery, except as provided in paragraph (c) of this section:

(1) Notify the Administrator at least 20 days before beginning the spraying operation. Include the following information in the notice:

(i) Name and address of owner or operator.

(ii) Location of spraying operation.

(iii) Procedures to be followed to meet the requirements of this paragraph.

(2) Discharge no visible emissions to the outside air from the spray-on application of the asbestos-containing material or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(c) The requirements of paragraphs (a) and (b) of this section do not apply to the spray-on application of materials where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

(d) Owners and operators of sources subject to this section are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

(Approved by the Office of Management and Budget under control number 2000-0264.)

§ 61.149 Standard for fabricating.

(a) *Applicability.* This section applies to the following fabricating operations using commercial asbestos:

(1) The fabrication of cement building products.

(2) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.

(3) The fabrication of cement or silicate board for ventilation hoods; ovens; electrical panels; laboratory furniture, bulkheads, partitions, and ceilings for marine construction; and flow control devices for the molten metal industry.

(b) *Standard.* Each owner or operator of any of the fabricating operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.150 Standard for insulating materials.

After the effective date of this regulation, no owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this paragraph do not apply to spray-applied insulating materials regulated under § 61.148.

§ 61.151 Standard for waste disposal for asbestos mills.

Each owner or operator of any source covered under the provisions of § 61.142 shall:

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of § 61.156; and

(b) Discharge no visible emissions to the outside air from the transfer of asbestos waste from control devices to the tailings conveyor, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with § 61.152(b) or paragraph (c) of this section; and

(c) Discharge no visible emissions to the outside air during the collection, processing, packaging, transporting, or deposition of any asbestos-containing waste material, or use one of the disposal methods specified in paragraphs (c) (1) or (2) of this section, as follows:

(1) Use a wetting agent as follows:

(i) Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the

particular dust by the manuf
of the agent.

(ii) Discharge no visible emiss
the outside air from the wettin
ation or use the methods speci
§ 61.154 to clean emissions con
particulate asbestos material
they escape to, or are vented
outside air.

(iii) Wetting may be suspende
the ambient temperature at the
disposal site is less than −9.5°C.
Determine the ambient air te
ture by an appropriate measu
method with an accurac
±1°C(±2°F), and record it a
hourly while the wetting opera
suspended. Keep the records
least 2 years in a form suitable
spection.

(2) Use an alternative d
method that has received pri
proval by the Administrator.

§ 61.152 Standard for waste disp
manufacturing demolition, ren
spraying, and fabricating operat

Each owner or operator o
source covered under the provis
§§ 61.144 and 61.149 shall:

(a) Deposit all asbestos-con
waste material at waste disposa
operated in accordance with the
sions of § 61.156; and

(b) Discharge no visible emiss
the outside air during the col
processing (including incine
packaging, transporting, or dep
of any asbestos-containing waste
rial generated by the source,
one of the disposal methods spec
paragraphs (b)(1), (2), or (3)
section, as follows:

(1) Treat asbestos-containing
material with water:

(i) Mix asbestos waste from
devices with water to form a
adequately wet other asbestos-c
ing waste material; and

(ii) Discharge no visible emiss
the outside air from collection,
and wetting operations, or u
methods specified by § 61.154 t
emissions containing particulate
tos material before they escape
are vented to, the outside air; an

particular dust by the manufacturer of the agent.

(ii) Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(iii) Wetting may be suspended when the ambient temperature at the waste disposal site is less than −9.5°C (15°F). Determine the ambient air temperature by an appropriate measurement method with an accuracy of ±1°C(±2°F), and record it at least hourly while the wetting operation is suspended. Keep the records for at least 2 years in a form suitable for inspection.

(2) Use an alternative disposal method that has received prior approval by the Administrator.

§ 61.152 Standard for waste disposal for manufacturing demolition, renovation, spraying, and fabricating operations.

Each owner or operator of any source covered under the provisions of §§ 61.144 and 61.149 shall:

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of § 61.156; and

(b) Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, transporting, or deposition of any asbestos-containing waste material generated by the source, or use one of the disposal methods specified in paragraphs (b)(1), (2), or (3) of this section, as follows:

(1) Treat asbestos-containing waste material with water:

(i) Mix asbestos waste from control devices with water to form a slurry; adequately wet other asbestos-containing waste material; and

(ii) Discharge no visible emissions to the outside air from collection, mixing, and wetting operations, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air; and

(iii) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; and

(iv) Label the containers specified in paragraph (b)(1)(iii) as follows:

CAUTION

Contains Asbestos-
Avoid Opening or
Breaking Container
Breathing Asbestos is Hazardous
to Your Health

Alternatively, use warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.1001(g)(2)(ii).

(2) Process asbestos-containing waste material into nonfriable forms:

(i) Form all asbestos-containing waste material into nonfriable pellets or other shapes; and

(ii) Discharge no visible emissions to the outside air from collection and processing operations, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Use an alternative disposal method that has received prior approval by the Administrator.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.153 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.

Each owner or operator of any inactive waste disposal site that was operated by sources covered under § 61.142, § 61.144, or § 61.149 and received deposits of asbestos-containing waste material generated by the sources, shall

(a) Comply with one of the following:

(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or

(2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on

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the area adequate to prevent exposure of the asbestos-containing waste material; or

(3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

(4) For inactive waste disposal sites for asbestos tailings, apply a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Use the agent as recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent. Obtain prior approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

(1) Display warning signs at all entrances and at intervals of 100 m (330 feet) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements for 51 cm×36 cm (20"×14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) Fence the perimeter of the site in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.

§ 61.154 Air-cleaning.

(a) The owner or operator who elects to use air-cleaning, as permitted by §§ 61.142, 61.144, 61.147(c)(2), 61.147(d)(2), 61.148(b)(2), 61.149(b), 61.151(b), 61.151(c)(1)(ii), 61.152(b)(1)(ii), and 61.152(b)(2) shall:

(1) Use fabric filter collection devices, except as noted in paragraph (b) of this section, doing all of the following:

(i) Operating the fabric filter collection devices at a pressure drop of no more than .995 kilopascal (4 inches water gage), as measured across the filter fabric; and

(ii) Ensuring that the airflow permeability, as determined by ASTM Method D737-75, does not exceed 9 $m^3/min/m^2$ (30 $ft^3/min/ft^2$) for woven fabrics or 11 $m^3/min/m^2$(35 $ft^3/min/ft^2$) for felted fabrics, except that 12 $m^3/min/m^2$ (40 ft^3min/ft^2) for woven and 14 $m^3/min/m^2$ (45 ft^3min/ft^2) for felted fabrics is allowed for filtering air from asbestos ore dryers; and

(iii) Ensuring that felted fabric weighs at least 475 grams per square meter (14 ounces per square yard) and is at least 1.6 millimeters (one-sixteenth inch) thick throughout; and

(iv) Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(2) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this section. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(b) There are the follo
tions to paragraph (a)(1):
(1) If the use of fabric
or explosion hazard, the
tor may authorize as a s
use of wet collectors desi
ate with a unit contacting
least 9.95 kilopascals (40
gage pressure).
(2) The Administrator
ize the use of filterin
other than that descri
graphs (a)(1) and (b)(1)
if the owner or operator
to the Administrator's
that it is equivalent to
equipment in filtering
bestos material.

[49 FR 13661, Apr. 5, 198
June 21, 1984]

§ 61.155 Reporting.

(a) Within 90 days a
tive date of this subpa
or operator of any exi
which this subpart ap
vide the following inf
Administrator, except
or operator who prov
mation prior to April
to comply with § 61.24
tion replaces) is not re
mit it.
(1) A description
control equipment us
ess; and
(2) If a fabric filter
control emissions, th
across the fabric filte
gage; and
(i) If the fabric de
fabric, the airflow pe
min/m² and; if the f
whether the fill ya
spun; and
(ii) If the fabric f
felted fabric, the de
minimum thickness
airflow permeability
(3) For sources s
and 61.152:
(i) A brief descrip
ess that generates
waste material; and
(ii) The average
containing waste m
measured in kg/da

(b) There are the following exceptions to paragraph (a)(1):

(1) If the use of fabric creates a fire or explosion hazard, the Administrator may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals (40 inches water gage pressure).

(2) The Administrator may authorize the use of filtering equipment other than that described in paragraphs (a)(1) and (b)(1) of this section if the owner or operator demonstrates to the Administrator's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

[49 FR 13661, Apr. 5, 1984; 49 FR 25453, June 21, 1984]

§ 61.155 Reporting.

(a) Within 90 days after the effective date of this subpart, each owner or operator of any existing source to which this subpart applies shall provide the following information to the Administrator, except that any owner or operator who provided this information prior to April 5, 1984 in order to comply with § 61.24 (which this section replaces) is not required to resubmit it.

(1) A description of the emission control equipment used for each process; and

(2) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches water gage; and

(i) If the fabric device uses a woven fabric, the airflow permeability in $m^3/min/m^2$ and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2, the minimum thickness in inches, and the airflow permeability in $m^3/min/m^2$.

(3) For sources subject to §§ 61.151 and 61.152:

(i) A brief description of each process that generates asbestos-containing waste material; and

(ii) The average weight of asbestos-containing waste material disposed of, measured in kg/day; and

(iii) The emission control methods used in all stages of water disposal; and

(iv) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(4) For sources subject to § 61.153:

(i) A brief description of the site; and

(ii) The method or methods used to comply with the standard, or alternative procedures to be used.

(b) The information required by paragraph (a) of this section must accompany the information required by § 61.10. The information described in this section must be reported using the format of Appendix A of this part.

(Approved by this Office of Management and Budget under control number 2000-0264)

(Sec. 114. Clean Air Act as amended (42 U.S.C. 7414))

§ 61.156 Active waste disposal sites.

To be an acceptable site for disposal of asbestos-containing waste material under §§ 61.151 and 61.152, an active waste disposal site must meet the requirements of this section.

(a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.

(b) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) of this section must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements of 51 cm × 36 cm (20" × 14") upright

format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site.	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material which was deposited at the site during the operating day or previous 24-hour period is covered with either.

(1) At least 15 centimeters (6 inches) of compacted nonasbestos-containing material, or

(2) A resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. This agent must be used as recommended for the particular dust by the manufacturer of the dust suppression agent. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(d) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if an alternative control method for emissions that has received prior approval by the Administrator is used.

(Secs. 112 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7412, 7601(a))

Subpart V—National Emission Standard for Equipment Leaks (Fugitive Emission Sources)

Source: 49 FR 23513, June 6, 1984, unless otherwise noted.

§ 61.240 Applicability and designation of sources.

(a) The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices or systems required by this subpart.

(b) The provisions of this subpart apply to the sources listed in paragraph (a) after the date of promulgation of a specific subpart in Part 61.

(c) While the provisions of this subpart are effective, a source to which this subpart applies that is also subject to the provisions of 40 CFR Part 60 only will be required to comply with the provisions of this subpart.

§ 61.241 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in Subpart A of Part 61, or in specific subparts of Part 61; and the following terms shall have specific meaning given them:

"Closed-vent system" means a system that is not open to atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

"Connector" means, flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment.

"Control device" means an enclosed combustion device, vapor recovery system, or flare.

"Double block and bleed system" means two block valves connected in series with a bleed valve or line that

can vent the line between t
block valves.

"Equipment" means each
compressor, pressure relief
sampling connection system,
ended valve or line, valve, fla
other connector, product accu
vessel in VHAP service, and a
trol devices or systems requ
this subpart.

"First attempt at repair" m
take rapid action for the pur
stopping or reducing leakage o
ic material to atmosphere usi
practices.

"In gas/vapor service" mean
piece of equipment contains
fluid that is in the gaseous sta
erating conditions.

"In liquid service" means
piece of equipment is not in ga
service.

"*In-situ* sampling systems"
nonextractive samplers or in-li
plers.

"In vacuum service" mea
equipment is operating at an
pressure which is at least 5 kil
(kPa) below ambient pressure.

"In VHAP service" means
piece of equipment either con
contacts a fluid (liquid or gas)
at least 10 percent by weight a
hazardous air pollutant (VHA
termined according to the pr
of § 61.245(d). The provisi
§ 61.245(d) also specify how t
mine that a piece of equipmen
in VHAP service.

"In VOC service" means,
purposes of this subpart, that
piece of equipment contains
tacts a process fluid that is a
percent VOC by weight (see
60.2 for the definition of vo
ganic compound or VOC and
60.485(d) to determine whethe
of equipment is not in VOC
and (b) the piece of equipmen
in liquid service as defined in
60.481.

"Open-ended valve or line"
any valve, except pressure
valves, having one side of th
seat in contact with process f
one side open to atmosphere, e
rectly or through open piping.

"Pressure release" means th
sion of materials resulting f

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

6280/3
FAC
08 DEC 1986

From: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune
Public Works Officer, Marine Corps Base, Camp Lejeune

Subj: DISPOSAL OF ASBESTOS WASTE IN SANITARY LANDFILLS

Encl: (1) N.C. Solid & Hazardous Waste Mgmt Branch ltr dtd 17 Nov 86

1. Forwarded for compliance with State of North Carolina Rules at the enclosure. Mr. Alexander, extension 3034, will provide any additional information you may require.

K. J. KIRIACOPOULOS
By direction

Copy to:
LANTNAVFACENGCOM (Codes 114 & 406)
NREAD
EnvEngr (w/o encl)

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

5280/3
FAC

0 8 DEC 1988

From: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune
Public Works Officer, Marine Corps Base, Camp Lejeune

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K. J. KIRIACOPOULOS
By direction

Copy to:
CLANTNAVFACENGCOM (Codes 114 & 106)
NRRAB
Enybmer (w/o encl)

11800
FAC
06 MAY 1986

Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
Base Maintenance Officer

APPROVED MIP #85-CLNC-488-FAC; ASBESTOS REMOVAL

Encl: (1) AC/S BOSMAD ltr 11800 BOSM dtd 21 Apr 86

1. The enclosure is forwarded for implementation and an estimate of benefits.

2. Please provide a response on both matters by 12 May 1986.

B. W. ELSTON
By direction

Copy to:
EnvEngr

06 MAY 1988

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO:
11800
BOSM
APR 21 1986

From: Assistant Chief of Staff, Base Operational Support Management Assistance
To: Assistant Chief of Staff, Facilities

Subj: MODEL INSTALLATION PROGRAM PROPOSAL NO. 85-CLNC-488-FAC, ASBESTOS REMOVAL

Ref: (a) BO 12451.2

Encl: (1) Subject Proposal w/NAVSO 5305/5

1. The subject proposal has been approved for implementation by the Commanding General. The proposal relates to matters under the cognizance of your department and is forwarded for implementing action as appropriate. We request you notify this office upon completion of the required implementation action so the file on the subject proposal may be closed.

2. The enclosure is also forwarded for an estimate of benefits. MIP awards are processed in accordance with the procedures for the Beneficial Suggestion Program set forth in the reference, and the Civilian Personnel Officer advises the cognizant functional manager should make the award determination.

3. If it is determined the contributor is ineligible for a monetary award based on guidance in the reference (i.e. clearly a job responsibility or routine safety matter), please note in Item 4 of the pertinent NAVSO 5305/5.

4. It is requested that your office complete this award determination and return it to this office no later than 10 days following receipt.

H. F. SMITH

MIP AWARDS DETERMINATION

SPENCER, JOHN L.	MIP 85-CLNC-488-FAC ASBESTOS REMOVAL
POSITION TITLE, AND GRADE OR RANK/RATE WS-10 Pipefitter Foreman	ACTIVITY OF CONTRIBUTER(S) (Name and location) Marine Corps Base Camp Lejeune, NC 28542
ORGANIZATIONAL CODE AND TITLE Base Maintenance Division (Facilities Dept.)	
TO: AC/S, Facilities	DATE FORWARDED APR 21 1986
DUE DATE 10 Days After Receipt	

A complete evaluation of this contribution is necessary and all questions that apply should be answered. Although you may not have authority to implement the contribution, you are requested to give your opinion on its value. Do not merely state that authority to adopt the contribution is under the cognizance of GSA, VA, Treasury, etc. YOUR REPLY MAY BE USED VERBATIM IN NOTIFYING THE CONTRIBUTER(S) OF THE RESULTS.

SIGNATURE OF AWARDS ADMINISTRATOR Mary L. Casserah	ACTIVITY AND LOCATION AC/S, BOSMAD

INVESTIGATION REPORT	YES	NO
1. WILL CONTRIBUTION BE ADOPTED LOCALLY? (If "NO" give reason for nonadoption in space 4 and answer questions 5 and 6 only)		
2. IS CONTRIBUTION IN OPERATION? (Complete items below)		

IF "YES" GIVE DATE INSTALLED _____ IF "NO" INDICATE BELOW THE ACTION TAKEN TOWARD ADOPTION

☐ COMMITMENT TO ADOPT HAS BEEN MADE ☐ PROJECT OR JOB ORDER HAS BEEN ISSUED ☐ EXPERIMENTAL WORK OR TRIAL TEST IS UNDER WAY ☐ APPROVAL HAS BEEN REQUESTED

3. ESTIMATE OF BENEFITS

A. INTANGIBLE BENEFITS

VALUE ☐ MODERATE ☐ SUBSTANTIAL ☐ HIGH ☐ EXCEPTIONAL

EXTENT OF APPLICATION ☐ LIMITED ☐ EXTENDED ☐ BROAD ☐ GENERAL

B. TANGIBLE BENEFITS (In table below compute labor savings at actual cost.)

ITEM	LABOR			MATERIAL			TOTAL (LABOR AND MATERIALS)
	Hours Per	Dollars Per Hour	TOTAL	Units Per	Cost Per Unit	TOTAL	
FORMER METHOD		$	$		$	$	$
NEW METHOD							
SAVINGS							

4. ADDITIONAL INFORMATION AND COMMENTS

(If more space is needed, use reverse side starting with this end of the page up.)

	YES	NO		
5. IS PATENT INVESTIGATION RECOMMENDED?			SIGNATURE OF INVESTIGATOR	DATE
6. IF CONTRIBUTION CAN BE USED ELSEWHERE, INDICATE WHERE:			ACTIVITY AND LOCATION OF INVESTIGATOR	
			APPROVING OFFICIAL	DATE

Encl (1)

MODEL INSTALLATION PROGRAM CONTROL FORM

CLNC PROPOSAL NUMBER	TITLE/SUBJECT OF PROPOSAL
85-CLNC-488-FAC	ASBESTOS REMOVAL

FUNCTIONAL CODE	DIRECTIVE	LEVEL OF APPROVAL	DATE OF PROPOSAL	RECEIVED BOSMAD
AL	N/A	CG	850924	851002

NAME/PHONE OF SUBMITTER(S)	ORGANIZATION
John L. Spencer/3457	FAC

SYNOPSIS OF PROPOSAL

Propose that asbestos removal be done by in-house personnel, eliminating contracting out asbestos removal.

FUNCTIONAL MANAGER RECOMMENDATION DATE: 851205

AC/S, FAC

Approve

REMARKS:
See attached AC/S FAC memo dtd 5 Dec 85.

STEERING GROUP RECOMMENDATION DATE: XXXXXX

N/A - Functional Manager Recommends Approval.

REMARKS:

COMMANDING GENERAL ACTION DATE: 26 MAR 1986

Approved: _____ Disapproved: _____ Forward to Higher Authority: K

Concept Approved-Final Approval Pending Results of Test: _____

REMARKS:

ACTION BY HIGHER AUTHORITY	FINAL ACTION
DTG OF MCBCL REQUEST:	
DTG OF RESPONSE:	OTHER RECOGNITION: DATE SUBMITTER(S) NOTIFIED:

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

11800
FAC

DATE: DEC 5 1985

FROM: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
TO: Assistant Chief of Staff, Base Operational Support Management Assistance Division

SUBJ: MIP 85-CLNC-488-FAC; ASBESTOS REMOVAL: STOP CONTRACTING OUT AND USE INHOUSE PERSONNEL FOR REMOVAL OF ASBESTOS

Encl: (1) BMaintO mem 11800 MAIN dtd 8Nov85

1. Recommend approval of the subject proposal as qualified by the remarks of the Base Maintenance Officer in the enclosure.

B. W. ELSTON
By direction

☆ U.S. GOVERNMENT PRINTING OFFICE: 1983-605-010:8484

S/N 0107-LF-052-2320

Memorandum

11800
MAIN

DATE: 8 Nov 85

FROM: Base Maintenance Officer

TO: Assistant Chief of Staff, Facilities

SUBJ: MIP 85-CLNC-488-FAC, ASBESTOS REMOVAL: STOP CONTRACTING OUT AND USE INHOUSE PERSONNEL FOR REMOVAL OF ASBESTOS

Ref: (a) Your memo 11800 Fac dtd 6 Nov 85

1. I support utilizing Base Maintenance personnel in the removal of asbestos when it is directly related to the repair projects for which they are assigned. When there are major repair projects being contracted, the removal of asbestos associated with the project should be included in the contract.

2. The use of the SAF-T-STRIP or the PROFO-BAG is a relatively new method of asbestos removal which should be used where possible to reduce potential contamination.

W. M. RICE

MODEL INSTALLATION PROGRAM

PROPOSAL

MARINE CORPS BASE
CAMP LEJEUNE

INSTRUCTIONS:
1. COMPLETE ALL INFORMATION REQUESTED.
2. PLEASE PRINT OR TYPE LEGIBLY.
3. USE ADDITIONAL SHEETS IF NECESSARY.
4. FORWARD COMPLETED PROPOSAL TO AC/S, BOSMAD, MCB

DO NOT WRITE IN THIS SPACE
DATE RECEIVED
OCT 2 1985

TITLE OR SUBJECT OF PROPOSAL
Asbestos removal; stop contracting out and use in-house personnel for removal of asbestos

PROPOSAL NUMBER
85-CLNC-488-FAC

NAME, TITLE, GRADE/RANK, UNIT OF SUBMITTER(S)
John L. Spencer, Pipefitter Foreman, WS-10, Base Maintenance Pipefitting Unit, Shop 62

PHONE

CURRENT PROCEDURE
I am enclosing copies showing the conventional and the cost effective solution.

PROPOSED PROCEDURE (If a directive/order must be waived to implement proposal-Identify the specific reference.)
No directives or orders have to be changed to do this. Current OSHA and EPA regulations cover these methods.

BENEFITS/ADVANTAGES
We can do the asbestos repairs in-house and save the base from $7 to $12,000 each job. We have in Shope 62, Pipefitting Unit, Base Maintenance Division, the same equipment that the contractor has and in some cases more of our personnel are well versed in the old and new cost effective solutions.

I (WE) UNDERSTAND THAT THE ACCEPTANCE OF A CASH AWARD FOR THE USE OF THIS PROPOSAL BY THE UNITED STATES GOVERNMENT SHALL NOT FORM THE BASIS OF A FURTHER CLAIM OF ANY NATURE UPON THE UNITED STATES BY ME (US), MY (OUR) HEIRS, OR ASSIGNS.

John L Spencer 9-24-85
(SIGNATURE AND DATE)

(SIGNATURE AND DATE)

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-5008

IN REPLY REFER TO
6260.3a
371
17 Mar 86

2 Copy
Alex
BMO
Route to

From: Commanding Officer
To: Commanding General, Marine Corps Ba 8542

Subj: IDENTIFICATION OF MATERIAL-CONTAIN

Ref: (a) Phoncon btwn James Sawyer, P&E and Beverly Howell on 13 March 86

Encl: (1) Request for and Results of Test

1. In response to reference (a), samples were taken from Building BB-2, Gymnasium, Courthouse Bay on 14 March 1986 to determine if ceiling and wall material in the office and gear locker contained asbestos. Enclosure (1) represents the locations at which samples were taken and their results.

2. Please contact the Industrial Hygiene Branch at extension 1930/2767 if further assistance is needed.

M. P. GENTRY
By direction

Copy to:
Base Maintenance, Operations Division (Attn: James Sawyer)

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-5008

IN REPLY REFER TO
6260.3a
371
17 Mar 86

From: Commanding Officer
To: Commanding General, Marine Corps Base, Camp Lejeune, NC 28542

Subj: IDENTIFICATION OF MATERIAL-CONTAINING ASBESTOS

Ref: (a) Phoncon btwn James Sawyer, P&E and Beverly Howell on 13 March 86

Encl: (1) Request for and Results of Test

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M. P. GENTRY
By direction

Copy to:
Base Maintenance, Operations Division (Attn: James Sawyer)

REQUEST FOR AND RESULTS OF TESTS

PAGE NO. | NO. OF PAGES

SECTION A - REQUEST FOR TEST

1. TO: Occupational & Preventive Medicine
Dept.
Bldg 65
IH Lab
Camp Lejeune, NC 28542

2. FROM: Beverly Howell

3. PRIME CONTRACTOR AND ADDRESS
BB-2 Courthouse

CONTRACT NUMBER

4. MANUFACTURING PLANT NAME AND ADDRESS

P. O. NUMBER

5. END ITEM AND/OR PROJECT	6. SAMPLE NUMBER	7. LOT NO.	8. REASON FOR SUBMITTAL	9. DATE SUBMITTED
asbestos			asbestos I.D.	14 Mar 86

10. MATERIAL TO BE TESTED	10a. QUANTITY SUBMITTED	11. QUANTITY REPRESENTED	12. SPEC. & AMEND AND/OR DRAWING NO. & REV. FOR SAMPLE & DATE
Bulk	5	5	

13. PURCHASED FROM OR SOURCE	14. SHIPMENT METHOD	15. DATE SAMPLED AND SUBMITTED BY
		14 Mar 86 B. Howell

16. REMARKS AND/OR SPECIAL INSTRUCTIONS AND/OR WAIVERS.

1 - Gear Locker	86-107
2 - Office (wall on gym side near door)	86-108
3 - Office (" " " " viewing window)	86-109
4 - Office (top casing of windows)	86-110
5 - Office (ceiling)	86-111

17. SEND REPORT OF TEST TO
same as #2

SECTION B - RESULTS OF TEST *(Continue on plain white paper if more space is required)*

1. DATE SAMPLE RECEIVED	2. DATE RESULTS REPORTED	3. LAB REPORT NUMBER
14 Mar 86	14 Mar 86	86-107 - 86-111

4 TEST PERFORMED	RESULTS OF TEST	SAMPLE RESULT	REQUIREMENTS
Asbestos ID	86-107(1) - Negative 86-108(2) - Chrysotile Asbestos 86-109(3) - Negative 86-110(4) - Chrysotile Asbestos 86-111(5) - Chrysotile Asbestos		

DATE	TYPED NAME AND TITLE OF PERSON CONDUCTING TEST	SIGNATURE
14 Mar 86	M. P. MCMAHON, HM2 PMT	MPM'Mahon HM2

DD FORM 1 FEB 62 1222

REPLACES DD FORM 1222, 1 JUL 58, WHICH IS OBSOLETE.

S/N 0102-LF-012-0600

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

5100
FAC

DATE: 27 Feb 1986

FROM: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
TO: Assistant Chief of Staff, Manpower

SUBJ: WORKPLACE MONITOR TRAINING

Ref: (a) BSafety memo 6260 SAFD dtd 24 Feb 86
(b) DODINST 6055.5

1. Reference (a) requested comments on the subject training. As discussed during our meeting of 19 February 1986, this issue applies to organizations other than those under the cognizance of AC/S Facilities. Accordingly, I suggest you gather input from other staff sections if time will permit.

2. We do not concur with the idea that workplace monitoring should be accomplished by the same organization which is performing the work. Obviously, this tends to negate the credibility of such a vital program which protects human health and safety. As indicated in reference (b), "only industrial hygienist, qualified occupational health personnel, or technicians under the supervision of industrial hygienist" shall perform workplace evaluations. Qualified personnel are required to calibrate equiment used in before-and-after monitoring. This quality control of exposure levels is required in order for the results to be admissible evidence in proceedings of the OSH Act and/or Workmen's Compensation Act. Similar to Navy contract specifications, which prohibit asbestos monitoring being conducted by contractor employees, monitoring of in-house removal projects by base employees does not provide the "unbiased" oversight intended by Federal law and DOD policies.

3. Occupational health and safety of employees is considered to be a specialized program. It should be administered by trained, qualified technicians/professionals as opposed to collateral duties of journeymen, mechanics, or supervisors. Adding these duties and responsiblities to the employees performing the work may require changing job classification. This could certainly prove to be detrimental and would take away from the productivity of employees involved.

4. Finally, billets are not available within the AC/S Facilities department to absorb this new function. Whether this task would be designated as a primary duty or whether it would be assigned as a small portion of time for many employees, the end result is the same. That is we have taken productive manhours and converted to an overhead function. Recommend we continue to press Naval Hospital to provide this service.

R. A. Tiebout

R. A. TIEBOUT

MODEL INSTALLATION PROGRAM

PROPOSAL

MARINE CORPS BASE
CAMP LEJEUNE

INSTRUCTIONS:
1. COMPLETE ALL INFORMATION REQUESTED.
2. PLEASE PRINT OR TYPE LEGIBLY.
3. USE ADDITIONAL SHEETS IF NECESSARY.
4. FORWARD COMPLETED PROPOSAL TO AC/S, BOSMAD, MCB

DO NOT WRITE IN THIS SPACE
DATE RECEIVED

PROPOSAL NUMBER

TITLE OR SUBJECT OF PROPOSAL

INDUSTRIAL HYGIENE SUPPORT FOR MCB/BASE MAINTENANCE

NAME, TITLE, GRADE/RANK, UNIT OF SUBMITTER(S) | PHONE

DONALD B. OGLESBY WD/08 PLANNER & ESTIMATOR (PIPING SYSTEMS) | 451-5809/5329

CURRENT PROCEDURE The current procedure is for any Employee suspecting that materials subject to repair or ripout contain Asbestos Materials will immediately report their suspicions to their supervisor who will notify the P&E Section of the Operations Branch. Repairs will be discontinued pending further evaluation of the worksite by Operations Personel. The P&E Section, Operations Branch is responsible for the collection of suspected Asbestos Samples in accordance with OPNAVINST 6260.1B and guidelines provided by the Preventive Medicine Unit, NAVAL HOSPITAL. The P&E Section, Operations Branch will give PMU, INDUSTRIAL HYGIENIST the suspected Materials for Identification of Possible Asbestos Content.

SEE ATTACHED SHEET

PROPOSED PROCEDURE (If a directive/order must be waived to implement proposal-identify the specific reference.)

As soon as possible establish ONE (1) GS-12 INDUSTRIAL HYGIENE & ONE(1) GS-5/7 TECHNICIAN for Asbestos Identification & on the job fiber counting and monitoring. The INDUSTRIAL HYGIENIST would report directly to AC/S Facilities and Work out of Base Maintenance. THE INDUSTRIAL HYGIENIST would: (1) Be Hazardous Materials Program Manager for Marine Corps Base and fully implement OSHA CFR 1910. 1200 and MCO 5100.25. (2) Be Program MANAGER for MCB Respiratory Protection Program and provide annual Training/Fit Testing of all applicable MCB and Base Maintenance personnel. Be Waste Oil Program Manager

SEE ATTACHED SHEET

BENEFITS/ADVANTAGES

(1) Reduce the workload on the already UNDER-STAFFED P&E, OPERATIONS BRANCH by having SHOP Supervisors contact the INDUSTRIAL HYGIENIST of suspected Asbestos Materials. He will be able to respond faster to the needs of Base Maintenance by being a part of the ORGANIZATIONAL STRUCTURE. The P&E will no longer be required to take samples of suspected Asbestos Materials, allowing more manhours for other work. In some cases this will eliminate costly delays in work tasks and down time by direct contact between I.H and Supervisor. The I.H. will give the supervisor written instructions and precautions in Job Preparation, safety equipment required, etc.

SEE ATTACHED SHEET

I (WE) **UNDERSTAND** THAT THE ACCEPTANCE OF A CASH AWARD FOR THE USE OF THIS PROPOSAL BY THE UNITED STATES GOVERNMENT SHALL NOT FORM THE BASIS OF A FURTHER CLAIM OF ANY NATURE UPON THE UNITED STATES BY ME (US), MY (OUR) HEIRS, OR ASSIGNS.

Donald B. Oglesby 6-4-86
(SIGNATURE AND DATE)

(SIGNATURE AND DATE)

CURRENT PROCEDURE

PWE = work job

1. Marine Corps Base and Base Maintenance must depend on already extremely understaffed Naval Hospital Industrial Hygienists to: (A) Review Asbestos pre-ripout operations. (B) Identify Insulation and existing Materials for possible Asbestos content. (C) Provide Asbestos Fiber counting for personnel exposure and certify spaces as cleared or fiber free for re-entry. Due to limited availability of Industrial Hygiene Personnel for certification and monitoring, work Projects are often delayed. No Industrial Hygiene Personnel are available for weekend work or emergency after Normal working hours rip-outs. To perform Asbestos Operations even under emergency conditions without Industrial Hygiene Evaluation/Supervision, Marine Corps Base runs a risk of EPA or OSHA Violations which could result in a fine or Citation being issued to the Command.
2. OSHA CFR 1910.134 requires annual respiratory protection and fit testing of all applicable Marine Corps Base personel who require the use of respirators in order to perform their duties. The Appointment of a Respirator Program Manager is Required. Both Base Maintenance and other Marine Corps Base Personel must rely upon extremely limited Naval Hospital Industrial Hygiene Support that cannot provide all required training nor manage the Marine Corps Base Respiratory Program. Base Safety Personel do not have this expertise.
3. OSHA CFR 1910.1200 (Hazard Communications Act) and MCO 5100.25 require a hazardous materials inventory of all work-spaces, completion of Material Safety Data Sheets (MSDS) and training of personel in how to use Hazardous Materials, personal protective equipment, and health effects.

CURRENT PROCEDURE

Only the INDUSTRIAL HYGIENIST HAVE THE Chemical/TECHNICAL background to provide this training and conduct a thorough ANNUAL INVENTORY. There is no expertise available within MCB to implement AND manage this program.

4. ONLY INDUSTRIAL HYGIENIST have a sufficient Chemical/ Technical Back-ground to train MCB/Base Maintenance PERSONNEL IN HAZARDOUS Materials, Asbestos Procedures, Personal Protective Equipment, sampling for spills, etc. Due to the few Naval Hospital INDUSTRIAL HYGIENISTS available and the extremely heavy demands placed upon them for other services, their availability is very limited AND cannot be relied upon with any degree of consistency. This does not remove the Marine Corps Base from Liability and the responsibility of properly implementing these programs as required by Federal Statutes and directives.

Proposed Procedure

(3) OBTAIN Microscopes stored at Base Safety in order to establish an Asbestos Identification and counting Laboratory and fully support the Base Maintenance Asbestos Program
(4) Provide Annual Training ON HAZARDOUS Materials including PERSONAL protective EQUIPMENT and health effects (Based ON information CONTAINED IN Material Safety Data Sheets) for all applicable MCB AND Base Maintenance PERSONNEL.
(5) Be available after normal working hours and ON weekends for emergency Asbestos Rip-outs, Chemical Spills, etc.
6. Be available full time for PLANS AND Projects Review.
7. CONDUCT heat stress evaluations of selected work areas during summer months.
8. CONduct other worksite evaluations as may be directed by AC/S Facilities, Base MAINTENANCE OFFICER or as required.

Benefits / Advantages

If Asbestos Materials is Identified and a ripout is necessary the Industrial Hygienist will give the P&E written instructions on necessary Job Preparations, safety equipment required and any pertinent information needed by P&E to write Job Order, eliminating Manhours used by P&E to write Amendments because he did not know necessary Job Preparations required.

2. Reduce cost to Government by having Base Maintenance Personnel perform all Maintenance related Asbestos Ripouts quickly and efficiently, minimizing downtime of equipment needing repair.
3. Bring MCB into full compliance as required by MCO 5100.2B and OSHA CFA 1910.1200 by developing Hazardous Materials Inventory and Employee Training Program.
4. Full Industrial Hygienist availability after hours and weekends for Emergency Spills and Asbestos Ripouts, etc. (Prior approval for Naval Hospital Industrial Hygiene Services after hours is not available)
5. Stable Training Program for MCB Personnel in Asbestos, Hazardous Materials, and Personal Protective Equipment & Health Effects. (Base Safety does not have this expertise)
6. Ability to obtain quick Asbestos fiber counts during and after working hours and emergency weekend rip-outs.
7. Bring MCB into full compliance in respiratory protection program as required in OSHA CFR 1910.134.
8. One Point of contact for full accountability and responsibility
9. Full time availability for design and project reviews.

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-0008

Bob Alexander

6260.3a
371
14 Jan 85

From: Commanding Officer
To: Commanding General, Marine Corps Base, Camp Lejeune, NC 28542
(Attn: AC/S Facilities)

Subj: RESULT OF ASBESTOS AIR MONITORING

Ref: (a) OSHA CFR 1910 Series
(b) OPNAVINST 5100.23B

Encl: (1) Sampling Results 9 October - 30 December 1985

1. Since 9 October 1985, the Industrial Hygiene Branch of the Occupational and Preventive Medicine Department has provided air monitoring services for Base Maintenance asbestos removal operation as well as pre-ripout consultations. This mutual cooperation has assured that asbestos removal operations were in full compliance with reference (a) and that at no time were other personnel not involved in these procedures exposed to airborne asbestos fibers. Based upon 64 area and personal samples taken during this period the following comments are offered for your review and evaluation:

a. The use of the sealed bags used for pipe insulation removal highly reduces personal and area exposure to asbestos fibers.

b. Advance notification permits effective manpower utilization of sampling personnel and planning for peak workload operations.

c. The value of 0.1 fibers per cubic centimeter of air has been used for clearing samples to insure safe entry into a previously occupied space. This value has been established in reference (b) for placement of personnel on the Asbestos Medical Surveillance Program (AMSP).

d. The use of wet clean up techniques also greatly reduces airborne exposures and ehances final clean up procedures.

2. Personal and area sampling results will be submitted on a monthly basis beginning in February 1986. For further information or clarification, contact the Industrial Hygiene Branch, extension 1930/2767.

M. P. CENTRY
By direction

Copy to:
Base Maintenance Officer
Base Safety Manager
Base Env. Engineer

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-5008

6260.3a
371
14 Jan 85

From: Commanding Officer
To: Commanding General, Marine Corps Base, Camp Lejeune, NC 28542
(Attn: AC/S Facilities)

Subj: RESULT OF ASBESTOS AIR MONITORING

Ref: (a) OSHA CFR 1910 Series
(b) OPNAVINST 5100.23B

Encl: (1) Sampling Results 9 October - 30 December 1985

1. Since 9 October 1985, the Industrial Hygiene Branch of the Occupational and Preventive Medicine Department has provided air monitoring services for Base Maintenance asbestos removal operation as well as pre-ripout consultations. This mutual cooperation has assured that asbestos removal operations were in full compliance with reference (a) and that at no time were other personnel not involved in these procedures exposed to airborne asbestos fibers. Based upon 64 area and personal samples taken during this period the following comments are offered for your review and evaluation:

a. The use of the sealed bags used for pipe insulation removal highly reduces personal and area exposure to asbestos fibers.

b. Advance notification permits effective manpower utilization of sampling personnel and planning for peak workload operations.

c. The value of 0.1 fibers per cubic centimeter of air has been used for clearing samples to insure safe entry into a previously occupied space. This value has been established in reference (b) for placement of personnel on the Asbestos Medical Surveillance Program (AMSP).

d. The use of wet clean up techniques also greatly reduces airborne exposures and ehances final clean up procedures.

2. Personal and area sampling results will be submitted on a monthly basis beginning in February 1986. For further information or clarification, contact the Industrial Hygiene Branch, extension 1930/2767.

M. P. CENTRY
By direction

Copy to:
Base Maintenance Officer
Base Safety Manager
Base Env. Engineer

Sampling Results 9 Oct - 30 Dec 85

Sample No.	Date	Bldg #	Fibers/cc	Sample Location
127-1	9 Oct 85	H-32	0.09	Area
128-1	10 Oct 85	H-32	0.91	"
128-2	10 Oct 85	H-32	0.71	"
129-1	11 Oct 85	M-408	0.02	"
129-2	11 Oct 85	M-408	0.03	"
130-1	28 Oct 85	1101	0.034	"
130-2	28 Oct 85	1101	0.02	"
131-1	25 Oct 85	1601	0.04	Personal
131-2	25 Oct 85	1601	0.01	Area
131-3	25 Oct 85	1601	0.01	"
131-4	25 Oct 85	1601	0.01	"
133-1	29 Oct 85	1101	0.04	"
133-2	29 Oct 85	1101	0.04	"
135-1	30 Oct 85	1101	0.04	"
136-1	30 Oct 85	1101	0.06	"
145-1	22 Nov 85	TC-743	0.187	Personal
145-2	22 Nov 85	TC-743	0.015	"
145-3	22 Nov 85	TC-743	0.14	Area
146-1	25 Nov 85	TC-743	0.063	"
146-2	25 Nov 85	TC-743	0.06	"
148-1	3 Dec 85	1301	0.15	"
148-2	3 Dec 85	1301	0.088	"
148-3	3 Dec 85	1301	0.088	"
149-1	3 Dec 85	1301	0.097	"
149-2	3 Dec 85	1301	0.084	"
150-1	4 Dec 85	AS-124	0.38	"
151-1	4 Dec 85	1301	0.023	"
151-2	4 Dec 85	1301	0.022	Personal
151-3	4 Dec 85	1301	0.04	"
151-4	4 Dec 85	1301	0.06	Area
151-5	4 Dec 85	1301	0.056	"
152-1	5 Dec 85	1301	0.052	Personal
152-2	5 Dec 85	1301	0.042	Area
152-3	5 Dec 85	1301	0.046	"
152-4	5 Dec 85	1301	0.048	"
152-5	5 Dec 85	1301	0.047	"
153-1	6 Dec 85	1301	0.151	Personal
153-2	6 Dec 85	1301	0.097	Area
153-3	6 Dec 85	1301	0.094	"
153-4	6 Dec 85	1301	0.108	Personal
153-5	6 Dec 85	1301	0.104	Area
153-6	6 Dec 85	1301	0.10	"
155-1	11 Dec 85	1301	0.15	"
156-1	11 Dec 85	M-101	0.22	Personal
156-2	11 Dec 85	M-101	0.019	Area
156-3	11 Dec 85	M-101	0.02	"
157-1	12 Dec 85	H-17	0.013	"
157-2	12 Dec 85	H-17	0.013	"
157-3	12 Dec 85	H-17	0.014	"
158-1	13 Dec 85	1301	0.59	"
158-2	13 Dec 85	1301	0.057	"

Encl (1)

Sample No.	Date	Bldg #	Fibers/cc	Sample Location
158-3	13 Dec 85	1301	0.024	Area
158-4	13 Dec 85	1301	0.42	"
159-1	16 Dec 85	425	0.28	Personal
159-2	16 Dec 85	425	0.06	Area
160-1	17 Dec 85	1301	0.054	"
160-2	17 Dec 85	1301	0.054	Personal
161-1	17 Dec 85	1118	0.11	Area
161-2	17 Dec 85	1118	0.057	Personal
162-1	22 Dec 85	1301	0.178	"
162-2	22 Dec 85	1301	0.155	"
163-1	23 Dec 85	1301	0.049	Area
165-1	30 Dec 85	AS-502	0.13	Personal
165-2	30 Dec 85	AS-502	0.05	Area

TELEPHONE CONVERSATION RECORD
MCBCL 2305/8

(This record is to be used for both incoming and outgoing calls)

DATE
26 August 1985

TIME *(Began-Completed)*

TO: Chief of Staff,

ORIGINATOR
(Name, Title, Location & Telephone Number Charged)
Mr. Ron Edwards
NC Division of Environmental Management

PERSON CALLED
(Name, Title, Location & Telephone Number Charged)
Mr. Bob Alexander
Environmental Engineer, CLNC

SUBJECT
Ongoing Asbestos Removal Projects being completed by Base Maintenance

COST OF CALL *(MCB Units Only)*
☐ CHARGEABLE TO STATION ALLOTMENT ☐ NOT CHARGEABLE TO STATION ALLOTMENT

ROUTING

ACTIVITY OR NAME	ACTION	INFO	INITIAL

COMMENTS

SUMMARY OF CONVERSATION

1. Mr. Edwards had not received our response to the asbestos notice of violation at the time of this call. Mr. Edwards indicated that the subject list had been requested by Mr. Walter Hemmingway of the NC OSHA OFfice.

2. Mr. Edwards requested a point of contact to refer the NC OSHA office in the event of the OSHA people wanting to make an inspection. I gave him Mr. R. J. Andrews, Base Safety Manager, extension 5725, as the appropriate point of contact.

3. I gave Mr. Edwards a list of those project numbers which were shown as "in the shop" on the status report.

COPIES TO:
AC/S, Manpower, BSafety, BMO, EnvEngr

SIGNATURE

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

6280
MAIN

DATE: AUG 15 1985

FROM: Base Maintenance Officer

TO: Assistant Chief of Staff, Facilities (Attn: Mr. Alexander)

SUBJ: STATUS OF ASBESTOS JOB ORDERS

Encl: (1) Status of Asbestos Job Orders as of 15 August 1985

1. The enclosure is forwarded for your information.

W. M. RICE

☆U.S. GOVERNMENT PRINTING OFFICE: 1985 — 505-012/18049

15 August 1985

Facility	JON	Status/Comments
TT-48	1846	In shop
M-513	3010	In shop
AS-114	3016	Awaiting to be scheduled
M-415	3022	Awaiting materials
M-620	3035	Awaiting to be scheduled
M-612	3038	Awaiting to be scheduled
M-402	3042	Awaiting to be scheduled
1706	3083	In shop
117	3086	Awaiting to be scheduled
901	3103	Awaiting to be scheduled
M-205	3277	Awaiting to be scheduled
M-512	3420	Awaiting to be scheduled
BB-5	3511	Awaiting to be scheduled
2600	3513	Awaiting to be scheduled
TC-744	3948	Completed 07/16/85
37	4134	Awaiting materials
115	4178	In shop
300	4179	Awaiting to be scheduled
401	4180	In shop
AS-236	4197	Awaiting to be scheduled
Steam Pits	4490	In shop
M-408	4561	In shop
236	4581	Awaiting materials
20	4595	Awaiting materials
1100	4699	Awaiting materials
1301	5109	In shop
RR-8	6008	Awaiting materials
M-601	6019	In shop

North Carolina Department of Natural Resources & Community Development
James B. Hunt, Jr., Governor Joseph W. Grimsley, Secretary
DIVISION OF ENVIRONMENTAL MANAGEMENT

May 31, 1983

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Major General D. J. Fulham
Commanding General
Marine Corps Base
Camp Lejeune, North Carolina 28542

Subject: Notice of Violation
Asbestos Removal Project
Rifle Range Bldg. RR9
Camp Lejeune, North Carolina
Onslow County

Dear Major General Fulham:

On May 6, 1983, Ron Edwards of the Wilmington Regional Office observed asbestos that had been removed from Building RR9 at the Rifle Range and Building BB 12 on April 20, 1982, Building BB 11 and 14 on June 8, 1982, and Building BB 13 on September 22, 1982 at Courthouse Bay without prior notification.

The National Emission Standards for Hazardous Air Pollutants (asbestos removal) states: Written notification shall be postmarked or delivered to the administrator at least 10 days prior to commencement of demolition and shall include the following information required by paragraph (d)(2) of this section:

(i) Name of owner or operator
(ii) Address of owner or operator
(iii) Description of the building, structure, facility, or installation to be demolished or renovated, including the size, age, and prior use of the structure, and the approximate amount of friable asbestos materials present.
(iv) Address or location of the building, structure, facility, or installation.
(v) Scheduled starting and completion dates of demolition or renovation.
(vi) Nature of planned demolition or renovation and method(s) to be employed.
(vii) Procedures to be employed to meet the requirements of this paragraph and paragraph (j) of this section.
(viii) The name and address or location of the waste disposal site where the friable asbestos waste will be deposited.

(ix) Name, title, and authority of the State or local governmental representative who has ordered a demolition which is subject to paragraph (d)(6) of this section.

This section recommends guidelines and work practices which minimize exposure, not only to the removal personnel but to the public. The inspection also revealed that this material was not disposed of properly as required by paragraph (j) of 40 CFR, Part 61.22. Enclosed for your reference is a copy of the Asbestos NESHAP regulation.

The Division of Environmental Management was delegated the authority for the NESHAP regulation under 40 CFR, Part 61 on November 24, 1976.

It is requested that within fifteen (15) days of receipt that the Marine Corps Base at Camp Lejeune respond in writing to this notification. The response should indicate all actions taken by the Base in correcting the above violations as well as a plan of action for future asbestos removal projects at Camp Lejeune including the identification of personnel by rank and/or position, who will be responsible for notification, demolition and removal, and ultimate disposal.

Further violations may subject the Marine Corps Base at Camp Lejeune to enforcement action including the assessment of civil penalties. If you have any questions, please contact Mr. Ronald Edwards at telephone number (919) 256-4161.

Sincerely,

Charles Wakild
Regional Supervisor

CW/RE/cfp
Enclosure
cc: Page Benton
Fin Johnson
Wilmington Regional Office
Central Files

FAC/JGF/hf
6280
17 JUN 1983

North Carolina Department of Natural
Resources & Community Development
Division of Environmental Management
Attn: Mr. Charles Wakild
Wilmington Regional Office
7225 Wrightsville Avenue
Wilmington, NC 28403-3696

Dear Mr. Wakild:

In accordance with the May 31, 1983 notification of violation, the following information is provided.

a. No additional work involving asbestos will be done at the locations cited in your letter of May 31, 1983, until proper notifications and precautions have been taken.

b. The Base Maintenance Officer, in cooperation with the Preventive Medicine Unit, is currently conducting inspections of existing buildings suspected of containing asbestos in an effort to identify friable asbestos. No action will be taken to remove this material without proper notification to your office.

c. The below listed officers have the primary responsibility for rip-out and disposal of asbestos. These officers have been provided with the mechanisms for avoiding future violations and have been advised of the requirement to provide timely notification to your office.

(1) Lieutenant Colonel R. P. Calta, Base Maintenance Officer -- Projects involving routine maintenance and repair by in-house station personnel.

(2) Commander R. C. Carlson, Public Works Officer/Officer in Charge of Construction, Jacksonville NC Area -- Projects performed by civilian contractor personnel.

d. Signs are being prepared to be posted at the asbestos disposal site warning personnel/public of the presence of asbestos hazard.

FAC/JGF/hf
6280

Because of the age of many of the base's buildings/facilities and the past use of asbestos in the steam distribution system, asbestos disposal will be an ongoing concern. Additionally, there is an active construction and maintenance program which will result in the renovation and/or demolition of many facilities containing asbestos. Accordingly, this command shares your agency's concerns for exposure to friable asbestos materials by personnel and for emission to the atmosphere/discharge to environment.

Overall responsibility for this matter is assigned to the Assistant Chief of Staff, Facilities. Colonel J. T. Marshall, telephone 919-451-2544, is the point of contact on matters related to asbestos handling and disposal.

Sincerely,

T. M. STOKES, JR.
Chief of Staff

Blind Copy to:
OICC JAXNC Area
MAIN
NREA

A 3J3

North Carolina Department of Natural Resources & Community Development
James B. Hunt, Jr., Governor Joseph W. Grimsley, Secretary
DIVISION OF ENVIRONMENTAL MANAGEMENT

May 31, 1983

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Major General D. J. Fulham
Commanding General
Marine Corps Base
Camp Lejeune, North Carolina 28542

Subject: Notice of Violation
Asbestos Removal Project
Rifle Range Bldg. RR9
Camp Lejeune, North Carolina
Onslow County

Dear Major General Fulham:

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(v) Scheduled starting and completion dates of demolition or renovation.
(vi) Nature of planned demolition or renovation and method(s) to be employed.
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(viii) The name and address or location of the waste disposal site where the friable asbestos waste will be deposited.

(ix) Name, title, and authority of the State or local governmental representative who has ordered a demolition which is subject to paragraph (d)(6) of this section.

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Further violations may subject the Marine Corps Base at Camp Lejeune to enforcement action including the assessment of civil penalties. If you have any questions, please contact Mr. Ronald Edwards at telephone number (919) 256-4161.

Sincerely,

Charles Wakild
Regional Supervisor

CW/RE/cfp
Enclosure
cc: Page Benton
Fin Johnson
Wilmington Regional Office
Central Files

6280
SAFD
09 AUG 1985

From: Assistant Chief of Staff, Manpower
To: Assistant Chief of Staff, Comptroller

Subj: ALLEGED INCIDENT OF FRAUD, WASTE, ABUSE OR CORRUPTION - CONTROL #163

Ref: (a) AC/S, Fac ltr 6280/3 FAC dtd 1Aug85
(b) Excerpt fr DoDINST 6055.5
(c) Excerpt fr SECNAVINST 5100.10E
(d) Excerpt fr OPNAVINST 5100.8F
(e) Excerpt fr OPNAVINST 6260.1B
(f) CG ltr 6200 SAFD dtd 17May85
(g) CO, NH ltr 6260 371 dtd 18Jun85

1. In accordance with reference (a), the follow-up response to subject Hotline report is provided.

2. Medical surveillance, occupational health and industrial hygiene are medical functions and have been assigned to the medical department by references (b) through (e). Workplace monitoring is an integral part of and essential to these medical functions. Deficiencies in the workplace monitoring program were identified by reference (f) which, also, requested the Commanding Officer of the Naval Hospital to establish a comprehensive workplace monitoring program sufficient to satisfy command needs and requirements mandated by higher headquarters. The response from the Commanding Officer of the Naval Hospital, reference (g) was noncommittal in establishing and maintaining a workplace monitoring program.

3. Efforts to establish a program consistent with regulations are continuing, but an effectual date of such implementation is not known at this time.

J. B. AIROLA

Copy to:
AC/S, FAC

6280/3
FAC
1 AUG 1985

Assistant Chief of Staff, Facilities, Marine Corps Base,
Camp Lejeune
Assistant Chief of Staff, Manpower

ALLEGED INCIDENT OF FRAUD, WASTE, ABUSE, OR CORRUPTION -
CONTROL #163

Ref: (a) AC/S, Comp ltr 7510 COMP dtd 12Mar85
(b) AC/S, Fac ltr 6280/2 dtd 15Apr85

1. Reference (a) forwarded the HOTLINE information and requested an inquiry be conducted. Reference (b) stated that an adequate air sampling program had not been established and requested a meeting to discuss coordination between your staff and projects managed by this office. The discussions completed during this meeting indicated significant deficiencies exist in the MCB monitoring program for compliance with asbestos regulations.

2. As discussed between Mr. Collins, Deputy AC/S, Manpower and Mr. Elston, Deputy AC/S, Facilities, the program responsibility for occupational health and industrial safety are under your cognizance. Thus the subject action is forwarded for your continuing action. Request the follow-up to the HOTLINE inquiry be provided directly to AC/S, Comptroller with a copy provided to this office.

R. A. TIEBOUT

Copy to:
AC/S, Comp
SJA
NAVHOSP/PMU
→ EnvEngr

Alex

TELEPHONE CONVERSATION RECORD
MCBCL 2305/8

(This record is to be used for both incoming and outgoing calls)

DATE
24 July 1985

TIME *(Began - Completed)*
1520-1540

TO: Chief of Staff,

ORIGINATOR
(Name, Title, Location & Telephone Number Charged)
Mr. Ron Edwards, N.C. Division of Environmental Management

PERSON CALLED
(Name, Title, Location & Telephone Number Charged)
Mr. Bob Alexander, MCB Environmental Engineer

SUBJECT
COMPLIANCE WITH ASBESTOS REGULATIONS OF CLEAN AIR ACT

COST OF CALL *(MCB Units Only)*
☐ CHARGEABLE TO STATION ALLOTMENT ☐ NOT CHARGEABLE TO STATION ALLOTMENT

ROUTING

ACTIVITY OR NAME	ACTION	INFO	INITIAL

COMMENTS

NCDEM intends to issue a Notice of Violation to CG, MCB

SUMMARY OF CONVERSATION

1. Mr. Edwards called to say he had inspected asbestos removal projects earlier this week that were being completed by a construction contractor and by Base Maintenance employees. He further stated that, while the contractor operations were in compliance, significant violations were observed by Base Maintenance projects at Bldgs M-408 and M-601. The actions he observed included placing broken asbetos boards in a pile outside the building, unsealed openings allowing emissions of asbestos fibers into the atmosphere, and lack of adequate warning signs. Mr. Edwards indicated that although OSHA compliance was not his agency's responsibility, during the inspection he noted Base Maintenance employees did not appear to be fully protected beause they were not adequately using protective equipment or clothing. He expressed concern that an adequate protection program was not being implemented at Camp Lejeune.

2. In summary, Mr. Edwards indicated that a Notice of Violation would be forwarded to the CG, MCB and that the compliance status of Camp Lejeune as far as EPA and State air pollution control records would be classified "Not in Compliance."

COPIES TO: MAIN, NREA, SJA, SAFD, CO, NavHosp(PMU)

SIGNATURE Robert Alexander

Civilian Guidepost

Compiled and Edited by

CIVILIAN PERSONNEL DIVISION, MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law of the Department of the Navy. Funds for printing of this publication have been approved by the Navy Publications and Printing Policy Committee.

VOLUME 30 NO. 11 31 May 1985

COMMANDING GENERAL PRESENTS AWARDS

In an award ceremony held recently, Major General L. H. Buehl, Commanding General, Marine Corps Base, presented the Marine Corps Meritorious Civilian Service Award to Mr. Bruce A. Morris (pictured above left) and Special Act or Service Awards to Mr. Danny D. Sharpe (pictured above right) and Mr. Samuel K. Jolly (pictured above far right).

Mr. Morris, formerly a Training Instructor (Food Service), GS-9, with Marine Corps Service Support Schools, was cited for:

"Outstanding performance and dedication to duty while employed at Marine Corps Service Support Schools, Marine Corps Base, Camp Lejeune, North Carolina since October 1969. During this period, Mr. Morris' professional competence, initiative, technical proficiency, organizational and managerial abilities, training analysis and course design and development expertise have had a consistent positive impact in the attainment of the first rate formal training program in the Food Service Occupational Field. Through his professionalism, initiative, and positive "can do" attitude, the Food Service Formal School has attained a position of academic excellence and has been cited for innovative techniques and noteworthy accomplishment by Headquarters, Marine Corps."

Mr. Sharpe, Supervisory Ecologist, GS-11, Natural Resources Division, received a Special Act or Service Award in the amount of $1,000 for his contribution to the Base Hazardous Material/Waste Program.

Mr. Sharpe wrote the entire Marine Corps Base Hazardous Waste Management Base Order which received praise from Headquarters, U. S. Marine Corps' Environmental Staff Specialist. The Management Program was considered to be of such high quality by Headquarters Marine Corps personnel, it was used as a model for other Marine Corps Activity Programs throughout the nation.

In addition, he supervised an informal Base-wide Inspection/Education Program for command and unit level personnel involved with items governed by State and Federal Regulations promulgated under The Resource Conservation and Recovery Act (RCRA). When other military installations in North Carolina with a similar program were receiving citation fines and severe adverse publicity, Camp Lejeune satisfied a rigorous program review by state inspectors on 25 September 1984.

Hazardous Waste Regulations issued in response to the RCRA requirements include requests for permitting hazardous waste treatment and storage disposal operations. Procedures for obtaining a permit are rigorous. As a result of Mr. Sharpe's efforts and contributions, Marine Corps Base, Camp Lejeune is one of the first two Marine Corps activities to receive a final Hazardous Waste Permit.

Mr. Jolly, formerly an Environmental Protection Specialist, GS-9, Natural Resources Division, was presented a Special Act or Service award in the amount of $500 for his contribution to the Base Hazardous Material/Waste Program aboard Marine Corps Base.

By providing excellent on-site training to Facilities Operators, Mr. Jolly effectively enabled the cognizant units to improve their abilities to properly manage hazardous waste. His efforts led to the publishing of a Base-wide message which provided appropriate action to address specific problems regarding proper segregation and labeling of hazardous waste. The modified instructions were particularly important to the various tenants at Marine Corps Air Station (H), New River, because of the commom usage of regulated toxic chemicals.

His initiative and persistent follow-up led to prompt correction of discrepancies regarding management of hazardous waste. His promptness in effecting corrective action enabled the Command to maintain compliance with State and Federal Regulations promulgated under The Resource Conservation and Recovery Act. The corrective action resulted in the Command satisfying a rigorous program review conducted on 25 September 1984 by inspectors from the State Solid and Hazardous Waste Branch.

* * * * * * *

EXCELLENT INSTALLATIONS -- THE FOUNDATION OF DEFENSE

INTERNAL STAFFING ANNOUNCEMENTS
(For Civil Service Employees)

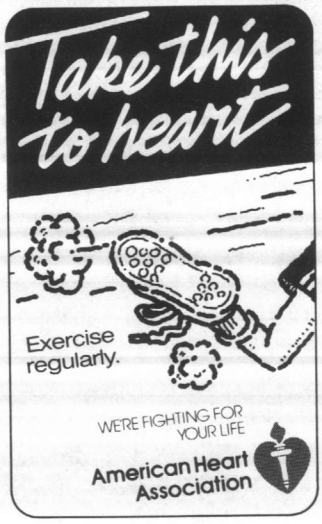
Open Continuously Until 31 December 1985

Clerk-Stenographer, GS-3 and Clerk-Typist GS-3, Ann. No. 9-85
Clerk-Stenographer, GS-4, Ann. No. 10-85
Clerk, GS-2 and Clerk, GS-3, Ann. No. 11-85
Licensed Practical Nurse, GS-3 TARGET GS-4, Ann. No. 12-85
Food Service Worker, WG-2, WG-3 and WG-4, Ann. No. 19-85
Laborer WG-2 and WG-3, Custodial Worker, WG-2, Ann. No. 22-85
Helper, (All Options), WG-5, Ann. No. 26-85
Practical Nurse (Vocational), GS-3 TARGET GS-4, Practical Nurse (Vocational), GS-3, Ann. No. 41-85

Open for Specified Period

Supply Technician, GS-7, Ann. No. 73-85, closes 31 May 1985

* * * * * * *



* * * * * * *

PERFORMANCE CASH AWARDS MUST BE ON TIME

Supervisors are reminded that BO 12451.1H requires submission of recommendations for Sustained Superior Performance awards and Quality Step Increases no later than 60 calendar days after the end of the period upon which the recommendations are based.

Late award recommendations will be returned without processing.

* * * * * * *

F L A G D A Y

14 June 1985

The Stars and Stripes was created on 14 June 1777 when the Continental Congress resolved: "That the flag of the thirteen United States be thirteen stripes, alternate red and white; that the union be thirteen stars, white in a blue field, representing a new constellation." Join other Americans across the nation -- display your American flag on Flag Day.

OPEN ENROLLMENT FOR LIFE INSURANCE

The Office of Personnel Management (OPM) has now announced that the open enrollment period for life insurance will be 1 June through 1 July instead of 1-30 June 1985. Elections will be effective the first pay period in August. Employees otherwise eligible to participate in Federal Employees' Group Life Insurance (FEGLI) will have the opportunity to add to their existing coverages or to enroll if they had previously waived coverage. Only those employees who wish to change their participation or levels of coverage will need to complete an election form. Previous waivers or declinations will not be cancelled unless the employee submits a new election.

Distribution of the FEGLI 85 Open Enrollment booklet (FE-74-A) has been made to permanent civil service employees. If, after examining this booklet you desire to make a change, you should come to the Employee Relations Branch, Civilian Personnel Division, Building 33 during the open enrollment period to fill out the necessary form.

* * * * * * *

CODE OF CONDUCT

One of the most important parts of the Civil Service Reform Act (CSRA) is the code of employee conduct and responsibilities. Federal officials may not:

--discriminate for or against any employee/applicant on the basis of race, color, religion, sex, age, national origin, marital status, political affiliation or handicapping condition;

--ask for or consider recommendations about an employee/applicant unless the person giving it has personal knowledge of the employee/applicant's work performance, ability, or general qualifications;

--force any employee/applicant to engage in political activity, or "punish" the person for refusing to participate in political activity;

--interfere with any person's right to compete for employment;

--influence a person to withdraw from competition to improve or injure the opportunities of any other person;

--grant any employee/applicant preference not authorized by law, rule or regulation (including defining the manner of competition or the requirements for any position) to improve or injure the opportunities of others;

--give or encourage giving any relative an appointment, employment, promotion or advancement;

--take, or fail to take a personnel action to "punish" any employee/applicant for disclosing violations of laws, rules or regulations;

--take or fail to take, a personnel action because an employee/applicant used their appeal rights;

--discriminate for or against an employee/applicant on the basis of conduct which does not affect the employee's or another person's job performance.

BENEFICIAL SUGGESTION WINNERS

Mr. Maynard G. A. Riddle, Civilian Personnel Division, received a cash award of $428 for his suggestion to use a telephone answering service at the Outside Recruiting Branch, Midway Park. He also received recognition for his suggestion on placing traffic cones at a safe distance from the Military Police Gate House, Main Gate, Marine Corps Base, Camp Lejeune. This enables vehicles to cross through the cones easier during morning rush hour traffic. This suggestion was not eligible for a cash award.

Mr. Cameron J. Quintana, Naval Hospital, received a $135 cash award for his suggestion on saving electrical energy. Mr. Quintana suggested to block off certain lights in the machine/boiler room of Facilities Management Department with wall switches so they could be turned off when not in use, thus reducing the electrical load and saving energy. The award was based on first year net tangible savings of $1,354.09.

Ms. Ruth A. Shipley, Naval Hospital, was given a cash award of $96 for her suggestion to stock Stylex syringes, individually wrapped, for use with Pitocin Induction Kits to start induction on pregnant patients. Syringes that come with the original kits were sticking after being filled a few times. New kits had to be opened in order to get another syringe for use. The award was based on first year net tangible savings of $966.

Mr. Donnie Collins, Logistics Department, received a cash award of $72 for adoption of his suggestion. Mr. Collins suggested a modification of the brake pedal on DeLorean Warehouse Tractors, enabling the operator to apply more downward pressure when braking, thereby enhancing the brake system.

Mr. William R. Faulk, Base Maintenance Division, was presented cash awards totaling $161 for adoption of four individual suggestions. He received $53 for his suggestion to use flash back protectors on acetylene tanks to prevent explosion of the tanks when in use. A $47 award was given for Mr. Faulk's suggestion to use a spreader bar for repairing trash containers enabling them to be manipulated easier, thereby preventing possible damage to the containers or injury to personnel. Mr. Faulk received $36 for his suggestion that the security metal pipe rack between Buildings 1301 and 1303 be turned to allow easier access during loading and unloading of vehicles. Additionally, he was presented a $25 cash award for suggesting that an anti-seize compound be used on sliding doors to prevent corrosion, make adjustments easier, and extend the life of the doors. Cash awards on all four suggestions were based on intangible benefits.

Ms. Vicki S. Evans, Provost Marshal's Office, was given a cash award of $50 for her suggestion to use a card file cross-reference system for Incident Complaint Reports. The adoption of this suggestion reduced the amount of materials needed in maintaining records. The award was based on intangible benefits.

Mr. Martin D. Sosa, Base Maintenance Division, received a cash award of $50 for his suggestion on control of the hot water circulation pump. He suggested the pump starter with motor overload protection be interconnected with existing thermostat controls in Building 14, Hadnot Point. The controller will then cut off the hot water circulation pump and steam supply to the convertor when the weather temperature rises. The award was based on intangible benefits.

Mr. Linton C. Greene, Jr., Civilian Personnel Division, was presented a cash award of $25 for his suggestion. Mr. Greene suggested a modification to the Table of Allowances for Publications and Directives to reflect two sets of the Military Occupational Specialties (MOS) Manual of all branches of the armed services. This enables staffing specialists to more easily evaluate applications of former military personnel. The award was based on intangible benefits.

Mr. Earnest Hill, Naval Hospital, received a cash award of $25 for his suggestion to install a safety hook lock on the oven doors in the Food Management Department to keep the doors from swinging into the nearby office door, preventing possible injury to personnel entering and leaving the office.

Mr. James H. Parker, Naval Hospital, was given recognition for his suggestion that a rubber stamp be used to indicate needed supplies on paper bags in the Food Management Department instead of writing the information on the bags; thus, saving time which can be utilized performing other essential duties. The award was not eligible for a cash award.

Mr. Bobby E. Pearson, Naval Hospital, received recognition for his suggestion to change the emergency exit door in the Central Sterile Supply Decontamination area since the existing exit was partially blocked by storage of supplies. The award was not eligible for a cash award.

Our sincere congratulations to all suggesters who also received a "Beneficial Suggestion Winner" coffee mug for each adopted suggestion.

* * * * * * *

CLASSIFICATION APPEALS

The classification system is not perfect, and as long as human beings are involved, there will always be the chance of human error. If such an error is made, the appeal procedure -- as a safety valve -- provides a means of bringing the error forward for correction. An appeal must be predicated upon a current and accurate description of duties and responsibilities, wherein an employee truly believes that the classification is not correct or consistent with governing standards or guidelines.

Specific procedures for the preparation and processing of appeals for General Schedule employees are in Base Order 12511.1C (enclosure (4)) and for Federal Wage System employees, Base Order 12532.2B (enclosure (4)). Advice and assistance can be obtained from the Classification Branch, telephone extension 1532.

* * * * * * *

"To content yourself with being a 'Slave to Routine' is merely to court disaster." --J. C. Penny

ASBESTOS

Over 800,000 tons of asbestos are mined and processed each year to make over 3,000 different products in the United States. Past and present uses of asbestos are: Insulative covering for pipes and surfaces, coatings for cables and electric wires, in paints, cement, floor and ceiling tiles, sealants, clutch facings, brake linings, and wallboards.

Health hazards from asbestos dust have been recognized among workers heavily exposed in trades such as shipbuilding, asbestos mining, installation of insulation in the construction of buildings, and other trades.

Since the early 1940's, over 11 million workers may have been exposed to concentrations of asbestos dust, including 4.5 million shipyard workers during World War II. Asbestos exposure may cause asbestosis and increase the risk of developing cancer of the lung, esophagus, stomach, colon, and rectum. Asbestosis is a chronic lung ailment which produces shortness of breath and lung damage. This disease, as well as asbestos-related cancer can take as many as 20 to 40 years to develop. While asbestos itself can increase the risk of lung cancer, an asbestos worker who smokes has a 90% greater risk of developing asbestosis.

Several types of personal protective equipment against accidental exposure to asbestos are available to protect workers. Established procedures for working with asbestos have been developed and should be followed. Special asbestos waste dumpsters are provided for the collection of asbestos waste and a state approved asbestos dump site is located aboard Camp Lejeune.

To ensure the health of all personnel, both military and civil service, the Occupational and Preventive Medicine Department maintains the Asbestos Medical Surveillance Program (AMSP). The AMSP consists of a periodic medical screening examination which includes an occupational work history, pulmonary function test, chest x-ray, and physical examination. To be placed into this program, the individual's degree of exposure must be determined. If it is determined that the exposure was not on a regular basis or that the exposure was below established standards, the individual is not placed into the program. The frequency of follow-up examinations is determined by the Medical Officer at the Occupational Health Clinic during the physical examination.

If you should have any questions concerning the Asbestos Medical Surveillance Program, contact the Program Manager at extension 1930.

* * * * * * *

GUIDE FOR PERSONAL SAFETY DURING THUNDERSTORMS

When a thunderstorm is in the immediate vicinity, seek shelter in places which are protection from lightning, such as:

1. Large metal or metal-frame buildings
2. Dwellings or other buildings which are protected against lightning
3. Large unprotected buildings
4. Automobiles and buses with metal tops and bodies
5. House trailers with metal bodies
6. Enclosed metal boats or ships
7. Boats which are protected against lightning
8. City streets which are shielded by nearby buildings
9. Dense woods -- avoid isolated trees
10. Depressed areas -- avoid hilltops and high high places

Avoid dangerous areas, such as:

1. Automobiles (non-metal top or open)
2. Tractors and other machinery operated in open fields
3. Golf carts, scooters, motorcycles and bicycles
4. Open boats
5. Open fields, athletic fields and golf courses
6. Swimming pools, lakes and seashores
7. Wire fences, clotheslines, overhead wires and railroad tracks
8. Isolated trees
9. Hilltops and wide open spaces
10. Unprotected buildings and shelters in high areas

TREAT LIGHTNING WITH GREAT RESPECT AND CAUTION

* * * * * * *

PAYROLL SERVICES AVAILABLE

If you are not already enjoying the time-saving and convenient services available to you through the Civil Payroll Office and would like to, call the Civilian Personnel Division, extension 1458 or 1579, to request the necessary forms in order that you can. The appropriate forms will be forwarded to you.

What services are available? First, the payroll office will deposit your pay check in your checking account for you, thereby saving you time (plus the cost of the gas it takes to get there). Second, the payroll office will deduct from your pay an amount specified by you and forward it to your savings account, thereby assisting you to save regularly. And, third, the payroll office will deduct a specified amount from your pay to enable you to buy, on a continuous basis, U. S. Savings Bonds, which currently accrue no less than 7 1/2 percent interest when held to maturity.

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

6280
MAIN

DATE: 08 JUL 1985

FROM: Base Maintenance Officer

TO: Assistant Chief of Staff, Facilities (Attn: Mr. Alexander)

SUBJ: STATUS OF ASBESTOS JOB ORDERS

Encl: (1) Status of Asbestos Job Orders as of 5 July 1985

1. The enclosure is forwarded for your information.

W. M. RICE

☆U.S. GOVERNMENT PRINTING OFFICE: 1985 — 505-012/18049

RECEIVED
9 JUL 1985

Facility	JON	Status/Comments	5 July 1985
M-513	3010	In shop	
AS-114	3016	Awaiting to be scheduled	
M-415	3022	Awaiting materials	
M-620	3035	Awaiting to be scheduled	
M-612	3038	Awaiting to be scheduled	
M-402	3042	Awaiting to be scheduled	
1706	3083	Awaiting to be scheduled	
117	3086	Awaiting to be scheduled	
901	3103	Awaiting to be scheduled	
M-205	3277	Awaiting to be scheduled	
M-512	3420	Awaiting to be scheduled	
BB-5	3511	Awaiting to be scheduled	
2600	3513	Awaiting to be scheduled	
PT-4	3859	Completed 05/17/85	
TC-744	3948	At work	
37	4134	Awaiting materials	
115	4178	Awaiting to be scheduled	
300	4179	Awaiting to be scheduled	
401	4180	In shop	
AS-236	4197	Awaiting to be scheduled	
Steam Pits	4490	In shop	
M-408	4561	Awaiting to be scheduled	
M-314	4562	Completed 06/07/85	
236	4581	Awaiting materials	
20	4595	Awaiting materials	
M-319	4597	Completed 06/14/85	
1100	4699	Awaiting materials	
1301	5109	Awaiting to be scheduled	
RR-8	6008	Awaiting materials	
M-601	6019	In shop (work to start 07/09/85)	

Encl (1)

OPNAV 5216/144B (Rev. 8-81)
S/N 0107-LF-052-2322

Found in Fac Mgt O
A 6/4

DEPARTMENT OF THE NAVY
Memorandum

DATE: 3/29/85

FROM: Env Engr

TO: FAC MGT O

SUBJ: Asbestos Policies ; Command Responsibilities

Encl (1) OPNAVINST 5100.23 B

(2) Proposed B.O. P5101.20

1. Encl (1) is not applicable to Camp Lejeune (Per para 1005, Pg 1-3).
2. Encl (2) proposed assignment of Responsibility to NAVHOSP; they declined.

- No established policies (@ HQ MC, or at MCB) in effect now.
- CG, MCB is ultimately responsible for OSHA compliance.

V/R

* U.S. GOVERNMENT PRINTING OFFICE: 1983-605-010:8686

3/2-4/83

Eng Engr

Pete Meier

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
OPNAVINST 5100.23B
OP-45
31 August 1983

OPNAV INSTRUCTION 5100.23B

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Navy Occupational Safety and Health (NAVOSH) Program Manual

Ref: (a) SECNAVINST 5100.10E (NOTAL)
(b) OPNAVINST 5100.8F

Encl: (1) Navy Occupational Safety and Health Program Manual

1. Purpose

a. To reaffirm the Navy Occupational Safety and Health (NAVOSH) Program for all Navy personnel as required by reference (a).

b. To implement the following Department of Defense (DOD) instructions:

(1) DODI 1000.18, of 29 June 1976, Federal and State Occupational Safety and Health Inspections at Contractor Workplaces on DOD Installations (NOTAL)

(2) DODI 6050.5, of 31 May 1979, DOD Hazardous Materials Information System Procedures (NOTAL)

(3) DODI 6055.1, of 30 December 1981, DOD Occupational Safety and Health Program (NOTAL)

(4) DODI 6055.2, of 3 May 1978, Personal Protective Equipment (NOTAL)

(5) DODI 6055.3, of 8 June 1978, Hearing Conservation (NOTAL)

(6) DODI 6055.5, of 30 April 1980, Industrial Hygiene and Occupational Health (NOTAL)

2. Cancellation. OPNAVINSTs 5100.14, 5100.23A, 5103.1, 6260.1B, and 6260.2.

3. Discussion

a. References (a) and (b) contain policy statements and outline responsibilities for the implementation of the total Navy Safety and Occupational Health (S&OH) Program. The Navy S&OH Program encompasses all safety disciplines such as aviation safety, weapons/explosives safety, off-duty safety (recreation, public, and traffic), and occupational safety as well as occupational health. As the title implies, the NAVOSH Program specifically

b. At least annual inspections of all workplaces by qualified OSH inspectors. Forces afloat workplace inspections will require Immediate Superior in Command (ISIC) assistance in scheduling and obtaining qualified inspectors.

c. Prompt abatement of identified hazards. To the maximum extent practicable, all hazards shall be eliminated or minimized through engineering or administrative controls. Where engineering or administrative controls are not feasible, appropriate personal protective equipment shall be provided at government expense. Where hazard abatement resources are limited, priorities shall be assigned to take care of the most serious problems first. Appropriate notices shall be posted to warn employees of unabated serious hazards and to provide interim protective measures.

d. Procedures for all personnel to report suspected hazards to their supervisors and/or safety and health officials without fear of reprisal. Allegations of reprisal for such participation shall be filed in accordance with existing grievance procedures.

e. Appropriate OSH training for safety and health officials, all supervisory personnel and employees. Applicable OSH requirements shall be integrated into training programs and technical and tactical publications.

f. Procedures to review, in advance of construction/procurement, the design of facilities, systems, and subsystems to ensure that OSH hazards are eliminated or controlled throughout the life cycle.

g. Thorough mishap investigations and a comprehensive OSH management information system which provides all OSH data required by higher authority.

h. Comprehensive occupational health surveillance programs, both medicine and industrial hygiene, implemented by qualified personnel.

i. Procedures to recognize superior or deficient OSH performance. Performance evaluations shall reflect personal accountability in this respect, consistent with the duties of the position, with appropriate recognition of superior performance, and conversely, adverse notation or administrative action, as appropriate, for deficient performance.

1005. Applicability

a. The provisions of this manual apply to all Navy civilian and military personnel and operations ashore and afloat worldwide except in those areas wherein responsibility for such a program rests with the Commandant of the Marine Corps. Exceptions or specific limitations are also made, as required, for military unique equipment, systems, and operations including specific delineation of applicable provisions to forces afloat (see 1005.d); for

conditions governed by other statutory authorities; and for conditions governed by international agreements overseas. These provisions apply to the Navy's government-owned, contractor-operated facilities only if they involve: (1) the occupational safety and health of Navy personnel; (2) situations in which the United States traditionally, by admiralty law or contract, is liable for contractor employee injuries, e.g., Military Sealift Command; and (3) with respect to the contractor's employees, only those specific occupational safety and health matters over which DOD exercises statutory authority in accordance with the provisions of section B3(b) of reference 1-2. In all other matters affecting the safety and health of the contractor's employees, the contractor is responsible directly to the DOL's Occupational Safety and Health Administration (OSHA) or appropriate state office where OSHA has approved a state plan.

b. Application of this manual shall be consistent with the provisions of reference 1-4, other provisions of law providing for collective bargaining agreements and procedures, and any agreements entered into pursuant to such provisions. Matters of otficial leave for employee representatives involved in activities pursuant to this manual shall be determined according to procedures under reference 1-4, or applicable collective bargaining agreements.

R) c. Under the statutory authority of the Atomic Energy Act of 1954, Section 309(a) of the Department of Energy Organization Act, and Executive Order 12344 of February 1, 1982, the Director, Naval Nuclear Propulsion Program is responsible for the safety of reactors and associated naval nuclear propulsion plants, and the control of radiation and radioactivity associated with naval nuclear propulsion plant activities, including prescribing and enforcing standards and regulations for these areas as they affect the environment and the safety and health of workers, operators, and the general public. Accordingly, for the above areas the Naval Nuclear Propulsion Program is exempt from the requirements of this manual. However, for areas other than those described above, such as asbestos controls, machine guarding, etc., the requirements of this manual apply to Naval Nuclear Propulsion Program activities.

d. Forces Afloat Applicability. While the general concepts and provisions of this manual apply to forces afloat, specific limitations must be made for military unique equipment, systems, and operations. Because of the inherent differences in the organization and operating environment of a surface ship or submarine in contrast to a shore activity involving such areas chain of command relationships, required councils or committees, or training and hazard abatement procedures, it is necessary to identify those provisions of this manual where requirement differences exist between forces afloat and shore activities. This has been accomplished by use of annotations or exclusionary notations. This differentiation will also separate echelon two and three command requirements from those for forces afloat. In no case will provisions applying to forces afloat be lessened through special application.

CHAPTER 17

ASBESTOS

17001. References

References mentioned appear at the end of this chapter.

17002. Definition of Terms

See Glossary for the definitions of special terms used in this chapter.

17003. Discussion

a. The objective of this chapter is to assist Navy commands in the development of an effective control program for the use, removal, and disposal of asbestos materials in both ashore and afloat activities.

b. Asbestos is a general term applied to a variety of naturally occurring mineral silicates which are separable into fibers. Although there are many asbestos minerals, there are only six forms with specific attributes and characteristics of commercial importance. They are chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite. Asbestos is generally a fibrous material which is incombustible and possesses high tensile strength, good thermal and electrical insulating properties, and moderate to good chemical resistance. Because of these characteristics, asbestos has been employed in many uses. These uses include such diversified applications as roofing and flooring products; friction products, i.e., brake and clutch facing; reinforcing material in cement, pipe and sheet materials as well as the thickening agent in some paints; and thermal and acoustical insulations. For many years, the Navy used asbestos as primary insulation (lagging) material for high temperature machinery, boilers and piping aboard ship and in the stationary machinery and piping of boiler plants in shore facilities.

c. Asbestos is recognized as a major health hazard. Inhalation of asbestos fibers has been demonstrated to cause at least two distinct disease states. The use of the term "asbestosis" in a generic sense for all asbestos-associated disorders (including pleural plaques) is imprecise and confusing. Asbestosis is a progressively restrictive fibrosis of the lung and is recognized as a classic disabling or even fatal occupational disease. Asbestos has also been found to be a causal factor in the development of carcinoma of the lung, and of malignant mesothelioma; it is also suspected of causing cancer of the gastro-intestinal tract. Mesothelioma, a rare malignant tumor of the lung membrane which lines the chest and abdominal cavity, is occurring with increasing frequency in workers with exposure to asbestos. When coupled with cigarette smoking, the risk is increased dramatically.

d. The extended latency period of asbestos related disease, lack of adequate past exposure data, effect of other carcinogens, and the variability of human responses make absolute safe level determinations difficult. Latency periods of 20-40 years between the first asbestos exposure and the appearance of a malignancy have been observed.

e. In recognizing the serious health hazards posed by asbestos exposure, the Navy has adopted stringent occupational health and environmental protection standards for the control of asbestos. The standards and controls discussed in this chapter shall be strictly enforced and adhered to by all Navy personnel at both ashore and afloat activities.

17004. Permissible Exposure Limits (PEL's)

R) a. "Time-Weighted Average (TWA)". The 8-hour TWA airborne concentration of asbestos fibers to which personnel may be exposed shall not exceed 0.5 fibers per cubic centimeter of air (0.5 f/cc). Fibers are defined as rod shaped particles having a length-to-diameter ratio of three (or more) to one, and longer than 5 micrometers.

b. "Ceiling Limit". Personnel shall not be exposed at any time to airborne concentrations of asbestos in excess of ten fibers per cubic centimeter of air (10 f/cc). Ceiling limit values shall be based on a 15-minute sample.

c. Personnel Notification. Any individual found to have been exposed at any time during the course of their Navy employment to airborne concentrations of asbestos fibers in excess of either PEL shall be notified in writing of the exposure as soon as practicable but not later than 5 days after the finding. The individual shall also be notified in a timely manner of the corrective action being taken.

17005. Control of Asbestos in the Workplace Environment

As discussed in Chapter 5, the basic principles for controlling hazards in the occupational environment include substitution of less hazardous materials, engineering controls (e.g., ventilation), administrative controls, and the use of personal protective equipment. All of these principles are discussed in this section.

a. General Workplace Control Practices

R) (1) Asbestos-free substitute materials, approved under the technical management of the cognizant headquarters activity, shall be used in place of asbestos-containing materials. The replacement or substitution of friable asbestos-containing materials, such as shipboard asbestos thermal insulation and sprayed on asbestos, shall be of primary concern because they are loosely bound and may be easily crumbled or pulverized.

(2) As practicable, asbestos shall be handled, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the PEL's.

(3) Procedures shall be established to minimize the accumulation of asbestos laden waste dust or scrap materials. Specific procedures for containment of dust and handling of asbestos-containing materials shall be instituted so that the possibility of secondary air contamination is minimized. Clean-up procedures based on wetting the material and use of filtered vacuum cleaning for removal of debris shall be employed whenever practicable.

(4) Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably forseeable use, handling, storage, processing, disposal, or transportation, airborne concentrations of asbestos fibers in excess of the PEL's shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers and labeled in accordance with paragraph 17005e. Transportation of asbestos waste shall be conducted in a manner that does not release airborne fibers. Containers shall be distinctively color coded to ensure easy recognition.

(5) Care shall be taken to minimize the effects of meteorological conditions, such as wind, to control the spread/increase of airborne concentrations of asbestos. Enclosures or temporary curtains may be used for this purpose.

(6) To minimize exposure potential, asbestos removal operations shall, to the extent feasible, be performed during the second or third shift or on weekends or holidays.

(7) The disposal of asbestos waste shall be in accordance with procedures outined in paragraph 17006.

b. Ventilation. Local exhaust ventilation is frequently required to ensure that atmospheric levels of asbestos do not exceed the PELs. General requirements for the design and use of ventilation to reduce exposures are listed below. Specific guidance for each asbestos operation shall be obtained from the cognizant industrial hygienist.

(1) To the extent feasible, fixed local exhaust ventilation connected to high efficiency particulate air (HEPA) filters shall be provided at the point of airborne fiber generation. Capture velocities must be high enough to entrain generated fibers under the specific environmental conditions. Duct transport velocities must be high enough to prevent accumulation of fibers in the duct, and clean-out points must be provided for necessary periodic maintenance. Specific equipment design parameters (such as requirements for static pressure monitors), as well as protective clothing/respiratory protection and system servicing procedures for each operation, must be provided or approved by the cognizant industrial hygienist.

wearing a respirator if one was required for the task) using a HEPA filter vacuum approved by the industrial hygienist.

(3) Shower facilities shall be located between the "clean" and "dirty" change rooms. Change rooms will have separate clothing lockers for each employee to prevent contamination of street clothes. (R

(4) Laundering of asbestos contaminated clothing shall be done so as to prevent release of airborne asbestos fibers in excess of the PEL's. Contracts governing the laundering of asbestos-contaminated clothing shall specifically require that contractors comply with the precautions specified in 29 CFR 1910.1001 (d)(4)(iii). Asbestos-contaminated clothing shall be transported in sealed impermeable bags in containers to which are affixed the standard "caution label".

Note 1: The industrial hygienist shall be consulted regarding the adequacy of and requirements for protective clothing.

Note 2: The proper use of protective clothing requires that all openings be closed and that garments fit snugly about the neck, wrists, and ankles. Accordingly, the wrist and ankle junctions, as well as the collar opening on the outer disposable coveralls, etc., shall be taped, as necessary, to prevent contamination of skin and underclothing without restricting physical movement.

d. Respiratory Protection

(1) Engineering control measures shall be employed to control and contain airborne asbestos fibers to the lowest feasible level. Compliance with PELs shall not be achieved by the use of respirators except under the following conditions:

(a) During the time period necessary to commence engineering control measures;

(b) In work situations in which the control methods prescribed are not technically feasible, or feasible to an extent insufficient to reduce the airborne concentration of asbestos fibers below the maximum permissible limit;

(c) During emergencies.

(2) A respirator program shall be established as described in reference 17-5.

(3) Where a respirator is required, it shall be selected from those approved for protection against exposure to asbestos by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA). (R

(4) Reusable or disposable single-use air purifying respirators shall be NIOSH/MSHA approved for protection against pneumoconiosis and fibrosis producing dusts, including asbestos. They will be capable of reducing the concentrations of respirable airborne asbestos fibers below the PEL when either the ceiling or the 8-hour time weighted average (TWA) concentration of asbestos fibers is reasonably expected to exceed no more than 10 times the PEL, based on data obtained in accordance with paragraph 17008.

(5) A full facepiece powered air purifying respirator, or a powered air purifying respirator shall be used to reduce the concentration of respirable airborne asbestos fibers in the respirator below the PEL's when either the ceiling or the 8-hour time-weighted average concentration of asbestos fibers can be reasonably expected to exceed 10 times, but not 100 times the limit, based on data obtained in accordance with paragraph 17008.

(6) A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentration of respirable airborne asbestos fibers in the respirator below the PEL's when either the ceiling or 8-hour time-weighted average airborne concentration of asbestos fibers can be reasonably expected to exceed 100 times the limit, based on data obtained in accordance with paragraph 17008.

(7) When data obtained in accordance with paragraph 17008 is not available or is not relevant to a specific operation, a type "C" continuous flow or pressure-demand supplied air respirator shall be used to assure adequate protection.

(8) Personnel engaged in the removal ("rip-out"), or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings, shall be provided with a type "C" continuous flow or pressure demand, supplied air respirator.

(9) Breathing air or sources of breathing air for self-contained breathing apparatus and supplied-air respirators must conform to the most stringent of requirements found in the following documents: 29 CFR 1910.134(d); Federal Specification BB-A-1034a of 21 June 1968, with Amendment 1 of 15 December 1970.

(10) A Navy employee shall not be assigned to tasks requiring the use of respirators if, based upon his/her most recent medical examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other personnel will be impaired by his/her use of a respirator.

e. Caution Signs and Labels

R) (1) Caution signs (OPNAV 6260/2), which comply with reference 17-6, shall be provided and displayed at each location where airborne concentrations of asbestos fibers may exceed the PEL (either the TWA or ceiling limit). Signs

shall be posted at such a distance from such a location so that personnel may read the signs and take necessary steps before entering the area marked by the signs. A listing of required protective equipment may be attached to or be a part of the sign.

(2) Caution labels shall be affixed to containers of raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers if, in the foreseeable use, handling, storage, disposal, processing or transportation of those items, levels of airborne asbestos could be produced which might constitute a threat to health. The caution labels shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers

Avoid Creating Dust

Breathing Asbestos Dust May Cause

Serious Bodily Harm

17006. Disposal Procedures

a. For guidance concerning specific health-related precautions to be used for specific operations, consult the cognizant industrial hygienist.

b. In preparation for disposal, asbestos wastes must be adequately wetted, when appropriate, prior to bagging in heavy-duty plastic bags or other suitable impermeable containers. All bags or containers must be provided with standard asbestos caution labels. Asbestos waste containers such as bags, trash cans, dumpsters, etc., shall be distinctively color-coded the same color to assure easy recognition. Dumpsters shall be labeled "ASBESTOS WASTE ONLY" or otherwise marked in accordance with paragraph 17005e. Care must be exercised in order to prevent bags and other containers from rupturing when being moved to a dumpster or other suitable vehicle for transport to a proper disposal site.

c. Asbestos materials, properly contained and disposed of in an approved sanitary landfill that is operated in accordance with 40 CFR 241 guidelines, should not pose a hazard to human health or the environment.* Specific

*Note: Some states may require large quantities of asbestos materials to be disposed of in specially designated landfills. Consult appropriate state regulations prior to disposal.

locations within landfills used for the disposal of asbestos materials shall be recorded by the landfill operators with a copy retained by the cognizant naval facility for future reference. This practice should reduce the possibility of future unearthing and rupturing of disposal containers.

17007. Training and Education

All Navy employees currently exposed to asbestos, exceeding the Medical Surveillance Action Level (see paragraph 17009c), and their supervisors, shall receive a detailed indoctrination and periodic refresher instruction at least semi-annually. The initial indoctrination shall include the following information:

a. The hazards of asbestos;

b. Safe handling and disposal procedures;

c. Proper use of protective equipment and clothing;

d. Association of cigarette smoking and asbestos related disease; and

e. Procedures for reporting actual or suspected exposure to asbestos.

17008. Industrial Hygiene Surveillance

R) a. Workplace monitoring plan. A workplace monitoring plan shall be established to characterize exposures for every employee occupationally exposed to asbestos. In this regard both personal (employee) air sampling and environmental (area) monitoring as necessary, shall be performed. Personal air samples shall be collected in the breathing zone of the employee and in accordance with NIOSH Physical and Chemical Analytical Method (P&CAM) 239 or the new NIOSH Method 7400 as noted in paragraph d. The employee or designated employee representative shall be given the opportunity to observe sampling or monitoring. Within a class or category of similar operations, sampling shall be of such frequency and pattern as to accurately and reproducibly represent the airborne levels produced by a typical operation within the class or category. Sampling of all areas where repetitious asbestos work is performed shall be at intervals of six (6) months or less, to verify that the work site or operation has remained in the same class or category. Each non-repetitious asbestos removal operation will be sampled at least once to determine the maximum exposure potential of that operation. Each asbestos removal operation aboard ship will require at least one air sample to be taken upon completion of the operation to verify that clean-up operations were effective and that the area is safe for personnel to enter without respiratory protective equipment.

b. Method of Sampling. Samples shall be collected on cellulose membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken to determine both the TWA and peak concentration of asbestos fibers.

c. Method of Measurement. All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400-450 magnification, using phase contrast illumination, with sample mounted in a

high viscosity solution of membrane filter material. If the material which is suspected of being the source of the airborne fibers is known to contain asbestos, then all airborne fibers (having an aspect ratio of 3:1 and longer than 5 micrometers) are to be counted as asbestos. Persons counting filters shall be judged proficient by successful participation in the Proficiency Analytical Testing (PAT) program administered by the National Institute for Occupational Safety and Health (NIOSH). Only phase contrast microscopes especially set up for asbestos counting shall be utilized. Persons performing dispersion staining to differentiate asbestos from non-asbestos fibers shall be specifically trained in this technique. Their proficiency shall be verified with standard laboratory quality control techniques approved by the Navy Environmental Health Center (NAVENVIRHLTHCEN).

d. Sampling and Measurement Validity/Reliability. Sampling and measurement shall be conducted under the technical direction of the cognizant industrial hygienist. Sampling and analytical methods for airborne asbestos fibers shall conform to NIOSH P&CAM 239 or the new NIOSH Method 7400. (R

e. Records. All environmental and personnel air sampling records shall be retained for a period of 50 years following termination of service of employment of the individual to whom the records refer. Each individual, currently or previously employed by the Department of the Navy, or any other person he or she may designate, shall have access to all such records within 15 days of the request.

17009. Asbestos Medical Surveillance Program (AMSP)

a. General. This program consists of a periodic medical screening examination, which may include special purpose histories, physical examinations and laboratory tests, directed at detecting early changes in specific organ systems which have been identified with asbestos disease. Those individuals who, because of the nature of their job must work with, or be in the vicinity of operations which generate airborne asbestos, and who meet the requirements of paragraph 17009b and c shall be included in the medical surveillance program; inclusion is not based solely on the determination that an individual has been overexposed.

b. Criteria for Inclusion of Personnel in the AMSP

(1) Inclusion of any individual in the AMSP is determined by his or her degree of exposure to asbestos during the course of the individual's Navy employment. Inclusion of a particular individual in the AMSP is required if the exposure criteria in paragraph 17009c are reached or exceeded.

(2) For past exposures to asbestos, medical personnel attempting to determine whether to place an individual in the AMSP must be guided by the exposure history in the absence of more definitive exposure records. A history of participation in any operation where visible asbestos dust was present, including but not limited to rip-outs, shall be considered to have

been an exposure in excess of the ceiling value. In addition, individuals working in areas where the asbestos concentration did not equal or exceed the MSAL during the past year, but who believe they have been exposed to undetermined levels of asbestos fibers at some time during the course of their Navy employment, shall complete a medical surveillance questionnaire (Appendix 17-A). Based on the review of this questionnaire, individuals shall be placed in the AMSP if it can be reasonably concluded that their exposures could have been at or above the MSAL. The placement of personnel in the AMSP is based on a history of exposure or potential exposure at or above the MSAL as judged by competent medical personnel. Once placed in the AMSP, using the above procedures and criteria, the individual shall remain in the AMSP for the duration of his or her Navy employment.

c. Medical Surveillance Action Level (MSAL). The MSAL is the airborne concentration of asbestos fibers used to qualify an employee for placement in the AMSP. This MSAL has three separate and distinct criteria designed to assure that all individuals, currently or previously exposed, will be included in the AMSP. The MSAL is defined to include any individual, who because of Navy employment is:

(1) Required to enter or work in areas which could contain an 8-hour time-weighted average (TWA) concentration of asbestos at or above 0.1 fibers/cubic centimeter (f/cc), or

(2) Required to enter or work on a regular basis in areas which could contain concentrations of asbestos at or above 0.5 f/cc for any length of time ("on a regular basis" is defined as 15 separate days in any quarter during a calendar year or 45 days per year), or

(3) Exposed at any time, for any length of time, to airborne concentrations of asbestos at or above the "ceiling limit" of 10.0 f/cc.

The aforementioned term "Medical Surveillance Action Level" is defined and used only for the purpose spelled out specifically in this instruction and to identify those individuals who will be included in the Asbestos Medical Surveillance Program. The MSAL criteria are summarized as follows:

Concentration (f/cc)	Duration	Frequency
Equal to or greater than 0.1	8-hour TWA	On any occasion
or		
Equal to or greater than 0.5	For any length of time per day	15 days/quarter or 45 days/year
or		
Equal to or greater than 10.0	For any length of time	On any occasion

d. Medical Surveillance Evaluations

(1) Preplacement evaluation. All naval personnel, both military and civilian, upon assignment to a position involving potential exposures to asbestos that equal or exceed the MSAL, shall have a health evaluation. NAVMED 6260/5 shown in Appendix 17-B shall be used to record the results of this evaluation. This evaluation shall be performed prior to the assignment and shall include the following:

(a) A comprehensive occupational history, detailing prior exposure to potentially harmful chemical or physical respiratory hazards, particularly asbestos. Any adverse effects related to these exposures must also be recorded.

(b) A physical examination of the chest, with special emphasis on the presence of persistent "dry rales" or "crackles" at the lung base;

(c) A 14" x 17" posterior-anterior chest roentgenogram. These films shall be interpreted locally in accordance with current radiological practices. In addition, these films shall also be interpreted in accordance with the ILO International Classification of Radiographs of Pneumoconioses - 1980. To obtain ILO interpretations for their films, local medical facilities shall contact the NAVENVIRHLTHCEN.

(d) Pulmonary function tests, including forced expiratory volume in one second (FEV_1) and forced vital capacity (FVC). Such tests should be performed, calculated, and interpreted in accordance with the NAVENVIRHLTHCEN Technical Manual 77-1, May 1977 (NOTAL).

(e) A judgment of the individual's ability to use respiratory protective equipment. This requirement shall only apply for those individuals whose current or anticipated future work will expose them to asbestos at or above the MSAL. It does not apply to those individuals who are in the AMSP on the basis of past exposure.

Note: The findings of severe respiratory impairment from any cause, e.g., FEV_1) FVC less than 45% or FVC less than 70% of predicted or the presence of documented actual or probable pulmonary asbestosis, should be considered disqualifying for initial assignment. Any other abnormalities discovered in the course of the preplacement evaluation should be investigated to determine if they could substantially increase the risk of asbestos-induced disease.

(2) Periodic and Termination-of-Employment. Medical evaluation identical to the preplacement evaluation shall be conducted in accordance with the medical surveillance examination schedule below. The frequency of re-examination will vary according to age, work history, and medical findings.

Note: If records indicate that the individual has received an annual asbestos examination within the past twelve months, a termination examination is not required.

(3) Frequency of evaluation. Asbestos medical examinations shall be conducted in accordance with the following schedule:

Category	Criteria	Schedule for (Re)examination
1	Preplacement: Upon assignment to a position which involves working in areas where asbestos concentrations will be at or above the MSAL.	Prior to assignment
2	Periodic: Personnel working in areas where the asbestos concentration was at or above the MSAL in the past year.	Annually
3	Periodic: Personnel not working in areas where the asbestos concentration was at or above the MSAL in the past year, but with a history of such work experience (see paragraph 17009b):	
	a. 45 years of age or younger AND less than 15 years history of working in areas where the asbestos concentration was at or above the MSAL.	At 5-year intervals
	b. Over 45 years of age OR 15 or more years history of working in areas where the asbestos concentration was at or above the MSAL.	Annually

(4) Personnel shall be counselled regarding any abnormalities detected during any screening test, and the medical records so noted and signed by both the counselling physician and the patient.

e. Diagnosis of Asbestosis and Related Disorders

(1) The diagnosis of "asbestosis" is presumptive with known past exposure to asbestos (the presence of pleural changes or asbestos bodies in

the sputum may support or suggest past exposure) and two or more of the following criteria:

(a) Dyspnea (shortness of breath) on exertion;

(b) Persistent basal inspiratory "crackles" or "dry rales";

(c) Diffuse interstitial changes on the chest roentgenogram;

(d) Reduction in vital capacity and diffusion capability; and

(e) Digital clubbing.

(2) In early stages of the disease, dyspnea and roentgenographic changes may not be present and the only screening abnormalities may consist of a slight reduction in the vital capacity, and end-inspiratory rales. A history of exposure to asbestos is critical to the diagnosis. It is unusual for pulmonary asbestosis to develop with less than 10 years of exposure. Individuals with medical findings suggestive of asbestosis, but not supported by an adequate history of exposure, should undergo further evaluation by a pulmonary disease specialist to rule out other diagnoses.

(3) Employees who have been exposed to asbestos in the past and show abnormal lung changes, e.g., pleural plaques and/or pleural thickening, shall be diagnosed as having an asbestos-related disorder and shall be placed in the medical surveillance program.

f. Medical Records

(1) All personnel who are included in the AMSP shall have the exterior of their Health Records prominently marked "ASBESTOS".

(2) Each employee record must include the following identifying information:

(a) Name;

(b) Social Security No.;

(c) Date of birth;

(d) Dates of examinations; and

(e) Job titles, job codes, and/or primary and secondary Navy Enlisted Classification Code (NEC).

(3) All records of examinations, possible asbestos-related conditions, related x-ray interpretations, x-ray films and all forms and correspondence

related to the employee's medical history shall become a permanent part of the Health Record and be retained for a period of 50 years following termination of service/employment.

(4) The judgment of the occupational medicine physician concerning the adequacy of the diagnostic information to support the impression of asbestos-related disease shall be entered in the medical record. Lacking definitive information, the evaluating physician must exercise his/her best medical judgment on each individual case.

(5) Copies of any examinations, x-ray reports, or special studies in an employee's Health Record or compensation folder shall be made available to a physician of the employee's choice after execution of a proper release-of-information form.

(6) Medical records as defined in paragraph 17009f(2) and (3) above shall be maintained by the cognizant regional medical command and data reported to NAVENVIRHLTHCEN's Occupational Exposure Data Bank.

(7) Each individual currently or previously employed by the department of the Navy or any other person he or she may designate shall have access to the records, as defined in paragraph (3) above, within 15 days of the request.

17010. Work Performed by Private Contractors

Each contract for work to be performed by an independent contractor within the United States which may involve the release of asbestos fibers shall incorporate the appropriate references and/or specific contract clause or clauses necessary to assure that:

a. The contractor is aware of the potential hazard to his/her employees and others,

(R) b. The contractor shall take special precautions in accordance with references 17-2 and 17-6 to protect his/her employees, as well as others, from any physical harm.

c. The contract clause must require the contractor to measure and control asbestos fibers outside the asbestos boundary to less than 0.5 fibers/cc at all times. In addition, controlled areas must meet these criteria prior to release for unrestricted access. Appropriate monitoring and enforcement of the contract provisions is required.

17011. Environmental Protection

a. General

(1) Section 112 of reference 17-1 requires the administrator of the Environmental Protection Agency (EPA) to publish a list of hazardous

air pollutants for which national emission standards will be promulgated. Reference 17-2 promulgated emission standards for four hazardous air pollutants: asbestos, beryllium, mercury and vinyl chloride.

(2) Technical assistance for air pollution control is available upon request from the Engineering Field Divisions of the Naval Facilities Engineering Command.

(3) Care must be taken to assure that measures to meet the emission standards are compatible with NAVOSH standards contained in this chapter, particularly with regard to collection devices and disposal procedures involved in asbestos fabrication, installation or removal operations. For additional information contact the cognizant industrial hygienist.

b. Application of National Emission Standards for Asbestos

(1) The National Emission Standards for Asbestos are contained in reference 17-2.

(2) This standard became effective immediately upon publication and applies to asbestos mills, manufacture of asbestos products, demolition and renovation, spraying of asbestos, and the fabrication, insulation, and disposal of waste asbestos. It does not include fabrication or repair operations if the operation does not involve the production of asbestos cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving lap, or other textile material.

(3) Demolition or modification of institutional, commercial or industrial buildings (including residential buildings containing 5 or more dwelling units) containing friable asbestos requires at least 20 days prior notice by prescribed format to the Administrator of EPA. The work must be accomplished in compliance with specific procedures for the removal and handling of friable asbestos-coated or -covered pipe, duct, boiler, tank, turbine, furnace or structural member.

(4) Spray applications of materials containing more than 1% asbestos on a dry weight basis requires at least 20 days notice by prescribed format to the Administrator of EPA, and compliance with emission limitations. Spray application of materials containing 1% or more asbestos is prohibited for buildings, structural members, pipes and conduits.

(5) Rip-out of asbestos from commissioned ships is not included in the National Emission Standard; however, Navy ships are subject to state and local standards concerning asbestos rip-out from ships in state waters if such standards are applicable to ships, and are uniformly applied to all ships. Further, Navy ships must comply with the requirements of this chapter.

(6) Procedures for the handling, transporting and disposing of waste asbestos are prescribed in the standards. Waste asbestos or asbestos-contaminated material must be wetted down and placed in impermeable containers prior to transporting for disposal. The containers must be labelled as prescribed in this chapter. The most commonly available disposal method is in a sanitary landfill operated in accordance with the requirements in Chapter 7 of OPNAVINST 5090.1 and state and local permit requirements for sanitary landfills.

17012. Responsibilities

The following responsibilities are assigned to provide an effective asbestos exposure control program throughout the Navy:

a. The Commander, Naval Medical Command (MEDCOM), shall centrally manage the Asbestos Medical Surveillance Program ashore and afloat. MEDCOM shall also provide professional, technical, and health educational assistance to commands for the purpose of evaluating the potential for asbestos exposure. Chapter 3 provides a list of activities where industrial hygiene assistance is available.

b. The Chief of Naval Material shall, in coordination with MEDCOM, provide advice and technical assistance to define appropriate engineering and work practice controls, and to identify acceptable asbestos-free substitute materials.

c. Major claimants shall insure program support by budgeting the resources required to meet the regulatory standards for the control of asbestos as prescribed by this instruction.

d. Commanding officers for shore activities shall ensure that:

R) (1) Control measures and monitoring procedures prescribed in this chapter are applied to processes using asbestos or asbestos-containing materials.

(2) The National Emission Standard for Asbestos is complied with as prescribed in paragraph 17011.

(3) Resources are budgeted in order to meet these asbestos control requirements.

R) e. Commanding officers of afloat commands will adhere to provisions herein to the maximum extent possible, and shall obtain mandatory protective clothing and equipment to protect ships' force personnel during shipboard removal of thermal asbestos insulation material. The Allowance Equipage List (AEL) 2-330024045 of 30 March 1980 has been

provided to all afloat units, less those ships with minimal or no asbestos material aboard. Procedures for ship requisitioning of subject items and funding of item requirements resulting from COSAL changes are set forth in NAVSEAINST 7323.1 of 8 June 1977 (NOTAL).

Chapter 17

References

17-1. Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. (1971) (NOTAL)

17-2. 40 CFR, Part 61 (1977) (NOTAL)

17-3. Industrial Ventilation - A Manual of Recommended Practice. Committee on Industrial Ventilation, American Conference of Governmental Industrial Hygienists, Inc. (NOTAL)

17-4. American National Standard: Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2 1971. American National Standards Institute (NOTAL)

17-5. American National Standards Institute (ANSI) publication, Practices for Respiratory Protection ANSI Z88.2-1980 (available from the American National Standards Institute, 1430 Broadway, New York, New York 10018) (NOTAL)

A) 17-6. 29 CFR 1910.1001 (As Amended) (NOTAL)

PERIODIC HEALTH EVALUATION — NAVY ASBESTOS MEDICAL SURVEILLANCE PROGRAM

Sections 133, 1071-87, 3012, 5031 and 8012, Title 10 USC & Exec. Order 9397 (Privacy Act of 1974) Apply

USE HARD TIPPED PEN & PRESS FIRMLY, LEGIBLE COPY REQUIRED FOR DATA ENTRY

REPORT SYMBOL MED 6260-9

RETAIN ORIGINAL IN HEALTH RECORD
SEND COPY TO

Commanding Officer
NAVY ENVIRONMENTAL HEALTH CENTER
Naval Station, Norfolk, Virginia 23511

EXAMINATION FACILITY NAME

UIC

PAGE 1 of 1

CONTROL NUMBER (For NEHC Use Only)

NAME (LAST) (FIRST) (M.I.)

SOCIAL SECURITY NO.

DATE OF BIRTH (DAY) (MO) (YR)

RACE (Check One)
- White
- Black
- Asian
- Hispanic
- Indian
- Other

STATUS (Check One)
- Navy
- Marines
- Coast Guard
- Air Force
- Army
- Civilian

OCCUPATIONAL CODE (Civilian Employees)

GRADE/RATE (Military)

SEX
- M
- F

YRS. GOV'T. SER.

TODAYS DATE (DAY) (MO) (YR)

EXAM PURPOSE (Check One)
- INITIAL
- PERIODIC
- TERMINATION

SHIPBOARD PERS. ONLY ENTER SHIP HULL NO.

LETTERS NUMBERS

RESPIRATORY QUESTIONNAIRE

1. Are you currently working directly with asbestos in your job? (within the last year) — YES ☐ NO ☐

2. A. Was/is your exposure on a regular basis? (15 days per quarter or 45 days per year) — YES ☐ NO ☐

   B. How many years? (check one)
   - Less than one ☐
   - More than one, less than five ☐
   - More than five; less than fifteen ☐
   - More than fifteen ☐

   C. How old were you when first exposed? ☐☐

3. Do you usually have or have you usually had the following? (Usually means more than a quarter of the time.)

	YES	NO
A. Cough	☐	☐
B. Phlegm	☐	☐
C. Wheezing	☐	☐
D. Shortness of breath	☐	☐

4. Do you now or have you ever smoked cigarettes? (If no, skip to question 5.) — YES ☐ NO ☐

   A. If so, what age did you begin? ☐☐

   B. How much do you/did you smoke? (on average)
   - Less than one pack per day ☐
   - One pack per day ☐
   - More than one pack per day ☐
   - More than two packs per day ☐

   C. If you have quit, at what age did you do so? ☐☐

5. Do you smoke a pipe or cigars? (If no, skip to question 6.) — YES ☐ NO ☐

   A. How many years have/did you smoke a pipe or cigars? ☐☐

6. Have you ever had a serious lung disease requiring hospitalization? — YES ☐ NO ☐

RESPIRATORY PHYSICAL EXAMINATION

7. Weight (in pounds) ☐☐☐
   Height (in inches) ☐☐

8. Appearance
   - A. Stature
     - Normal ☐
     - Obese ☐
   - B. Chest Configuration
     - Normal ☐
     - Increased A-P diameter ☐
     - Other chest deformity ☐
   - C. Clubbing
     - None ☐
     - Present ☐

9. Crackles
   - None ☐
   - Localized late inspiratory ☐
   - Bilateral late inspiratory ☐
   - Localized early inspiratory ☐
   - Bilateral early inspiratory ☐

10. Wheezes
    - None ☐
    - Single or multiple monophonic wheezes ☐
    - Polyphonic expiratory wheezes ☐
    - Short late inspiratory, monophonic wheeze associated with inspiratory crackles ☐

11. Spirometry (note decimal point)
    - FVC observed (BTPS) in liters ☐.☐☐
    - FEV1 observed (BTPS) in liters ☐.☐☐

NAVMED 6260/5(10-83) S/N 0105-LF-206-2625 ORIGINAL - File in Health Record

Directions for Completing NAVMED 6260/5

Identifying Information

Name of Examining Facility ... Use official command mailing address
UIC ... Unit Identification Code, (examining facility), five digits are required.
Name ... Self explanatory
SSN ... Social Security Number
Date of Birth ... Use day, month, year format
Sex ... Check one
Years Govt. Service ... Enter whole numbers only. Count combinations of military and civil service and enter total years of Federal service.
Todays date ... Use day, month, year format
Race ... Check one
Status ... Check one
Occupation code (for US Civil Service employees only) ... Enter standard seven digit code, starting in first block on left.
Grade/Rate (for military personnel only) ... Enter standard grade/rate abbreviation starting in first block. Do not space by leaving blanks
Exam Purpose ... Check one
Ship hull number (for shipboard personnel only) ... Enter letter designation starting in first block. Enter number designation starting in first block on left.

Respiratory Questionnaire

Complete by checking appropriate blocks and filling in appropriate entries

Respiratory Physical Examination

Complete by checking appropriate blocks and filling in appropriate entries.

Upon completion of Evaluation

1. Separate copies.
2. File original in patient's health record.
3. Prepare transmittal indicating total number of forms in shipment.
4. Forward LEGIBLE copy #1, and transmittal to

   Commanding Officer
   Navy Environmental Health Center
   Norfolk, VA 23511

5. Retain copy #2 for clinic files per OPNAVINST 5100.23B

BO P5101.20
SAFD/TR/alm

SEPT 1983

BASE ORDER P5101.20

From: Commanding General
To: Distribution List

Subj: Asbestos Control Program

Encl: (1) Locator Sheet
(2) Procedures for Disposal of Cement-Asbestos Siding

Ref: (a) OPNAVIST 6260.1B
(b) 29 CFR 1910.134(d) (NOTAL)
(c) NAVFAC Guide Spec NFGS 02075
(d) ANSI 288.2
(e) 40 CFR 241
(f) N.C. Administrative Code, Title 15, Chap. 2
(g) BO 11090.1B

1. Purpose. To disseminate information and establish guidelines and responsibilities for asbestos control and to establish the Industrial Health and Safety Specialist as the Asbestos Control Program Coordinator.

2. Background. References (a) and (b) are the basic directives governing exposure to and control of asbestos within the Department of the Navy.

3. Action. All addressees will take action necessary to ensure compliance with the provisions of this order.

4. Applicability. Having received the concurrence of the Commanding Generals, 2d Marine Division, FMF, and 2d Force Service Support Group (Rein), FMFLant; and the Commanding Officers, Naval Hospital, and Naval Regional Dental Center, this Order is applicable to those commands.

5. Certification. Reviewed and approved this date.

Distribution:

LOCATOR SHEET

Subj: Asbestos Control Program

Location _____

(Recipient enter location as to where this directive is maintained)

ENCLOSURE (1)

ASBESTOS CONTROL PROGRAM

CHAPTER 1

POLICY, SCOPE, RESPONSIBILITY, DEFINITIONS, ACTION

	PARAGRAPH	PAGE
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RESPONSIBILITY	1002	1-2
DEFINITIONS	1003	1-2
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ASBESTOS CONTROL PROGRAM

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CHAPTER

1 POLICY, SCOPE, RESPONSIBILITIES, DEFINITIONS AND ACTION

2 GENERAL INFORMATION, SAFETY PRECAUTIONS, PROCEDURES AND WORK CONTROL MEASURES

ASBESTOS CONTROL PROGRAM

CHAPTER 1

POLICY, SCOPE, RESPONSIBILITY, DEFINITIONS, ACTION

1000. POLICY

1. It is the intent of this command that all applicable instructions and safety precautions regarding asbestos be strictly enforced/followed by all members of this command, military and civilian.

1001. SCOPE

1. This program applies to all command members, contractor personnel, non-appropriated and appropriated fund personnel and dependents of the Camp Lejeune complex.

2. To all phases of exposure to asbestos:

   a. Installation

   b. Removal (rip-out)

   c. Disposal

   d. Repair

1002. RESPONSIBILITY

1. There will be one installation-wide program to set forth guidelines/procedures for controlling asbestos exposure.

2. The Industrial Safety and Health Specialist is designated as the Asbestos Control Program Coordinator.

1003. DEFINITIONS

1. Asbestos. A generic term for a number of hydrated silicates that when crushed or processed separate into flexible fibers. The term includes chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite materials.

2. Asbestos Control Area: An area where asbestos work installation (rip-out, repair, etc.) is performed and is isolated by physical boundaries to prevent the spread of asbestos dust, fibers or debris.

3. Asbestos Fibers: This expression refers to asbestos fibers having an aspect ratio of 3:1 and longer than 5 micrometers.

4. Ceiling Concentration: An exposure of airborne concentrations of asbestos fibers at any time in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air.

5. Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees.

6. Friable Asbestos Material: Material that can easily be crumpled, pulverized, or reduced to powder by hand pressure or by bumping, scraping, sweeping, walking on or otherwise causing fibers to become airborne.

7. HEPA Vacuum Equipment: High efficiency particulate absolute filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns or larger.

8. Non-Friable Asbestos Material: Material that contains asbestos in which the fibers have been locked-in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not release fibers in excess of the asbestos control limit during any appropriate use, handling, demolition, storage, transportation, processing, or disposal.

9. Personal Monitoring: Sampling of asbestos fiber concentrations within the breathing zone of an employee.

10. Time Weighted Average (TWA): An average of time weighted concentrations of asbestos fibers for an eight hour work day or forty hour work week.

1004. ACTION

1. Commanding Officers/Departmental Heads:

a. Commanding Officers/Departmental Heads shall establish a procedure for the proper application of the provisions of this order.

b. Commanding Officers/Departmental Heads will ensure that all safety officers, NCOs and supervisors are oriented regarding the hazards and work controls pertaining to asbestos.

c. Commanding Officers/Departmental Heads will take action necessary to ensure that all approved personnel protective equipment and clothing required by OPNAVIST 6260.1B is available for use by workers exposed to asbestos.

d. Commanding Officers/Departmental Heads will monitor self-help program to determine if any self-help program planned by their unit involves or may involve the repair, removal, installation or disposal of asbestos materials. If exposure to asbestos is anticipated or suspected, the commanding officer/departmental head will notify the Asbestos Program Coordinator, ext. 5725/3891. No self-help program involving asbestos will commence until cleared by the coordinator.

2. Supervisors:

a. Both military and civilian supervisors shall notify the Asbestos Control Program Coordinator, ext. 5725/3891, prior to any fabrication, installation, repair or removal of asbestos material. Emergency repairs are exempt from this provision. However, above exemption applies only to the notification facet of this paragraph and does NOT negate the utilization of approved protective clothing, respiratory equipment and disposal containers. Emergency repairs are defined as unexpected, unplanned or unscheduled work.

b. Before assigning workers to asbestos projects, supervisors will instruct employees with regard to the hazards of asbestos, safety and health precautions and the use and requirements of protective equipment.

c. Supervisors will ensure that all required, approved protective clothing, respiratory equipment and controls specified in OPNAVIST 6260.1B are used by employees working with asbestos.

3. Employees:

a. Employees shall comply with all safety/health instructions/ guidelines as specified by supervisors and/or local orders, SOPs.

b. Employees shall report to his/her supervisor any suspected asbestos material in their workplace which is in a friable state; that is, a state or condition of disrepair; i.e., broken, cracked, crumbling, falling, etc.

4. Commanding Officer, NH:

a. The Commanding Officer, NH, shall be responsible for establishing/administering a medical surveillance program for persons exposed to asbestos in accordance with OPNAVIST 6260.1B/29 CFR 1910.134(d)

b. The Commanding Officer, NH, will provide specific assistance in monitoring airborne asbestos fibers and in the identification of suspected asbestos.

c. The Commanding Officer, NH, will provide health educational assistance for the purpose of evaluating asbestos exposure including respiratory protection training.

5. Resident Officer-in-Charge of Construction:

a. The Resident Officer-in-Charge of Construction shall issue appropriate guidance for all contracts for services involving a possible asbestos exposure hazard, including a standard contract clause or

clauses and instructions for their use. The contract clause must require the contractor to measure and control asbestos fibers.

b. The contract will contain specific instructions for disposal and transport of asbestos wastes in accordance with the provisions of this order.

c. The Resident Officer-in-Charge of Construction will notify the Assistant Chief of Staff, Facilities, in writing (with copy to Asbestos Program Coordinator) not later than thirty working days prior to start of work involving asbestos.

d. The Resident Officer-in-Charge of Construction will familiarize contractors with the provisions of procedures for disposal of cement-asbestos siding by contractors at base sanitary landfill, enclosure (2). (Provisions of enclosure (2) and other provisions of this order apply to all types asbestos wastes generated at Camp Lejeune.)

e. The Resident Officer-in-Charge of Construction will ensure contracts contain a standard clause instructing the contractor in procedures for handling asbestos materials not initially identified at job site.

6. Base Maintenance Officer:

a. The Base Maintenance Officer shall provide an approved, properly marked, remote site at the sanitary landfill to be used for the disposal of asbestos wastes in accordance with all applicable federal and state regulations.

b. The Base Maintenance Officer shall ensure compliance with asbestos waste disposal as set forth in this order.

c. The Base Maintenance Officer shall establish written procedures for the collection and cataloging of suspected asbestos materials. Samples will be collected in 4" x 4" ziploc plastic bags,

labeled "Caution - Contains Asbestos" and forwarded to the NRMC Occupational and Preventive Medicine Officer, Industrial Hygienist.

d. The Base Maintenance Officer shall, when submitting an order for materials which may contain asbestos, or materials which must possess the properties of asbestos, coordinate with Technical and Research personnel for the purpose of purchasing an acceptable asbestos-free substitute material.

e. The Base Maintenance Officer will notify the Assistant Chief of Staff, Facilities, in writing (with copy to Asbestos Program Coordinator) not later than 30 working days prior to start of work involving asbestos.

f. The Base Maintenance Officer will develop local procedures/ work methods to be used by all members of his organization. Procedures will be in accordance with OPNAVIST 6260.1B and Chapter 2 of this order.

7. Logistics:

a. The Assistant Chief of Staff, Logistics, shall provide technical assistance in identifying and procuring a suitable asbestos-free substitute for those applications that require asbestos proprieties.

b. The Assistant Chief of Staff, Logistics, shall ensure that personnel protective equipment/respiratory protection, approved and recommended by NIOSH/MSHA for use in asbestos contaminated atmospheres is available at Self-Service Store, Bldg. 1601.

c. The Assistant Chief of Staff, Logistics, shall, to a degree practical, ensure that no asbestos materials be purchased so long as an acceptable asbestos-free substitute can be found.

8. Motor Transport Officers:

a. Recent studies conducted by the Environmental Sciences Laboratory, New York, point out the acute hazard associated with asbestos exposure resulting from automotive brake lining maintenance and repair operations.

b. All commanders having cognizance of brake repair facilities will take appropriate actions to ensure that provisions of Chapter 2, paragraph 2002(1-6) of this order are followed.

9. Base Safety Manager: The Base Safety Manager shall be responsible for the overall monitoring of the asbestos control program.

10. Asbestos Control Program Coordinator:

a. The Asbestos Control Program Coordinator shall provide asbestos safety training for workers and supervisors as required by OPNAVIST 6260.1B.

b. The Asbestos Control Program Coordinator will periodically monitor work sites, methods, procedures utilized by base workers to ensure that safe working practices are being followed.

c. The Asbestos Control Program Coordinator will provide liaison with employees and Naval Hospital industrial hygiene personnel in identification of asbestos, selection of PPE and work methods as needed.

ASBESTOS CONTROL PROGRAM

CHAPTER 2

SAFETY PRECAUTIONS AND PROCEDURES, PERMISSIBLE EXPOSURE LIMITS, ENGINEERING WORK CONTROLS, RESPIRATORY PROTECTION, PERSONAL PROTECTIVE CLOTHING, CAUTION SIGNS AND LABELS, CLEAN UP, DISPOSAL

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ASBESTOS CONTROL PROGRAM

CHAPTER 2

SAFETY PRECAUTIONS AND PROCEDURES

2000. GENERAL

1. Historically, asbestos has been valued for its many uses such as: high temperature insulation, fireproofing and gasket material. Studies reveal that the inhalation of asbestos fibers may produce lung damage in the form of fibrosis. However, the inhalation of asbestos fibers produces no immediate apparent health problems; consequently, personnel working with asbestos are prone to minimize the exposure incident. Case histories indicate there is a long latency period of 20-40 years between the first exposure to asbestos fibers and the onset of respiratory difficulties.

2. Some tasks which may cause concentrations of airborne asbestos fibers to exceed the permissible limits (as set forth in paragraph (d) OPNAVINST 6260. 1B) are fabrication, installation, repair or removal (rip-out) of asbestos materials, power sawing of asbestos-containing fire retardant materials and brake repair/relining.

3. Although asbestos free substitutes are being developed, asbestos materials continue to be used at military installations in many applications, and as such will continue to pose a potential danger to personnel exposed to airborne fibers for many years.

2001. PERMISSIBLE EXPOSURE LIMITS

1. No person shall knowingly be exposed to airborne concentrations of asbestos fibers in excess of the permissible exposure limits as follows:

a. "Time Weighted Average (TWA)" - the 8 hour (TWA) airborne concentration of asbestos fibers to which personnel may be exposed shall not exceed two fibers per cubic centimeter of air.

b. "Ceiling Limit" - personnel shall not be exposed at any

time to airborne concentrations of asbestos fibers in excess of ten fibers per cubic centimeter of air.

2002. ENGINEERING AND WORK PRACTICE CONTROL MEASURES

1. Local exhaust ventilation and dust collection systems shall be designed, constructed, installed and maintained in accordance with:

a. Industrial Ventilation - A Manual of Recommended Practice. Committee on Industrial Ventilation, American Conference of Governmental Industrial Hygienists, Inc.

b. American National Standard: Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2 1979. American National Standards Institute.

2. All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the PELs shall be provided with a local exhaust ventilation system.

3. It must be noted that ventilation systems used to control the generation of asbestos fiber exposures or emissions cannot be directly exhausted to the workroom or atmosphere. The use of High Efficiency Particulate Air (HEPA) filters with prefilters, or other collection systems approved by the cognizant industrial hygienist, is required to prevent the inadvertent creation of an exposure hazard.

4. Exhaust filtration systems must be meticulously maintained to prevent performance degradation of the ventilation system as a whole. Such maintenance work must be done in accordance with the provisions of the basic instruction.

5. To the extent feasible, local exhaust ventilation connected to HEPA or other approved filters should be provided at the point of airborne fiber generation. Capture velocities must be high enough to entrain generated fibers under the specific environmental conditions. Duct transport velocities must be high enough to prevent accumulation

of fibers in the duct, and clean-out ports should be provided where necessary. Specific equipment design parameters (e.g., requirements for static pressure monitors), as well as protective clothing/ respiratory protection and system servicing procedures for each operation must be provided/approved by the cognizant industrial hygienist.

6. Procedures shall be established that minimize the accumulation of waste dust or scrap materials. Specific procedures for containment of dust and handling of contained materials shall be instituted so that the possibility of secondary air contamination is minimized. Cleanup procedures based on wetting the material and use of approved vacuum cleaning systems for removal of debris shall be employed whenever possible.

7. As far as practicable, asbestos shall be handled, applied, removed, cut or otherwise worked in a wet state to help prevent the emission of airborne fibers.

8. Personnel engaged in the removal ("rip-out"), or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with a type "C" continuous flow or pressure demand, supplied air respirator and protective clothing in accordance with OPNAVIST 6260.1B - 29 CFR 1910.134(d), ANSI 288.1 as prescribed in Chapter 2, paragraph 204, subparagraph 7 of this order. Care shall be taken to minimize the effects of meteorologic conditions, such as wind, to control the spread/increase of airborne concentrations of asbestos. Enclosures or temporary curtains shall be used to control the amount and velocity of air moving through the workplace, whenever possible.

2003. RESPIRATORY PROTECTION

1. Engineering control measures shall be employed to control and reduce airborne asbestos fibers to the lowest feasible level. Compliance with PELs shall not be achieved by the use of respirators except under the following conditions:

a. During the time period necessary to implement engineering control measures;

b. when work situations for which the control methods prescribed are not technically feasible, or are feasible to an extent insufficient to reduce the airborne concentration of asbestos fibers below the PELs; and

c. during emergencies.

2. A respirator program shall be established by the Base Maintenance Officer as described in the American National Standards Institute (ANSI) publication American National Standard, Practices for Respiratory Protection, ANSI Z88.2-1980 as embodied in 29 CFR 1910.134 (NOTAL).

3. Where a respirator is required, it shall be selected from those approved for protection against exposure to asbestos by the National Institute for Occupational Safety and Health (NIOSH) or by the Mine Safety and Health Administration (MSHA).

4. Reusable or disposable single-use air purifying respirators shall be NIOSH or MSHA approved for protection against pneumoconiosis and fibrosis producing dusts, including asbestos. They shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the PELs when the ceiling or the 8-hour TWA concentration of asbestos fibers is reasonably expected to exceed no more than 10 times the limit.

5. A full face piece powered air purifying respirator, or a powered

air purifying respirator shall be used to reduce the concentration of airborne asbestos fibers in the respirator below the PELs when the ceiling or the 8-hour TWA concentration of asbestos fibers is reasonably expected to exceed 10 times, but not 100 times, the limit, based on data obtained in accordance with paragraph 2001.1(a)-(b) of this order.

6. A type "C" continuous flow or pressure-demand supplied-air respirator shall be used to reduce the concentration of airborne asbestos fibers in the respirator below the PELs when the ceiling or 8-hour TWA airborne concentration of asbestos fibers is reasonably expected to exceed 100 times those limits, based on data obtained in accordance with paragraph 2001.1 (a) and (b) of this order.

7. Breathing air or sources of breathing air for self-contained breathing apparatus and supplied-air respirators must conform to the requirements found in the following documents: 29 CFR 1910.134(d) (NOTAL); NAVFACINST 11300.24B of 2 August 1972 (NOTAL) and OPNAVINST 6260.1B.

8. A person shall not be assigned to tasks requiring the use of respirators if, based upon his or her most recent medical examination, the examining physician determines that the person will be unable to function normally wearing a respirator, or that the safety or health of the person or other personnel will be impaired by his or her use of a respirator.

9. When data obtained in accordance with paragraph 2001.1 (a) and (b) is not available or is not relevant to a specific operation, a type "C" continuous-flow or pressure-demand supplied air respirator shall be used to assure adequate personnel protection.

2004. PERSONAL PROTECTIVE CLOTHING/CHANGE ROOM/SHOWER FACILITY REQUIREMENTS

1. Personnel engaged in the handling of asbestos-containing materials where emission of airborne fibers is likely to be in excess of the PELs, shall wear the below listed protective clothing:

a. Full-body, one-piece, disposalbe coveralls (preferably constructed of Tyvek material, or material comparable in weight, strength, and resistance to penetration by asbestos) over cloth coveralls.

b. Hoods (head coverings), which shall extend beyond the collar of the coverall to completely protect the neck area. The hood should by Tyvek material, or a comparable substitute. Use of a Tyvek coverall with attached hood is highly desirable.

c. Medium weight rubber gloves, or thin latex or rubber gloves with cotton "over glove."

d. Slip-resistant plastic shoe covers, or heavy polyethylene shoe covers with slip-resistant soles, or light-weight rubber boots.

e. Safety glasses with side shields, goggles, or a full-length face shield when full-face respirators are not in use.

2. Change rooms shall be provided as close as practical to the asbestos work areas. Protective clothing removal procedures shall be promulgated, to include vacuuming of clothing (before removal) using a vacuum approved by the cognizant industrial hygienist (while still wearing a respirator if one was required for the task).

3. Shower facilities shall be located between the "clean" and "dirty" change rooms and each room shall have separate clothing lockers or containers to prevent contamination.

4. Laundering of asbestos-contaminated clothing shall be done so

as to prevent release of airborne asbestos fibers in excess of the PELs. Contracts governing the laundering of asbestos-contaminated clothing shall specifically require that contractors comply with the precautions specified in Section (d)(4)(iii) of 29 CFR 1910.134(d). Bags of asbestos-contaminated clothing should be transported in sealed impermeable bags or containers with affixed standard caution label.

5. The proper use of protective clothing requires that all openings be closed and that garmets fit snugly about the neck, wrists, and ankles. Accordingly, the wrist and ankle junctions, and the collar opening on the disposable coveralls shall be taped as necessary to prevent contamination of skin and under-clothing without restricting physical movement.

2005. CAUTION SIGNS AND LABELS

1. Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may exceed the PELs, paragraph 2001.1(a)(b). Signs shall be posted at a distance such that personnel may read the signs and take necessary precautions before entering the area marked by the signs. Signs may be constructed to suit the particular situation; however, they must conform to the general requirements of 20" x 14" vertical format and shall display the following legend:

ASBESTOS	1" gothic or block
DUST HAZARD	3/4" gothic or block
AVOID BREATHING DUST	1/4" gothic
WEAR ASSIGNED PROTECTIVE EQUIPMENT	1/4" gothic
DO NOT REMAIN IN AREA UNLESS YOUR WORK REQUIRES IT	1/4" gothic
BREATHING ASBESTOS DUST MAY BE HAZARDOUS TO YOUR HEALTH	14 point gothic

2. Caution labels shall be affixed to containers of raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers.

2006. CLEAN-UP

1. Essential measures of asbestos dust control are housekeeping and clean-up procedures. External surfaces in places of employment must remain free of accumulations of asbestos fibers to prevent further dispersion. Meticulous attention must be given to restricting the spread of dust and debris by keeping waste from being distributed over the general area. Do not blow down the space with compressed air. When rip-out operations are complete, all asbestos debris must be removed from the worksite, and final clean-up completed. Monitor the asbestos airborne fiber concentration of the area as specified herein and certify the area as safe before the signs are removed. (If additional cleaning is required, monitor the asbestos airborne concentration thereafter. Notify the Asbestos Control Program Coordinator before unrestricted entry is permitted).

2007. DISPOSAL

1. In preparation for disposal, asbestos wastes must be adequately wet, when appropriate, prior to bagging in heavy-duty plastic bags or other suitable impermeable containers. All bags or containers must be provided with standard asbestos caution labels. Containers, such as trash cans, dumpsters,ect. used to collect asbestos wastes subsequent to disposal shall be painted yellow with the following ledgend displayed.

20"x14" MIN. BLACK LETTERS
1" GOTHIC OR BLOCK "ASBESTOS WASTES ONLY"
1" GOTHIC "CAUTION"
1/4" GOTHIC contains asbestos wastes
1/4" GOTHIC breathing asbestos may be hazardous to your health.

2. Asbestos waste, scrap, debris, bags, containers, equipment, or asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation of airborne concentrations of asbestos fibers in excess of the PELs shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers and labeled in accordance with paragraph 2005.1.2. Transportation of asbestos waste including piping or other debris resulting from demolition shall be conducted in a manner that does not release airborne asbestos fibers.

3. Asbestos waste may be disposed of at the landfill in the following manner:

a. Contact the Director of Maintenance and Repair Division, Base Maintenance. Arrangements will be made for the date and time of delivery. Asbestos will not be unloaded without the approval of the landfill operator.

b. The landfill operator will prepare a separate trench.

c. Fibrous asbestos will be properly bagged. Transporter will unload asbestos.

d. After unloading, the asbestos will be immediately covered with dirt, unless additional shipments are expected the same day and delay of covering the asbestos until after the last shipment will not cause any sifnificant hazard of discharge of asbestos to the environment.

4. Vehicles arriving at the disposal site with asbestos wastes not in compliance with the provisions of paragraph 2007.2.3 will not be allowed to dump waste at disposal or leave premises until all requirements are satisfied. In the event that asbestos wastes arrive at disposal site not in compliance with the provisions of this directive, provisions of BO 11090.16 will be activated.

PROCEDURES FOR DISPOSAL OF CEMENT-ASBESTOS SIDING

BY

CONTRACTORS AT BASE SANITARY LANDFILL

1. Director, Maintenance and Repair Branch (M&R), Base Maintenance Division, (451-5855, 5184) will be given 5 working days notice of initial delivery of asbestos-cement siding.

2. M&R Director will be furnished a schedule showing estimated volume (in cubic feet or yards/week) of asbestos to be disposed of. Unless the above prior arrangements are made, contractor may incur delays in disposal of the asbestos material.

3. Asbestos-cement will be accepted for disposal only if:

a. Asbestos-cement is free of lumber and other debris and refuse.

b. Truck is securely covered with tarpaulin (or equivalent) to prevent discharge of asbestos dust or debris during transportation.

c. Asbestos-cement is thoroughly moist.

4. Transporter will submit vehicle to inspection by a landfill operator prior to uncovering truck.

5. Transporter will dump the debris where directed by the landfill operator. After dumping debris, vehicle will not be moved until securely covered.

6. Transporter will clean up any asbestos-cement improperly spilled during disposal.

7. The landfill operator will normally cover the debris at 0900 and after 1500. Debris dumped between 0900 and 1500 will be covered with polyethylene sheet by the transporter to prevent release of dust prior to covering by landfill operator.

8. Transporters not following above procedures will be barred from the landfill.

ENCLOSURE (2)

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

IN REPLY REFER TO:
P-6280
FAC
23 MAY 1985

THIRD ENDORSEMENT on CO Delta Co., 2d Med Bn ltr 29 Apr 1985

From: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer

Subj: BUILDING 27 (NAVY RECORDS) ASBESTOS REMOVAL

1. Forwarded for referral of personnel to the Asbestos Medical Surveillance Program as recommended in enclosure (1) of the basic correspondence. Further, it is requested that you initiate a project to remove the remaining asbestos from Building 27.

R. A. TIEBOUT

Copy to:
CG, 2dFSSG
CO, NAVHOSP (PMU)
Env Engr

UNITED STATES MARINE CORPS
2d Force Service Support Group (Rein)
Fleet Marine Force, Atlantic
Camp Lejeune, North Carolina 28542-5701

IN REPLY REFER TO:
6200
7
07 May 1985

SECOND ENDORSEMENT on CO Delta Co., 2d Med Bn ltr 29 Apr 1985

From: Commanding General
To : Commanding General, Marine Corps Base, Camp Lejeune, NC
(ATTN: ASSISTANT CHIEF of STAFF, FACILITIES)

Subj: BLDG 27 ASBESTOS REMOVAL

1. Forwarded, for action

D.A. CERVENY
By direction

Copy to:
CO, 2d Med Bn

UNITED STATES MARINE CORPS
2d Medical Battalion
2d Force Service Support Group (Rein)
Fleet Marine Force, Atlantic
Camp Lejeune, North Carolina 28542-5709

IN REPLY REFER TO:
6200
7
02 May 1985

FIRST ENDORSEMENT on CO Delta Co., 2d Med Bn ltr 29 Apr 1985

From: Commanding Officer
To: Commanding General, 2d Force Service Support Group (Rein), (ATTN: SAFETY OFFICER), Fleet Marine Force, Atlantic, Camp Lejeune, North Carolina 28542

Subj: BLDG 27 (NAVY RECORDS) ASBESTOS REMOVAL

1. Forwarded, strongly recommending asbestos removal.

J. H. PELPHREY

UNITED STATES MARINE CORPS
Delta Company
2d Medical Battalion, 2d Force Service Support Group (Rein)
Fleet Marine Force, Atlantic
Camp Lejeune, North Carolina 28542

IN REPLY REFER TO
6200
D
29 APR 1985

From: Commanding Officer
To: Commanding General, 2D FSSG (REIN), Camp Lejeune, N. C. 28542
(ATTN: Safety Officer)
Via: Commanding Officer, 2D Medical Battalion, 2D FSSG (REIN),
Camp Lejeune, N. C. 28542

SUBJ: BUILDING 27 (NAVY RECORDS) ASBESTOS REMOVAL

Encl: (1) Industrial Hygiene Asbestos Survey in Building 27 ltr of
10 JAN 1985.

(2) Commanding Officer, Naval Hospital, Camp lejeune.
6260.10 over 371 of 15 MAR 1985.
Subj: Asbestos Air Samples.

1. It is requested that you review enclosures (1) and (2) and schedule Building 27 for asbestos removal.

S. T. Stoddard
LCDR MSC USN

3648

5100.10
371
10 Jan 85

From: Commanding Officer
To: Group Surgeon, 2d Force Service Support Group, Camp Lejeune, NC 28542

Subj: INDUSTRIAL HYGIENE ASBESTOS SURVEY IN BUILDING #27

Encl: (1) Lab Results

1. In response to inquiries and requests from personnel working in Bldg 27, the subject survey was conducted on 5 December 1984 by Mr. J. McCloskey, Environmental Health Technician. Concern was expressed about [illegible] maintenance projects which involved asbestos materials.

2. Findings. It was stated that during the summer, work crews installing light fixtures, cut holes in ceiling panels of an administrative office. FSSG personnel working in the office cleaned up the dust/debris. More recently, pipe insulation was removed in the classroom area. Some of this insulation was found in a trash cans. As indicated in enclosure (1), the materials involved were asbestos. Evidently, no hazard warnings were given in either of the above instances, nor were any asbestos safety precautions placed into effect.

3. Comments and Recommendations. The concentration of airborne asbestos fiber levels at the time of and as a consequence of the aforementioned maintenance is not known. Considering the uncertanties of exposure, all personnel working in the building, during, and immediately after these work periods, should be referred to the Asbestos Medical Surveillance Program. Future work involving the ceilings and attic pipe insulation should be delayed until hazard warnings are given and the proper safety precautions implemented.

M. P. GENTRY
By direction

Copy to:
CO, 2d MED BN, 2d FSSG
Base Maint O
Pub Wks O
Base Saf O

ENCL 1

1. TO: Laboratory Service
Navy Environmental Health Center
Naval Station
Norfolk, VA 23511

2. FROM:
Industrial Hygiene Branch
Occupational & Preventive Medicine Dept
Naval Hospital
Camp Lejeune, NC 28542

3. PRIME CONTRACTOR AND ADDRESS

CONTRACT NUMBER

4. MANUFACTURING PLANT NAME AND ADDRESS

P. O. NUMBER

5. END ITEM AND/OR PROJECT	6. SAMPLE NUMBER	7. LOT NO.	8. REASON FOR SUBMITTAL	9. DATE REQD
Preripout Evaluation	see below		Asbestos I.D.	5 Dec 84

10. MATERIAL TO BE TESTED	10a. QUANTITY SUBMITTED	11. QUANTITY REPRESENTED	12. SPEC. & AMEND AND/OR DRAWING NO. & REV. FOR SAMPLE & DATE

13. PURCHASED FROM OR SOURCE	14. SHIPMENT METHOD	15. DATE SAMPLED AND SUBMITTED BY
Bldg 27 Camp Lejeune, NC		5 Dec 84 J. MCCloskey

16. REMARKS AND/OR SPECIAL INSTRUCTIONS AND/OR WAIVERS.

AS-195-84 Removed pipe insulation - classroom
AS-196-84 Ceiling panel - main admin office

17. SEND REPORT OF TEST TO

same as #2

SECTION B - RESULTS OF TEST *(Continue on plain white paper if more space is required)*

1. DATE SAMPLE RECEIVED	2. DATE RESULTS REPORTED	3. LAB REPORT NUMBER
11 Dec 84	20 DEC 84	7271-72

4. TEST PERFORMED	RESULTS OF TEST SAMPLE RESULT	REQUIREMENTS
AS-195-84	AMOSITE AND CHRYSOTILE ASBESTOS FIBERS	
AS-196-84	CHRYSOTILE ASBESTOS FIBERS	

DATE	TYPED NAME AND TITLE OF PERSON CONDUCTING TEST	SIGNATURE
20 DEC 84	RAY COLLINS, CHEMIST	G.E. WRIGHT By direction

DD FORM 1 FEB 62 1222 REPLACES DD FORM 1222, 1 JUL 58, WHICH IS OBSOLETE.

S/N 0102-LF-012-0600

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

6280/2
FAC
15 APR 1985

From: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
To: Assistant Chief of Staff, Manpower

Subj: ASBESTOS REMOVAL, AIR SAMPLING RELATED THERETO

Ref: (a) OPNAVINST 5100.23B

1. A recent waste, fraud, abuse, and corruption hotline inquiry reported that asbestos removal operations were being conducted with no air tests being taken. Informal inquiry by this office revealed that sporadic or occasional samples are taken but that no organized or supervised program has been established in compliance with OSHA regulations.

2. It is the understanding of the undersigned that the Base Safety Officer has the overall staff responsibility to enforce regulations as they pertain to asbestos removal projects to include required air testing. The responsibility for industrial hygiene support as assigned to the Naval Hospital per the reference is not applicable to the Marine Corps. The proposed Base Order P5101.20 has not been published to clarify the responsibilities for asbestos management. Thus, the compliance with federal and state OSHA rules cannot be assured for asbestos removal projects performed by this command.

3. Accordingly, request the program for air sampling be initiated as soon as possible. We suggest a meeting to discuss the procedures for coordinating asbestos removal projects between your staff and the Base Maintenance Division and the Resident Officer in Charge of Construction.

4. For further assistance in this matter, contact LtCol J. G. Fitzgerald, ext. 3034/3035.

B. W. ELSTON

Copy to:
BMO
ROICC
EnvEngr

copy to Compt 4/30/85
Results of 24 APR MTG
to be forwarded

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

7510
FAC
29 MAR 1985

From: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune
To: Assistant Chief of Staff, Comptroller

Subj: ALLEGED INCIDENT OF WASTE, FRAUD, ABUSE, OR CORRUPTION CONTROL #163

Ref: (a) CG, MCB ltr 7510 COMP dtd 12 Mar 85

1. The following information is provided as requested by the reference. The results of our inquiry indicate that air tests are being taken on a spot-check basis by the Naval Hospital personnel.

2. This is an interim response pending further review of air testing with Industrial Hygiene, Safety, and Maintenance personnel. A final response will be provided by 12 April. Point of contact for this matter is Mr. Bob Alexander, extension 3034.

B. W. ELSTON

Copy to:
CO, NavHosp (Attn: PMU)
AC/S, Manp
Main
EnvEngr

Appendix C: U.S. Department of Labor-Occupational Safety and Health Administration (OSHA) Asbestos Regulations

(Code of Federal Regulations Title 29, Part 1910)

Section 1910.1001

(a) Definitions.

For the purpose of this section.

(1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) Permissible exposure to airborne concentrations of asbestos fibers.

(1) Standard effective July 7, 1972. The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) Standard effective July 1, 1976. The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) Ceiling concentration. No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) Methods of compliance.

(1) Engineering methods.

(i) Engineering controls. Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) Local exhaust ventilation.

(a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2-1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) Particular tools. All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) Work practices.

(i) Wet methods. Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) Particular products and operations. No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) Spraying, demolition, or removal. Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) Personal protective equipment.

(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) Air purifying respirators. A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) Powered air purifying respirators. A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) Type "C" supplied-air respirators, continuous flow or pressure-demand class. A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) Establishment of a respirator program.

(a) The employer shall establish a respirator program in accordance with the requirements of the American National Standard Practices for Respiratory Protection, ANSI Z88.2–1969, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z88.2–1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position where duties he is able to perform with the

same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

) Special clothing: The employer shall pro-
de, and require the use of, special clothing,
ich as coveralls or similar whole body
othing, head coverings, gloves, and foot
verings for any employee exposed to air-
rne concentrations of asbestos fibers,
hich exceed the ceiling level prescribed in
ragraph (b) of this section.

) Change rooms:

(i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) Clothes lockers: The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes.

(iii) Laundering:

(a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

Method of measurement.

All determinations of airborne concentra-
ons of asbestos fibers shall be made by the
embrane filter method at 400–450 × (mag-
ification) (4 millimeter objective) with
hase contrast illumination.

(f) Monitoring.

(1) Initial determinations. Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) Personal monitoring.

(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater then 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) Environmental monitoring.

(i) Samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) Sampling frequency and patterns. After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than 6 months for employees

whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) Employee observation of monitoring. Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) Caution signs and labels.

(1) Caution signs.

(i) Posting. Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) Sign specifications. The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	*Notation*
Asbestos	1" Sans Serif, Gothic or Block.
Dust Hazard	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust	¼" Gothic.
Wear Assigned Protective Equipment.	¼" Gothic.
Do Not Remain In Area Unless Your Work Requires It.	¼" Gothic.
Breathing Asbestos Dust May Be Hazardous To Your Health.	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) Caution labels.

(i) Labeling. Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) Label specifications. The caution labels required by subdivision (i) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm

(h) Housekeeping.

(1) Cleaning. All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) Waste disposal. Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) Recordkeeping.

(1) Exposure records. Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 20 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health, and to authorized representatives of either.

[41 F.R. 11504, March 19, 1976.]

(2) **Employee access.** Every employee and former employee shall have reasonable access to any record required to be maintained by subparagraph (1) of this paragraph, which indicates the employee's own exposure to asbestos fibers.

(3) **Employee notification.** Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

Medical examinations.

(1) **General.** The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) **Preplacement.** The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(3) **Annual examinations.** On or before January 31, 1973, and at least annually thereafter, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(4) **Termination of employment.** The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second ($FEV_{1.0}$).

(5) **Recent examinations.** No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) **Medical records.**

(i) **Maintenance.** Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) **Access.** The contents of the records of the medical examinations required by this paragraph shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of NIOSH, to authorized physicians and medical consultants of either of them, and, upon the request of an employee or former employee, to his physician. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

ROUTING SLIP 25 MAR 1985

FAC ROUTING			
	ACTION	INFO	INT
AC/S FAC		✓	AW
DEP AC/S, FAC		✓	F 3/26/85
FAC MGT & PLNG O			
CONST COORD		✓	
FAC UTIL O			
SPEC PROJECT O			
ENV ENGR	✓	✓	
FAC CHIEF			
SEC TO AC/S FAC			
ADMIN SEC			
MAIL & FILE CLERK			

COMMENTS:
Wouldn't attending
care —

ASBESTOS

Alex,
See me on this.
BR

ROUTING SLIP 25 MAR 1985

FAC ROUTING			
	ACTION	INFO	INT
AC/S FAC		✓	✓
DEP AC/S, FAC		✓	✓ 3/26/85
FAC MGT & PLNG O			
CONST COORD		✓	
FAC UTIL O			
SPEC PROJECT O			
ENV ENGR	✓	✓	
FAC CHIEF			
SEC TO AC/S FAC			
ADMIN SEC			
MAIL & FILE CLERK			

COMMENTS:
Wouldn't attending pre-con take care of their concerns?

[redacted] Your comments, please

DEPARTMENT OF THE NAVY
OFFICER IN CHARGE OF CONSTRUCTION
RESIDENT OFFICER IN CHARGE OF CONSTRUCTION
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO:
JAX/05/GRH/jj
22 March 1985

From: Resident Officer in Charge of Construction, Jacksonville, NC Area
To: Commanding Officer, Naval Hospital, MCB, Camp Lejeune, NC

Subj: REVIEW OF CONSTRUCTION/RENOVATION PLANS FOR MARINE CORPS BASE, CAMP LEJEUNE, NC

Ref: (a) NAVHOSP ltr 6260 371 dtd 19 Mar 85

1. The request contained in reference (a) to provide Occupational and Preventitive Medicine Department pre-completion designs is not appropriate for ROICC action. This office has no design or project management responsibilities and therefore cannot comply with your request.

2. Your request for notification of asbestos rip-outs should be redirected to the Assistant Chief of Staff, Facilities, Environmental Engineering Section, who has notification responsibilities for all appropriate agencies.

C. A. JOHANNESMEYER
CDR, CEC, USN

Blind copy to:
AC/S, Facilities

RECEIVED
25 MAR 1985

GH

GENERAL FILE
RESPONDED 3/22

10

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, N.C. 28542

GRH

IN REPLY REFER TO
6260
371
19 Mar 85

From: Commanding Officer
To: Resident Officer in Charge of Construction, Marine Corps Base, Camp Lejeune, NC 28542

Subj: REVIEW OF CONSTRUCTION/RENOVATION PLANS FOR MARINE CORPS BASE, CAMP LEJEUNE, NC

Ref: (a) OPNAVINST 5100.23B
(b) BO 6260.3B
(c) NAVMED-P5010
(d) Mtg btwn LT Mahar and LT Davis of 27 Feb 85

1. In compliance with references (a), (b), and (c), the Occupational and Preventive Medicine Department of the Naval Hospital has requested to review construction and renovation plans for Marine Corps Base, Camp Lejeune, NC. A plans review process by the Industrial Hygiene and Preventive Medicine staff could save considerable monies and resources which are often spent in cost overruns and repairing design flaws, as well as providing input for employee health safety considerations. Plans should be made available for review in the Occupational Preventive Medicine Department, Bldg #65, at the 50% and 90% completion stages. As discussed in reference (d), the Industrial Hygiene Division requests notification of any rip-out procedures which may expose personnel to asbestos. Notification of planned rip-outs are requested via phone call.

2. Plans should be forwarded to Head, Occupational and Preventive Medicine Department, Bldg 65, for review. Following the review, the plans will be forwarded with appropriate comments, recommendations, and applicable references. If you have any questions regarding this request, please call LT Mahar at extension 1930/2767.

M. P. GENTRY
By direction

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
OPNAVINST 5100.23B
OP-45
31 August 1983

OPNAV INSTRUCTION 5100.23B

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Navy Occupational Safety and Health (NAVOSH) Program Manual

Ref: (a) SECNAVINST 5100.10E (NOTAL)
(b) OPNAVINST 5100.8F

Encl: (1) Navy Occupational Safety and Health Program Manual

1. Purpose

a. To reaffirm the Navy Occupational Safety and Health (NAVOSH) Program for all Navy personnel as required by reference (a).

b. To implement the following Department of Defense (DOD) instructions:

(1) DODI 1000.18, of 29 June 1976, Federal and State Occupational Safety and Health Inspections at Contractor Workplaces on DOD Installations (NOTAL)

(2) DODI 6050.5, of 31 May 1979, DOD Hazardous Materials Information System Procedures (NOTAL)

(3) DODI 6055.1, of 30 December 1981, DOD Occupational Safety and Health Program (NOTAL)

(4) DODI 6055.2, of 3 May 1978, Personal Protective Equipment (NOTAL)

(5) DODI 6055.3, of 8 June 1978, Hearing Conservation (NOTAL)

(6) DODI 6055.5, of 30 April 1980, Industrial Hygiene and Occupational Health (NOTAL)

2. Cancellation. OPNAVINSTs 5100.14, 5100.23A, 5103.1, 6260.1B, and 6260.2.

3. Discussion

a. References (a) and (b) contain policy statements and outline responsibilities for the implementation of the total Navy Safety and Occupational Health (S&OH) Program. The Navy S&OH Program encompasses all safety disciplines such as aviation safety, weapons/explosives safety, off-duty safety (recreation, public, and traffic), and occupational safety as well as occupational health. As the title implies, the NAVOSH Program specifically

b. At least annual inspections of all workplaces by qualified OSH inspectors. Forces afloat workplace inspections will require Immediate Superior in Command (ISIC) assistance in scheduling and obtaining qualified inspectors.

c. Prompt abatement of identified hazards. To the maximum extent practicable, all hazards shall be eliminated or minimized through engineering or administrative controls. Where engineering or administrative controls are not feasible, appropriate personal protective equipment shall be provided at government expense. Where hazard abatement resources are limited, priorities shall be assigned to take care of the most serious problems first. Appropriate notices shall be posted to warn employees of unabated serious hazards and to provide interim protective measures.

d. Procedures for all personnel to report suspected hazards to their supervisors and/or safety and health officials without fear of reprisal. Allegations of reprisal for such participation shall be filed in accordance with existing grievance procedures.

e. Appropriate OSH training for safety and health officials, all supervisory personnel and employees. Applicable OSH requirements shall be integrated into training programs and technical and tactical publications.

f. Procedures to review, in advance of construction/procurement, the design of facilities, systems, and subsystems to ensure that OSH hazards are eliminated or controlled throughout the life cycle.

g. Thorough mishap investigations and a comprehensive OSH management information system which provides all OSH data required by higher authority.

h. Comprehensive occupational health surveillance programs, both medicine and industrial hygiene, implemented by qualified personnel.

i. Procedures to recognize superior or deficient OSH performance. Performance evaluations shall reflect personal accountability in this respect, consistent with the duties of the position, with appropriate recognition of superior performance, and conversely, adverse notation or administrative action, as appropriate, for deficient performance.

1005. Applicability

a. The provisions of this manual apply to all Navy civilian and military personnel and operations ashore and afloat worldwide except in those areas wherein responsibility for such a program rests with the Commandant of the Marine Corps. Exceptions or specific limitations are also made, as required, for military unique equipment, systems, and operations including specific delineation of applicable provisions to forces afloat (see 1005.d); for

conditions governed by other statutory authorities; and for conditions governed by international agreements overseas. These provisions apply to the Navy's government-owned, contractor-operated facilities only if they involve: (1) the occupational safety and health of Navy personnel; (2) situations in which the United States traditionally, by admiralty law or contract, is liable for contractor employee injuries, e.g., Military Sealift Command; and (3) with respect to the contractor's employees, only those specific occupational safety and health matters over which DOD exercises statutory authority in accordance with the provisions of section B3(b) of reference 1-2. In all other matters affecting the safety and health of the contractor's employees, the contractor is responsible directly to the DOL's Occupational Safety and Health Administration (OSHA) or appropriate state office where OSHA has approved a state plan.

b. Application of this manual shall be consistent with the provisions of reference 1-4, other provisions of law providing for collective bargaining agreements and procedures, and any agreements entered into pursuant to such provisions. Matters of official leave for employee representatives involved in activities pursuant to this manual shall be determined according to procedures under reference 1-4, or applicable collective bargaining agreements.

R) c. Under the statutory authority of the Atomic Energy Act of 1954, Section 309(a) of the Department of Energy Organization Act, and Executive Order 12344 of February 1, 1982, the Director, Naval Nuclear Propulsion Program is responsible for the safety of reactors and associated naval nuclear propulsion plants, and the control of radiation and radioactivity associated with naval nuclear propulsion plant activities, including prescribing and enforcing standards and regulations for these areas as they affect the environment and the safety and health of workers, operators, and the general public. Accordingly, for the above areas the Naval Nuclear Propulsion Program is exempt from the requirements of this manual. However, for areas other than those described above, such as asbestos controls, machine guarding, etc., the requirements of this manual apply to Naval Nuclear Propulsion Program activities.

d. Forces Afloat Applicability. While the general concepts and provisions of this manual apply to forces afloat, specific limitations must be made for military unique equipment, systems, and operations. Because of the inherent differences in the organization and operating environment of a surface ship or submarine in contrast to a shore activity involving such areas chain of command relationships, required councils or committees, or training and hazard abatement procedures, it is necessary to identify those provisions of this manual where requirement differences exist between forces afloat and shore activities. This has been accomplished by use of annotations or exclusionary notations. This differentiation will also separate echelon two and three command requirements from those for forces afloat. In no case will provisions applying to forces afloat be lessened through special application.

DEPARTMENT OF THE NAVY
OFFICER IN CHARGE OF CONSTRUCTION
RESIDENT OFFICER IN CHARGE OF CONSTRUCTION
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO:
JAX/05/GRH/jj
19 September 1983

From: Resident Officer in Charge of Construction, Jacksonville, NC Area
To: Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina (Attn: Bob Alexander)

Subj: Proposed Base Order - P5101.20

Ref: Base Safety Manager ltr SAFD/TWR/twr P5101.20 dtd 8 Aug 83

1. As requested by the reference, the following comments are provided:

Page 1-6, Paragraph 6-c

Is the Base Maintenance Officer responsible for taking samples of suspected materials discovered on contract work?

Page 1-6, Paragraph 5-e. Since asbestos removal is a high cost item associated with demolition, a catch all clause to ensure removal of non-identified asbestos does not give the prospective contractors a basis of bid. Any asbestos that is not identified in the bid documents and that's discovered after contract award will have to be removed by negotiating a contract modification. Negotiation of asbestos removal change orders is difficult at best because the Government has collected little costing data to aid in the negotiations. Therefore, such change orders are inherently expensive and should be avoided if possible. The best solution is to identify in the bid documents the location, type, and extent of existing asbestos as accurately as possible to allow removal by competitive bid.

Enclosure (1) was forwarded to this office for use in disposal of asbestos covered steam and condensate piping at the sanitary landfill. This office feels that the requirement in paragraph 4(a) causes cost increases which are not offset by any anticipated salvage value of the pipe. We suggest that all asbestos covered piping, regardless of diameter, be wrapped and buried at the sanitary landfill.

Gary R. Horne

GARY R. HORNE
By direction

extent of existing asbestos as accurately as possible to allow removal

DEPARTMENT OF THE NAVY
OFFICER IN CHARGE OF CONSTRUCTION
RESIDENT OFFICER IN CHARGE OF CONSTRUCTION
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
CAMP LEJEUNE, NORTH CAROLINA 28542

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Gary R. Horne

GARY R. HORNE
By direction

05

DEPARTMENT OF THE NAVY
RESIDENT OFFICER IN CHARGE
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

JAX/05/GRH/fao
25 May 1982

From: Resident Officer in Charge of Construction, Jacksonville, NC Area
To: Commander, Atlantic Division, Naval Facilities Engineering Command (Attn: Code 406- Mel Mutter)

Subj: Asbestos Disposal Aboard Marine Corps Base, Camp Lejeune, NC

Ref: (a) Phoncon, Mel Mutter (LANTDIV 406)/G. R. Horne (JAXNC ROICC) of 24 May 1982

Encl: (1) Base Maintenance Officer ltr MAIN/DDS/spk 6240 dtd 16 Dec 81
(2) Base Maintenance Officer ltr MAIN/JIW/spk 6240 dtd 16 Feb 82
(3) ROICC ltr to BMO JAX/80/GNS/fao dtd 20 May 82

1. As discussed by the reference, enclosures (1), (2), and (3) are provided for use in preparation of contract documents involving asbestos disposal aboard Camp Lejeune. Enclosure (1) primarily addresses friable asbestos materials and has been approved by the North Carolina EPA. Paragraph (4) of Enclosure (1) fails to address the disposal of piping larger than three inches. Asbestos from this larger piping must be completely removed and properly bagged for disposal at the landfill. The piping itself must be completely free of asbestos fibers and turned over to DPDO (Lot 203 on Holcomb Boulevard) for disposal.

2. Enclosure (2), as modified by enclosure (3), addresses cement-asbestos siding, shingles, and other non-friable materials. The contractor will be responsible for covering the disposed materials with polyethylene if delivered between 0900 and 1430. If delivered between 1430 and 1500, the Base will immediately cover any shingles or siding materials placed in the trench. No materials will be accepted after 1500.

3. The specifications should also require that the ROICC be notified in writing at least one week (seven days) in advance of any planned contractor disposition of asbestos at the landfill.

G. R. Horne
G. R. HORNE

Copy:
LANT DIV Code 05

Blind copy to:
05A
05B
05E

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

1	10	
2	80	
MAIN/DDS/spk		
6240	20	
DEC 4	6 1981	
5	05	
6		
7		
8		
RETURN TO	02	

From: Base Maintenance Officer
To: Resident Officer in Charge of Construction, Jacksonville NC Area

Subj: Disposal of Asbestos at Base Sanitary Landfill; guidelines for

Ref: (a) BMO ltr MAIN/DDS/spk 6240 of 1 Dec 1981
(b) NC Solid Waste Disposal Regulations

Encl: (1) Operations Instructions, Sanitary Landfill Operators

1. During recent discussions with State Public Health officials, Base was advised that the subject method of disposal was acceptable provided proper health and safety precautions were taken. As indicated in reference (a), the base landfill can handle projected volumes.

2. Enclosure (1) outlines guidelines developed in accordance with requirements of reference (b). Paragraph 20 of enclosure (1) specifically addresses procedures to be followed with the subject disposal. Asbestos disposal is restricted to one designated location in the landfill. Trucks hauling asbestos must be covered with properly secured tarpaulin or equivalent.

3. Asbestos will be accepted if double-bagged in heavy-duty plastic bags. If a contractor/contract proposes to handle the asbestos in a manner other than double-bagging, the asbestos will be accepted only if the alternative method is presented in writing, with the written concurrence/approval of the Base Safety Officer and Preventive Medicine Officer. Contractors not adhering to the above requirements will not be allowed to utilize the landfill.

4. Asbestos insulated steam pipe will be accepted if the following requirements are met:

a. The pipe (excluding asbestos) must not be larger than three inches in diameter.

b. Pipe is cut in ten foot or shorter lengths.

c. The pipe is placed in the burial pit in an orderly, compact fashion with lengths of pipe all oriented in same direction horizontal to bottom of pit.

d. The pipe must be properly bagged, or wrapped as provided in paragraph 3 above.

5. Questions regarding this matter should be referred to Mr. L. D. Shepard at 451-5158.

F. H. MOUNT

ENCL (1)

OPERATIONAL INSTRUCTIONS
SANITARY LANDFILL OPERATORS

1. Instructions contained herein will be maintained and followed.

2. Solid waste shall be restricted to the smallest area possible and compacted as densely as practical. A proper slope on the working face shall be maintained.

3. Solid waste shall be covered at the end of each day's operation, with a compacted layer of at least six inches of soil material.

4. After completion of each cell, the area will be covered with at least two feet of suitable compacted soil, adequately sloped to allow surface water runoff in a controlled manner without excessive on-site erosion and off-site siltation.

5. The finished surface of the filled area shall be seeded with grass or other suitable vegetation immediately upon completion, but not later than thirty working days. If necessary, seeded slopes shall be covered with straw or similar material to prevent erosion.

6. Adequate on-site erosion control measures shall be practiced.

7. No off-site siltation will be allowed.

8. An attendant shall be on duty at the site at all times during hours of operation for public use to assure compliance with operational requirements, and to prevent the entrance of hazardous waste into the site.

9. The approach road to the site will be all weather constructed and maintained in good condition.

10. Dust control measures shall be implemented as necessary.

11. Surface water shall be diverted from the operational area.

12. Solid waste shall not be disposed of in water.

13. Open burning of solid waste is prohibited.

14. Base Fire Department (telephone 3333) will be called immediately in all cases of accidental fires.

15. Spoiled foods, animal carcasses, abattoir waste, hatchery waste, and other animal waste delivered to the disposal site shall be kept separate from other waste and shall be compacted and covered immediately.

16. Appropriate methods such as fencing and diking shall be provided to confine material subject to be blown by the wind within the area At the conclusion of each day's operation, wind blown material resulting from the operations, shall be collected and returned to the area by the attendant and the operators.

17. Effective vector control measures shall be applied to control flies, rodents, and other insects or vermin as necessary.

18. Traffic signs or markers shall be provided to promote an orderly traffic pattern.

19. All other existing signs shall be adheared to.

20. No hazardous or liquid waste (except asbestos) shall be accepted or disposed of in the Sanitary Landfill, except as may be permitted by the Division of Health Service.

21. Asbestos waste may be disposed of at the landfill in the following manner:

a. Contact the Director of Maintenance and Repair Division, Base Maintenance. Arrangements will be made for the date and time of delivery. Asbestos will not be unloaded without the approval of the landfill operator.

b. The landfill operator will prepare a separate trench.

c. Fibrous asbestos will be properly bagged. Transporter will unload asbestos.

d. After unloading, the asbestos will be immediately covered with dirt, unless additional shipments are expected the same day and delay of covering the asbestos until after the last shipment will not cause any significent hazard of discharge of asbestos to the environment.

22. The attendant will direct recyclable metal (ferrous and non-ferrous) to DPDO, lot 203.

23. Reusable wood and lumber over six feet in length will be directed to DPDO, lot 203 in accordance with Bo 4570.1C.

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

MAIN/JIW/spk
6240
FEB 16 1982

From: Base Maintenance Officer
To: Resident Officer in Charge of Construction, Jacksonville, North Carolina Area

Subj: Cement-Asbestos Siding; disposal of

Ref: (a) ROICC, Jacksonville, N.C. ltr JAX/80/GNS/fao of 1 Feb 1982

Encl: (1) Procedures for Disposal of Cement-Asbestos Siding by Contractors at Base Sanitary Landfill

1. The proposed procedures for the subject procedure furnished by reference (a) have been reviewed. Enclosure (1) provides procedures and guidelines to be followed in the future regarding disposal of the subject wastes at the Base Sanitary Landfill. Enclosure (1) has been developed with the understanding that the Industrial Hygienist, Naval Regional Medical Center, will conduct on-site air monitoring of asbestos handling activities at the landfill.

2. Point of contact with this matter is Mr. L. D. Shepard, extension 5158.

F. H. MOUNT

ROUTING ORDER		INT
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RETURN TO		02

Copy to:
BSafety0
NRMC (Industrial Hygienist)

ENCL (1)

PROCEDURES FOR DISPOSAL OF CEMENT-ASBESTOS SIDING

BY

CONTRACTORS AT BASE SANITARY LANDFILL

1. Director, Maintenance and Repair Branch (M&R), Base Maintenance Division, (451-5855, 5184) will be given 5 working days notice of initial delivery of asbestos-cement siding.

2. M&R Director will be furnished a schedule showing estimated volume (in cubic feet or yards/week) of asbestos to be disposed of. Unless the above prior arrangements are made, contractor may incur delays in disposal of the asbestos material.

3. Asbestos-cement will be accepted for disposal only if:

a. Asbestos-cement is free of lumber and other debris and refuse.

b. Truck is securely covered with tarpaulin (or equivalent) to prevent discharge of asbestos dust or debris during transportation.

c. Asbestos-cement is thoroughly moist.

4. Transporter will submit vehicle to inspection by a landfill operator prior to uncovering truck.

5. Transporter will dump the debris where directed by the landfill operator. After dumping debris, vehicle will not be moved until securely covered.

6. Transporter will clean up any asbestos-cement improperly spilled during disposal.

7. The landfill operator will normally cover the debris at 0900 and after 1500. Debris dumped between 0900 and 1500 will be covered with polyethylene sheet by the transporter to prevent release of dust prior to covering by landfill operator.

8. Transporters not following above procedures will be barred from the landfill.

Enclosure (1)

MAIN/JIW/spk
6240
FEB 16 1982

From: Base Maintenance Officer
To: Resident Officer in Charge of Construction, Jacksonville, North Carolina Area

Subj: Cement-Asbestos Siding; disposal of

Ref: (a) ROICC, Jacksonville, N.C. ltr JAX/80/GNS/fao of 1 Feb 1982

Encl: (1) Procedures for Disposal of Cement-Asbestos Siding by Contractors at Base Sanitary Landfill

1. The proposed procedures for the subject procedure furnished by reference (a) have been reviewed. Enclosure (1) provides procedures and guidelines to be followed in the future regarding disposal of the subject wastes at the Base Sanitary Landfill. Enclosure (1) has been developed with the understanding that the Industrial Hygienist, Naval Regional Medical Center, will conduct on-site air monitoring of asbestos handling activities at the landfill.

2. Point of contact with this matter is Mr. L. D. Shepard, extension 5158.

F. H. MOUNT

Copy to:
BSafetyO
NRMC (Industrial Hygienist)

DEPARTMENT OF THE NAVY
RESIDENT OFFICER IN CHARGE
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO:

JAX/80/GNS/fao
20 May 1982

From: Resident Officer in Charge of Construction, Jacksonville NC Area
To: Base Maintenance Officer

Subj: Cement-Asbestos siding and shingles; disposal of

Ref: (a) BMO ltr MAIN/JIW/spk 6240 of 16 Feb 82
(b) Phoncon btwn LCDR Sniffin (AROICC) and Mr. L. D. Shepard (Base Maintenance) of 18 May 82

Encl: (1) Procedures for Disposal of Cement-Asbestos Siding and Shingles by Contractors at Base Sanitary Landfill (Revised 19 May 1982)

1. Reference (a) established procedures for disposal of cement-asbestos siding in the Base Sanitary Landfill. During reference (b), Mr. Shepard expressed a desire to cover the asbestos debris only once a day at 1500 to save landfill space and allow sufficient time for covering at the end of each day. The enclosure is a revision of enclosure (1) to reference (a) which is provided for your records and which is being distributed to appropriate contractors.

2. It is requested any future changes to the enclosure be discussed with this office prior to implementation so the contractors can be notified before the changes become effective.

G. W. SNIFFIN
By direction

Distribution list:
(05)
20
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95
02

ENCL (1)

Revised 19 May 1982

PROCEDURES FOR DISPOSAL OF CEMENT-ASBESTOS SIDING AND SHINGLES

BY

CONTRACTORS AT BASE SANITARY LANDFILL

1. Director, Maintenance and Repair Branch (M&R), Base Maintenance Division, (451-5855, 5184) will be given 5 working days notice of initial delivery of asbestos-cement siding or shingles.

2. M&R Director will be furnished a schedule showing estimated volume (in cubic feet or yards/week) of asbestos to be disposed of. Unless the above prior arrangements are made, contractor may incur delays in disposal of the asbestos material.

3. Asbestos-cement will be accepted for disposal only if:

a. Asbestos-cement is free of lumber and other debris and refuse.

b. Truck is securely covered with tarpaulin (or equivalent) to prevent discharge of asbestos dust or debris during transportation.

c. Asbestos-cement is thoroughly moist.

4. Transporter will submit vehicle to inspection by a landfill operator prior to uncovering truck.

5. Transporter will dump the debris where directed by the landfill operator. After dumping debris, vehicle will not be moved until securely covered.

6. Transporter will celan up any asbestos-cement improperly spilled during disposal.

7. The landfill operator will normally cover the debris at 1500. Debris dumped between 0900 and 1430 will be covered with polyethylene sheet by the transporter to prevent release of dust prior to covering by landfill operator. Debris will not be accepted after 1500.

8. Transporters not following above procedures will be barred from the landfill.

Enclosure (1)

9/30/83

Alex
Do you agree w/ the
suggested changes?
EL

:ELR:sj

1983

From: Pul
To: Ba

Subj: Asl

Ref: (a)

Encl: (1)

1. The re [illegible] the enclosure is forwarded indicating proposed changes.

E. L. ROUSE
By direction

Copy to:
→FAC

29 SEP 1983

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PWO:04:ELR:sj
5101
28 Sep 1983

From: Public Works Officer
To: Base Safety Manager

Subj: Asbestos Control Program

Ref: (a) SAFD ltr SAFD/TWR/twr P5101.20 of 8 Aug 1983 w/attachment

Encl: (1) Proposed changes to BO-P5101.20

1. The reference has been reviewed and the enclosure is forwarded indicating proposed changes.

E. L. ROUSE
By direction

Copy to:
FAC

29 SEP 1983

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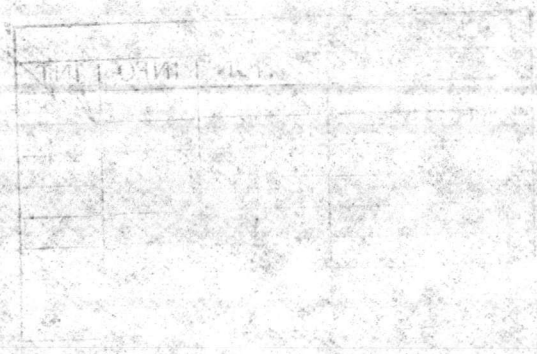

PROPOSED BO-P5101.20 ASBESTOS CONTROL COMMENTS

Enclosure (2) to the proposed Base Order

Add another paragraph:

"9. Asbestos insulated pipe may be cut in lengths with insulation still on pipe, ends sealed and deposited in landfill, regardless of pipe size."

To require field stripping and bagging of asbestos insulation from pipe tremendously increases both exposure hazard and cost. A change to policy preventing the stripping of asbestos insulation from pipe is essential.

PROPOSED BO 1001. Scope: Change to read:

"1. This program applies to anyone aboard the Camp Lejeune Complex."

This wording includes bonafide guests, visitors, TAD persons, hunters, even trespassers. The proposal wording leaves voids in coverage which could later create a problem.

1002 Responsibility: Also needed is:

"Detection of existing asbestos installation in proposed construction work shall be the responsibility of the Base Maintenance Officer (BMO) or the Public Works Officer (PWO).

"Identification of suspected samples shall be the responsibility of....."

a. Detection and identification of asbestos in work proposed to be done by BMO in-house forces or PWO contract forces or architect-engineer contractors is a real problem at present. No clear responsibility for detection is funded; no identification program is funded, therefore, the taxpayers frequently pay for asbestos removal wth contract change order funds, a very expensive cure for the problem. In 1981 Contract N62470-81-C-3559 all work in Building H-324 had to be deleted from the contract due to the non-availability of FY-81 O&MMC funds to change order removal of asbestos not detected or identified before bid opening, as noted in Enclosure (1). There have been too many other instances where change order funds were available. Detection and identification should occur before the bidding documents are issued for bids. It must be noted that much design work is being done by architect-engineer contract not by in-house forces, therefore, any program must have a span of control to encompass A/E's also.

Page 1-5:

5. Resident Officer in Charge of Construction (ROICC) is only in charge of NAVFAC contract administration on contracts awarded at LANTDIV, Norfolk. On contracts awarded here at Camp Lejeune it is "Officer in Charge of Construction (OICC). The title should encompass both "OICC/ROICC".

Page 1-5 last line and 1-5 line 1:

Change "contract clause" to "contract provisions". A NAVFAC contract clause must be reviewed by NAVFACHQ and incorporated into printed General Provisions. Public Works Department and OICC/ROICC can develop locality contract provisions for local use, but not clauses.

Page 1-5

b. Contract specifications do not contain such provisions.

d. Cement-asbestos roofing is also found aboard Camp Lejeune.

e. ROICC/OICC title discussed previously.

As previously noted, a detection and identification program before construction is essential.

Page 1-7

6.2 NRMC....Industrial Hygienist has been approached about identifying samples so that proper PWO/OICC/ROICC contract provisions could be prepared. NRMC Industrial Hygienist lacked staff and funding for such large scale sample identification.

Page 1-8

Last line on page - Identify "PPE" more clearly.

Page 2-9

1. Caution signs on jobs by contract shall be provided by the Contractor. This needs to be mentioned here so we don't have anyone requiring Base signs on Contractor sites.

NAVFAC Guide Specifications NFGS - 02075, REMOVAL AND DISPOSAL OF ASBESTOS MATERIALS, might be incorporated in this Base Order by reference. A copy is enclosed for your perusal.

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U U N C L A S S I F I E D U
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ROUTINE

R 191652Z DEC 84

FM SECNAV WASHINGTON DC

TO ALNAV

UNCLAS //N05212//

ALNAV 145/84
SUBJ: ASBESTOS RELATED RECORDS

A. SECNAVINST 5212.10

1. REF A PROVIDES A LIST OF STANDARD SUBJECT IDENTIFICATION CODES (SSIC) WHICH IDENTIFY FILES WHICH MAY CONTAIN INFORMATION ON ASBESTOS OR INSULATION MATERIAL. THESE FILES HAVE BEEN FROZEN AND ARE NOT TO BE DESTROYED.

2. COMMANDS SHOULD REVIEW THE REQUIREMENTS OF REF A AND ENSURE THAT NO UNAUTHORIZED DESTRUCTION OF ANY OF THESE RECORDS PRESENTLY STORED IN FEDERAL RECORDS CENTERS OR ANY ASBESTOS RELATED RECORDS CURRENTLY HELD LOCALLY OCCURS.

3. PERSONNEL REQUIRING ADDITIONAL GUIDANCE SHOULD CONTACT MS. K. HARTING, NAVAL DATA AUTOMATION COMMAND, CODE 17, WASHINGTON DC 20374, COMMERCIAL (202) 433-2835 OR 433-4217; AUTOVON 288-2835.

BT

DEC 20 1984

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DLVR:FLDMEDSERVSCOL CAMP LEJEUNE NC(2)...ACT
DLVR:II MAF ARCTIC WAR TRNG GRU(3)...ACT
DLVR:NAVINVSERVRA CAMP LEJEUNE NC(2)...ACT
DLVR:CG SIXTH MAB(6)...ACT
DLVR:FSMAO ONE CAMP LEJEUNE NC(2)...ACT
DLVR:NAVDENCLINIC CAMP LEJEUNE NC(4)...ACT
DLVR:RSU CAMP LEJEUNE NC(2)...ACT
DLVR:MTCC CAMP LEJEUNE NC(1)...ACT
DLVR:NAVHOSP CAMP LEJEUNE NC(4)...ACT
DLVR:DPDO CAMP LEJEUNE NC(4)...ACT
DLVR:NAVREL CAMP LEJEUNE NC(1)...ACT
DLVR:RASC CAMP LEJEUNE NC(2)...ACT
DLVR:NAVMARTRIJUDCIR PIEDMONT CAMP LEJEUNE NC(2)...ACT
DLVR:PERSUPPDET CAMP LEJEUNE NC(4)...ACT
DLVR:ROICC NAVREGMEDCEN CAMP LEJEUNE NC(4)...ACT
DLVR:HQ NUC II MAF(7)...ACT
DLVR:HQ MARCOR LIAISON OFFICER CAMP LEJEUNE NC(2)...ACT
DLVR:MARCORENGSCOL CAMP LEJEUNE NC(2)...ACT
DLVR:ROICC JAXNCA CAMP LEJEUNE NC(1)...ACT
DLVR:ECOASTCMSYCOMPLEX CAMP LEJEUNE NC(2)...ACT
DLVR:INFTRNGSCOL CAMP LEJEUNE NC(2)...ACT
DLVR:MARCORSVCSPTSCOL CAMP LEJEUNE NC(2)...ACT

MANP(2)...ACT FOR CG MCB CAMP LEJEUNE(124) 05212/15/0395
BCOS(1) BSDO(1) CEOB(1) OICB(1) SSTF(92) GSTF(12) OCDR(14)

SVC/ RTD:000-042/COPIES:0185

381689/354 2 OF 2 MATA0639 354/17:42Z 191652Z DEC 84
CSN:AUIB00344 SECNAV WASHING

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6280/2
FAC

24 AUG 1984

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commanding General, 2d Force Service Support Group (Rein), FMFLANT, Camp Lejeune, North Carolina 28542

Subj: ASBESTOS IN BUILDINGS FC-305 AND FC-306

Encl: (1) Background information and data on asbestos in Buildings FC-305 and FC-306

1. The enclosure provides copies of correspondence and data relating to the asbestos contaminated ceiling coating in FC-305 and FC-306. The record reflects conscientious and responsive action to minimize and/or eliminate personnel exposure to the maximum extent possible. I am sure you will agree, however, we must remain vigilant and persistent until the final asbestos particles are removed. To this end, I have directed my staff to monitor and expedite action wherever possible.

2. In spite of the actions taken by both our commands to this point, the enclosure would suggest some occupants are still not informed, or fail to understand the situation. Any action you might take to clarify this matter to the present occupants of the subject buildings would be appreciated.

L. H. BUEHL

Writer: B. Elston, FAC, X3034
Typist: N. Henderson, 24 Aug

BACKGROUND INFORMATION AND DATA

ON

ASBESTOS IN BUILDINGS FC-305 AND FC-306

A. CG, MCB ltr to CMC dtd 24 Aug 84

B. Senator Riegle's ltr to CMC w/encls

Enclosure 1 - NavHosp ltr dtd 30 Dec 83
Enclosure 2 - PWO ltr dtd 9 May 84

C. Analysis of ambient air samples

D. CG, 2d FSSG ltr dtd 12 Jan 84

ENCLOSURE (1)

5700
FAC
24 AUG 1984

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (LFF-2/Maj Kelly)

Subj: ASBESTOS INQUIRY FROM SENATOR RIEGLE

Ref: (a) PONECON btwn Maj Kelly, HQMC (LFF-2), and Mr. Elston, Dep AC/S, Fac MCB of 17 Aug 84
(b) Sen Riegle's ltr of 8 Aug 1984

1. As requested during reference (a), the following is a proposed response to reference (b).

"We share your concerns regarding exposure of Marines to potentially harmful levels of asbestos in the unaccompanied enlisted personnel housing as expressed in your letter of August 8, 1984. The industrial hygiene survey of November 22, 1983 conducted by Environmental Health Technicians did confirm the ceiling materials contained asbestos but did not determine the concentration levels. Immediately after learning of the industrial hygiene survey results in late December 1983, ambient air samples were taken on January 12, 1984 to determine the absolute concentration levels and thus the exposure hazard to occupants, if any.

"The results of the four ambient air samples showed concentrations of 1.68, 0.67, 0.516 and 0.353 fibers per cubic centimeter, respectively. Occupational Safety and Health Act (OSHA) standards prescribe permissible levels of exposure at 2.0 fibers per cubic centimeter. Accordingly, relocation as recommended in the initial survey of the buildings was not required based on asbestos concentration levels in the ambient air samples.

"Though the initial industrial hygiene survey did not determine the asbestos concentration levels, efforts to secure contract removal of the asbestos were initiated immediately upon learning the ceiling coating contained asbestos. This action was initiated on the premise that any personnel exposure to asbestos, regardless of the extent, must be eliminated or reduced to the minimum possible. Contractor efforts to remove the asbestos ceiling coating are scheduled to begin on or about September 1, 1984 and work will continue for 13 months at a cost of $150,000. The performance standards for this contract are very strict and will require an airtight seal between the workplace and the occupied portion of the building. Caution signs and labels will be displayed at each work site. During the removal and reconstruction, occupants of each affected wing will be relocated to other facilities.

"Additional personnel notification and education measures are being initiated to ensure to the maximum extent possible our Marines are aware of the specific problem and ongoing actions to

eliminate same. To further ensure protection against potential health hazards, the Command will perform extensive personnel and environmental monitoring by industrial hygienists during and after the work.

"As described above, a significant effort is being expended to ensure the health, welfare and safety of the occupants. Additionally, the Commanding General, Marine Corps Base, Camp Lejeune, Brigadier General L. H. Buehl, has personally inspected the facilities in question and talked with personnel working and living there. We trust this information is adequate."

L. H. BUEHL

Blind Copy to:
CG, 2d FSSG
CO, NavHosp
SAFD
PWO
MAIN

Drafter: Mr. Elston/Typist: H Foster FAC 23Aug84

HEADQUARTERS, MARINE CORPS BASE, CAMP LEJEUNE

ACTION BRIEF

DATE: 23 Aug 84

Staff Section: Assistant Chief of Staff, Facilities

Subj: ASBESTOS INQUIRY FROM SENATOR DONALD W. RIEGLE, JR.

Ref: (a) FONECON btwn Maj Kelly, HQMC (LFF-2) and B. Elston, Dep AC/S, Fac on 17 Aug 84

Encl: (1) Senator Riegle's ltr dtd 8 Aug 84 w/encls
(2) Analysis of "Asbestos Suspect" Samples
(3) CG, 2d FSSG ltr 42/MJOM/vao over 11000 dtd 12 Jan 84
(4) Subsection 1910.1001 of OSHA 2206, Safety and Health Standards (29 CFR 1910) revised June 1981

Problem:

As a result of an industrial hygiene survey in November 1983, asbestos materials were detected in FC-305 and FC-306. The Naval Hospital recommended several measures, one of which was to relocate the personnel as soon as arrangements could be made.

Background/Discussion:

During the reference, Major Kelly advised of receipt of Senator Riegle's letter [enclosure (1)] and noted it had come to the attention of the Commandant. Major Kelly telefaxed copy and requested we prepare a suggested response for the Commandant.

In reviewing the background data, it was determined that in addition to the initial industrial hygiene survey in November 1983, ambient air samples were taken thereafter in January 1984. The results of the samples were received in April 1984 and showed the asbestos concentration to be within tolerance. The results of the air samples testing are attached as enclosure (2).

Second FSSG personnel have been questioned as to what information, if any, was provided to the occupants and also what other actions, if any, were taken by FSSG. Second FSSG advises 8th Comm Bn (occupant of the buildings) received a copy of the original notification (NavHosp ltr dtd 30 Dec 1983) and individual occupants were notified orally via company formations. Second FSSG also requested asbestos be removed as per enclosure (3).

As requested by the Commanding General, copy of the OSHA standard is attached as enclosure (4). Additionally, a recommended letter to CG, 2d FSSG is attached herewith as requested.

Recommended Action:

Sign the attached letters.

Very respectfully,

B. W. ELSTON

Writer: B. Elston
Typist: N. Henderson, 23 Aug

MEMORANDUM OF CALL

Previous editions usable

TO:

☐ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

OF (Organization)

☐ PLEASE PHONE ▶ ☐ FTS ☐ AUTOVON

☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

MESSAGE

BOB ALEXANDER

RECEIVED BY	DATE	TIME

63-110 NSN 7540-00-634-4018 STANDARD FORM 63 (Rev. 8-81)
Prescribed by GSA
☆ GPO : 1982 O - 381-529 (230) FPMR (41 CFR) 101—11.6

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
OPNAVINST 5100.23B
OP-45
31 August 1983

OPNAV INSTRUCTION 5100.23B

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Navy Occupational Safety and Health (NAVOSH) Program Manual

Ref: (a) SECNAVINST 5100.10E (NOTAL)
(b) OPNAVINST 5100.8F

Encl: (1) Navy Occupational Safety and Health Program Manual

1. Purpose

a. To reaffirm the Navy Occupational Safety and Health (NAVOSH) Program for all Navy personnel as required by reference (a).

b. To implement the following Department of Defense (DOD) instructions:

(1) DODI 1000.18, of 29 June 1976, Federal and State Occupational Safety and Health Inspections at Contractor Workplaces on DOD Installations (NOTAL)

(2) DODI 6050.5, of 31 May 1979, DOD Hazardous Materials Information System Procedures (NOTAL)

(3) DODI 6055.1, of 30 December 1981. DOD Occupational Safety and Health Program (NOTAL)

(4) DODI 6055.2, of 3 ... ent (NOTAL)

(5) DODI 6055.3, of 8 ... L)

(6) DODI 6055.5, of 30 ... ccupational Health (NOTAL)

2. Cancellation. OPNAVINSTs 5100. ... 60.2.

3. Discussion

a. References (a) and (b) contai ... n-sibilities for the implementation of ... l Health (S&OH) Program. The Navy S&OH ... disciplines such as aviation safety, ... safety (recreation, public, and traffi ... safety as well as occupational health. As the title imp..., the NAVOSH Program specifically

B Safe O
what is this
mean

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
OPNAVINST 5100.23B
OP-45
31 August 1983

OPNAV INSTRUCTION 5100.23B

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Navy Occupational Safety and Health (NAVOSH) Program Manual

Ref: (a) SECNAVINST 5100.10E (NOTAL)
(b) OPNAVINST 5100.8F

Encl: (1) Navy Occupational Safety and Health Program Manual

1. Purpose

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(2) DODI 6050.5, of 31 May 1979, DOD Hazardous Materials Information System Procedures (NOTAL)

(3) DODI 6055.1, of 30 December 1981, DOD Occupational Safety and Health Program (NOTAL)

(4) DODI 6055.2, of 3 May 1978, Personal Protective Equipment (NOTAL)

(5) DODI 6055.3, of 8 June 1978, Hearing Conservation (NOTAL)

(6) DODI 6055.5, of 30 April 1980, Industrial Hygiene and Occupational Health (NOTAL)

2. Cancellation. OPNAVINSTs 5100.14, 5100.23A, 5103.1, 6260.1B, and 6260.2.

3. Discussion

a. References (a) and (b) contain policy statements and outline responsibilities for the implementation of the total Navy Safety and Occupational Health (S&OH) Program. The Navy S&OH Program encompasses all safety disciplines such as aviation safety, weapons/explosives safety, off-duty safety (recreation, public, and traffic), and occupational safety as well as occupational health. As the title implies, the NAVOSH Program specifically

b. At least annual inspections of all workplaces by qualified OSH inspectors. Forces afloat workplace inspections will require Immediate Superior in Command (ISIC) assistance in scheduling and obtaining qualified inspectors.

c. Prompt abatement of identified hazards. To the maximum extent practicable, all hazards shall be eliminated or minimized through engineering or administrative controls. Where engineering or administrative controls are not feasible, appropriate personal protective equipment shall be provided at government expense. Where hazard abatement resources are limited, priorities shall be assigned to take care of the most serious problems first. Appropriate notices shall be posted to warn employees of unabated serious hazards and to provide interim protective measures.

d. Procedures for all personnel to report suspected hazards to their supervisors and/or safety and health officials without fear of reprisal. Allegations of reprisal for such participation shall be filed in accordance with existing grievance procedures.

e. Appropriate OSH training for safety and health officials, all supervisory personnel and employees. Applicable OSH requirements shall be integrated into training programs and technical and tactical publications.

f. Procedures to review, in advance of construction/procurement, the design of facilities, systems, and subsystems to ensure that OSH hazards are eliminated or controlled throughout the life cycle.

g. Thorough mishap investigations and a comprehensive OSH management information system which provides all OSH data required by higher authority.

h. Comprehensive occupational health surveillance programs, both medicine and industrial hygiene, implemented by qualified personnel.

i. Procedures to recognize superior or deficient OSH performance. Performance evaluations shall reflect personal accountability in this respect, consistent with the duties of the position, with appropriate recognition of superior performance, and conversely, adverse notation or administrative action, as appropriate, for deficient performance.

1005. Applicability

a. The provisions of this manual apply to all Navy civilian and military personnel and operations ashore and afloat worldwide except in those areas wherein responsibility for such a program rests with the Commandant of the Marine Corps. Exceptions or specific limitations are also made, as required, for military unique equipment, systems, and operations including specific delineation of applicable provisions to forces afloat (see 1005.d); for

Fibers found in barracks at Lejeune

W-Star Star?

By Jack Murphy
Staff Writer

CAMP LEJEUNE — Base officials say that 380 Marines are living in barracks where they may be exposed to asbestos.

January tests for asbestos in the two barracks revealed 0.1 through 1.6 fibers per cubic centimeter, said Gunnery Sgt. Mike Branski of the Joint Public Affairs Office for Camp Lejeune.

Federal regulations say a structure must be evacuated when the fiber count is 2 per cubic centimeter, Branski said.

By late summer or early fall, base officials will evacuate the residents and have the asbestos removed. The asbestos is in ceiling coatings and the Marines have solicited bids for the work.

Each of the barracks — FC-305 and 306 in the French Creek area — has 190 residents.

"The big problem in those barracks was in the lounge areas, where they (troops) take their pool sticks and scrape them across the ceilings and that would dislodge particles," said Gary Horne, a civil engineer who works for the Navy.

"We didn't see any evidence of major damage to the ceilings in the sleeping rooms," he said.

STAND BY FOR A BLAST!

Navy Cmdr. Charles A. Johannesmeyer, who is in charge of construction on the base, was asked whether the fibers pose a health threat. "No, you can't say that," Charles said. "Was there a potential that they (troops) were exposed to airborne fibers? Sure, because we had an asbestos acoustical insulation and some of it was dropping down."

The buildings were completed in 1970 at a cost of $652,000 each. "Asbestos was banned in 1973 — friable asbestos as a building material," Horne said.

The problem in the barracks involves friable asbestos. This is "asbestos in a form which can be broken in pieces and therefore fibers can become airborne and ingested into the lungs," Johannes-

'The big problem in those barracks was in the lounge areas, where they take their pool sticks and scrape them across the ceilings and that would dislodge particles.

Civil engineer Gary Horne, who works for the Navy

Sixteen bids ranging from $92,000 to $485,000 have been received for the work, Horne said. The government estimate is $189,000.

"The low bid is suspect," Horne said. "It's too low, so we've gone back to the man for a verification.

Asbestos removal is expensive but worthwhile, Johannesmeyer said. "It's a shame we don't know more, because really all they know is that asbestos fibers in the air can be a health hazard," he said. "We just don't know enough, so what you have to do is be safe."

Johannesmeyer said he has 15 or 16 contracts per year that include asbestos removal. This project is the first that deals only with asbestos removal, he said.

Buildings at Camp Lejeune date from the base's origin in the 1940s. "Generally, asbestos is encountered in piping, wire insulation and boiler jobs," Johannesmeyer said. "Anything involving heat, that's where we expect to find it.

"As we replace a plumbing system, for instance, in a building that was constructed in the '40s, the first thought that comes to mind is most likely we're going to have to have an asbestos removal provision in our contract. We verify that either by observation or if we're not sure by letting the environmental type

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, N.C. 28542

IN REPLY REFER TO
371-bhy
6260.10
29 Feb 1984

From: Commanding Officer
To: Commanding General, Second Force Service Support Group (Rein), FMFLANT, Camp Lejeune, NC 28542

Subj: Asbestos Surveys in the French Creek Area; report of

Ref: (a) CG, 2dFSSG ltr, 42/MJOM/vao, 11000 dtd 10 Jan 84

1. In response to reference (a), the subject surveys were conducted in Buildings FC 304, 309, 310 and 311, to determine the existence of asbestos health hazards. The survey was held on 27 January 1984, by Mr. J. McCloskey, Environmental Health Technician and HMC D. Crane, USN.

2. Findings. Evidently, the application of sprayed on asbestos materials in facilities in this section of the French Creek complex was limited to Buildings FC-305 and 306. No spray applied surfaces were observed in FC-304, 309, 310 and 311. All surfaces in the latter group of buildings appeared to be of similar construction. None of the surfaces were suspected of being asbestos. An elemental analysis Field Screening Test of typical ceiling material taken from Room #114, Barracks #FC-304, was negative for asbestos.

C. Z. Henderson

C. Z. HENDERSON
By direction

Copy to:
MedOff, 2dFSSG
SafOff, 2dFSSG
IndHygOf, 2dFSSG

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, N.C. 28542

IN REPLY REFER TO
371-dlm
6260.10
30 Dec 1983

From: Commanding Officer
To: Commanding General, 2d Force Service Support Group (Rein), FMFLant, Camp Lejeune, NC 28542

Subj: Industrial Hygiene Survey for Asbestos Materials in Barracks #FC-305 and FC-306; report of

Ref: (a) OPNAVINST 5100.23B, Chap 17

1. The subject survey was conducted on 22 November 1983 by Mr. J. McCloskey, Environmental Health Technician and HMC D. Patton, USN in conjunction with SSgt Smith, 8th Communication Battalion, S-4. The survey was held subsequent to notification that some surfaces in FC 305 and 306 were suspected of being asbestos. Considering present concerns about asbestos, as a disease causing agent the purpose of the survey was directed toward the hazard potential. Telephone confirmation for the presence of asbestos in samples taken from the barracks in question was received on 1 December 1983, from the Industrial Hygiene Laboratory, Naval Shipyard, Charleston, South Carolina.

2. Background. Asbestos used in construction materials may be found in hard substances such as floor or ceiling tiles or soft, loosely bound materials which are often sprayed on surfaces to serve as fire retardants or for accoustical purposes. Asbestos fibers in the hard materials are firmly bound and do not, generally, create an exposure hazard. But, the soft, loosely bound (friable) materials are of much greater concern. Fibers may be released from friable substances as a result of breakdown in the integrity of the material which loses cohesive strength as it ages. Fibers may be released via air currents and vibration. Fall out of fibers from deteriorated surfaces is usually low level but continuous. Fiber release from contact depends upon accessibility and the degree of damage. Contamination in a space can be very high for brief periods of time and then gradually decrease as the fibers settle. Fibers which have settled can be resuspended in breathing zones of individuals by normal activities and custodial work.

3. Findings. The inspection revealed soft, friable ceiling coatings in all living spaces, rec rooms and some passageways. Varying degrees of damage to the material was noted in every space. Apparently, the damage has resulted from the following causes:

a. When the door of the top clothes locker compartment is raised the latch or hasp which extends out scrapes the ceiling.

b. Maintenance work, ie., rearrangement of light fixtures, etc..

c. Deterioration of the material due to water leakage.

d. Damage from pool cues. Some surfaces in the rec rooms show wear in areas which are low and accessible to the extended arm.

371-dlm
6260.10
30 Dec 1983

Subj: Industrial Hygiene Survey for Asbestos Material in Barracks #FC-305 and FC-306; report of

e. There are also various size gouges/holes from unknown causes.

4. Comments and Recommendations. Personnel residing in Barracks FC-305 and 306 should be relocated as soon as arrangements can be made. This action is felt necessary due to the likelihood of low level exposures and intermittent greater exposures from vandalism and/or separation of wet materials from the underlying surfaces. Relocation of the individuals who reside in rooms where water damage has occurred should receive priority. All friable materials containing asbestos should be removed and handled in accordance with the safety precautions contained in reference (a) prior to reassignment of personnel to the Barracks. The following interim measures should be implemented to minimize further exposures where appropriate:

a. Personnel should be advised of the hazard and the possible consequences of further damage to the surfaces.

b. Pool table/cues should be removed unless the friable surfaces are protected by a barrier.

c. Damaged areas, especially those with ragged edges should be painted to seal the material and minimize fiber release.

d. No maintenance work involving the friable material should be performed without implementation of appropriate asbestos safety measures. This includes, at least, temporary relocation of room occupants and isolation of the work site.

e. Hasps/latches on the door of the top clothes locker compartment should be removed or otherwise prevented from coming into contact with the ceilings.

G. L. WINTERS
By direction

Copy to:
CO, 8th Comm Bn
Saf Off, 2d FSSG
Med Off, 2d FSSG
Base Maint Off
Pub Wks Off

5700
FAC

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commandant of the Marine Corps (LFF-2/Maj Kelly)

Subj: ASBESTOS INQUIRY FROM SENATOR RIEGLE

Ref: (a) FONECON btwn Maj Kelly, HQMC (LFF-2), and Mr. Elston, Dep AC/S, Fac
(b) Sen Riegle's ltr of 8 Aug 1984

1. As discussed during reference (a), the following is a proposed response reference (b).

"We share your concerns regarding exposure of Marines to potentially harmful levels of asbestos in the unaccompanied enlisted personnel housing as expressed in your letter of August 8, 1984. Immediately following the industrial hygiene survey, efforts to secure contract removal of the asbestos materials were initiated. Further, results of ambient air sampling indicated exposure levels less than the permissible concentration of two fibers per cubic centimeter to which personnel may be exposed as established by Navy directives. Relocation, as recommended in the initial survey of the buildings, was not feasible due to absence of available space, nor was relocation required based on asbestos concentration levels in the ambient air samples.

"Contractor efforts to remove the asbestos ceiling coating are scheduled to begin on or about 1 September 1984 and work will continue for 13 months at a cost of $150,000. The performance standards for this contract are very strict and will require an airtight seal between the workplace and the occupied portion of the building. During the removal and reconstruction, occupants of each affected wing will be relocated to other facilities.

"In order to further protect against potential health hazards, this Command will perform extensive personnel and environmental monitoring by industrial hygienists during and after the work. Caution signs and labels will be displayed at each work site and necessary personnel notification and education measures will be taken.

"As described above, a significant effort is being expended to address this complex and potentially serious health problem. We trust this information is adequate."

M. G. LILLEY
By direction

Drafter: Mr. Alexander/Typist: H. Foster, FAC,20Aug84

Prior to reconstruction, personnel were not moved from FC 305, 306 due to a shortage of Enlisted billeting space. This shortage no longer exists and steps can now be taken to move these marines to other quarters.

We share your concerns
we acted immediate promptly upon learning
thoroughly

Project 5th ...
protective features . seal monitors
Relocation

Because of your concern we're taking addit'l
measures to advise & monitor

Public work letter dtd 9 May 84 has stated milestones for progress in repair of related quarters #C 305, 306.

By approximately 22 Aug 1984 contract # N62470-84-7870 should be in effect and work started soon there after

During the reconstruction phase the marines will be slightly inconvenienced as they will be relocated to other ~~be~~ Quaters provided by base facilities.

Upon completion of the reconstruction the marines will then be able to return to their previus quarter.

Billy

Here's what I feel our response should be:

Gentlemen:

In response to your letter dtd 8 Aug 84 the following statement is submitted.

We are aware of the lab results of samples taken 1 Dec 83 in enlisted quarters FC 305, 306. These results were conveyed to this office by Department of the Navy letter 371-dlm, 6260.10 dtd 30 Dec 83.

Upon receipt of said letter, action was taken through public works to initiate a contract to repair, replace or renovate as required.

Concentration (fiber/cu.cm)	Time	Action
≥ 0.1	8-hr TWA	Medical Surveillance
≥ 0.5	any time (per day)	" "
≥ 10.0	any time (instantaneous)	" "
2.0	"8-hr TWA"	Permissible Exposure Limit (PEL)

POM-86 DEFICIENCY PRIORITIES

1. All deficiencies should be listed in priority sequence. Definitions of priorities are:

Priority 1. Deficiencies which impinge upon the ability to adequately accomplish the command's mission. An example of this deficiency classification would be cost of utilities.

Priority 2. Unfunded requirements which fall short of being absolutely essential as defined in Priority 1, but are of such magnitude that deficiencies in this priority could cause a marked deterioration in the ability of the command to accomplish its mission. However, continued underfunding of these financial programs from year to year could result in a reclassification to a Priority 1 item. Examples of items in this category would be certain supplies amd equipment.

Priority 3. A priority of less magnitude than 1 or 2, but important to the overall effectiveness of the command. Again, failure to fund these deficiencies would not mean mission degradation except over a period of years. An example is T/E replacement which implies a full complement of equipment on hand, but not necessarily in 100% condition Code "A".

Priority 4. Items categorized as desirable which would enhance the effectiveness of command. However, failure to fund these programs would not have an adverse effect on command posture. An example of items in this priority would be equipment identified in allowance lists and considered "nice to have" after other more critical priorities are funded.

d. Permissible Exposure Limits (PELs)

(1) "Time-Weighted Average (TWA)" - The 8-hour TWA airborne
R) concentration of asbestos fibers to which personnel may be exposed shall not exceed two fibers per cubic centimeter of air (2 f/cc).

(2) "Ceiling Limit" - Personnel shall not be exposed at any
R) time to airborne concentrations of asbestos in excess of ten fibers per cubic centimeter of air (10 f/cc).

2. Engineering and Work Practice Control Measures

a. Local exhaust ventilation is frequently required to ensure that atmospheric levels of asbestos do not exceed the PELs. General requirements for the design and use of ventiliation to reduce exposures can be found in attachment (1). Specific guidance in adapting attachment (1) to each asbestos operation may be obtained from the cognizant industrial hygienist - see enclosure (3).

b. As practicable, asbestos shall be handled, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the PELs.

c. Asbestos-free substitute materials shall be tested under the technical management of cognizant headquarters activity and, if acceptable, shall be used in place of asbestos-containing materials.

d. All external surfaces in the work area where asbestos is handled shall be maintained free of visible accumulations of loose asbestos fibers which could result in airborne concentrations in excess of the PELs set forth in paragraph 1d.

e. Disposal of asbestos, asbestos-containing materials, and asbestos-contaminated waste shall be in accordance with the procedures listed in attachment (2).

f. To minimize exposure potential, shipboard or shore facility asbestos removal operations shall, to the maximum extent feasible, be performed during the second or third shifts or on weekends and holidays.

3. Personal Protective Equipment

a. Compliance with the PELs shall not be achieved by the use of respirators except as indicated in attachment (3). Assistance in the specific application of attachment (3) may be obtained from the cognizant industrial hygienist - see enclosure (3).

b. Special clothing such as coveralls, disposable whole body clothing, hoods, gloves and foot coverings shall be supplied

NAVOSH EXPOSURE STANDARDS, CONTROL, AND MEDICAL SURVEILLANCE REQUIREMENTS FOR ASBESTOS

1. Definitions

a. Fiber. A rod-shaped particle whose length-to-diameter ratio, or aspect ratio, is equal to or greater than 3:1, and whose length is greater than 5 micrometers. Airborne asbestos concentrations will be expressed as "counts," i.e., the number of fibers per cubic centimeter of air (f/cc). Sampling and counting methodologies are prescribed in paragraphs 4 and 5 below.

b. Asbestos Medical Surveillance Program (AMSP). This program consists of a periodic medical screening examination, which may include special purpose histories, physical examinations and laboratory tests, directed at detecting early changes in specific organ systems which have been identified with asbestos disease. Those individuals who, because of the nature of their job, must work with, or be in the vicinity of, operations which generate airborne asbestos shall be included in the medical surveillance program; and inclusion is not based solely on the determination that an individual has been overexposed.

c. Medical Surveillance Action Level (MSAL). The MSAL is (R
the airborne concentration of asbestos fibers used to qualify an employee for placement in the AMSP. This MSAL has three separate and distinct criteria designed to assure that all individuals, currently or previously exposed, will be included in the AMSP. The MSAL is defined to include any individual, who because of Navy employment is:

(1) Required to enter or work in areas which could potentially contain an 8-hour time-weighted average (TWA) concentration of asbestos at or above 0.1 fibers/cubic centimeter (f/cc), or

(2) Required to enter or work on a regular basis in areas which could potentially contain concentrations of asbestos at or above 0.5 f/cc for any length of time ("on a regular basis" is defined as 15 separate days in any quarter during a calendar year or 45 days per year), or

(3) Exposed at any time, for any length of time, to airborne concentrations of asbestos at or above the "ceiling limit" of 10.0 f/cc.

The aforementioned term "Medical Surveillance Action Level" is defined and used only for the purpose spelled out specifically in this instruction and to identify those individuals who will be included in the Asbestos Medical Surveillance Program. The MSAL criteria are summarized as follows:

CONCENTRATION (F/CC)	DURATION	FREQUENCY
Equal to or greater than 0.1	8-hour TWA	On any occasion
or		
Equal to or greater than 0.5	For any length of time per day	15 days/quarter or 45 days/year
or		
Equal to or greater than 10.0	For any length of time	On any occasion

Enclosure (1)

to and worn by personnel whose jobs require them to be in areas where the airborne asbestos concentration exceeds or is likely to exceed the PELs. See attachment (4) for details. (R

c. Change rooms shall be provided as close as practical to the asbestos work area when the airborne concentration of asbestos fibers exceeds the PELs. Details are provided in attachment (4). (R

4. Method of Measurement. All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 400-450 magnification, using phase contrast illumination, with sample mounted in a high viscosity solution of membrane filter material. If the material which is suspected of being the source of the airborne fibers is known to contain asbestos, then all airborne fibers (having an aspect ratio of 3:1 and longer than 5 micrometers) are to be counted as asbestos. (R

5. Air Sampling Requirements

a. Environmental Sampling - A workplace monitoring plan shall be established to characterize the airborne asbestos levels generated by all operations. Within a class or category of similar operations, sampling shall be of such frequency and pattern as to accurately and reproducibly represent the airborne levels produced by a typical operation within the class or category. Sampling of all areas where repetitious asbestos work is performed shall be at intervals of six (6) months or less, to verify that the work site or operation has remained in the same class or category. Each non-repetitious asbestos removal operation will be sampled at least once to determine the maximum exposure potential of that operation. Each asbestos removal operation aboard ship will require at least one air sample to be taken upon completion of the operation to verify that clean-up operations were effective and that the area is safe for personnel to enter without protective equipment. (R

b. Personnel Sampling - Samples shall be collected from within the breathing zone of personnel, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken to determine both the TWA asbestos concentratiion and the peak concentration. Filters should be precounted to determine the average background count. Persons counting filters shall be judged proficient by successful participation in the Proficiency Analytical Testing (PAT) program administered by the National Institute for Occupational Safety and Health (NIOSH). Only phase contrast microscopes especially set up for asbestos counting should be utilized. Persons performing dispersion staining to differentiate asbestos from non-asbestos fibers shall be specifically trained in this technique. Their proficiency shall be verified with standard laboratory quality control techniques approved by the Navy Environmental Health Center (NAVENVIRHLTHCEN) - see paragraph 3 of enclosure (3). (R

c. Sampling Validity/Reliability - Measurement and monitoring shall be conducted under the technical direction of the
R) cognizant industrial hygienist in accordance with the provisions of reference (b). Sources of industrial hygiene assistance are provided in enclosure (3).

d. All environmental and personnel air sampling records shall be retained for a period of 50 years following termination
A) of service of employment of the individual to whom the records refer. Each individual, currently or previously employed by the Department of the Navy, or any other person he or she may designate shall have access to all such records within 15 days of the request.

6. Caution Signs and Labels

a. Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may exceed the PELs. Signs shall be posted at a distance such that personnel may read the signs and take necessary precautions before entering the area marked by the signs. Signs may be sized to suit the particular situation. A listing of required protective equipment may be attached to or be part of the sign. The following criteria represent the minimum requirements: caution signs shall conform to the general requirements of 20" by 14" vertical format
R) signs. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision:

LEGEND	NOTATION
Asbestos	1" Sans Serif, Gothic or Block
Dust Hazard	3/4" Sans Serif, Gothic or Block
Avoid Breathing Dust	1/4" Gothic
Wear Assigned Protective Equipment	1/4" Gothic
Do Not Remain in Area Unless Your Work Requires It	1/4" Gothic
Breathing Asbestos Dust May be Hazardous to Your Health	14 point Gothic

Spacing between lines shall be at least equal to the height of the upper of any two lines.

b. Caution labels shall be affixed to containers of raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers if, in the foreseeable use, handling, storage, disposal, processing or transportation of these items, levels of airborne asbestos could be produced which might constitute a threat to health. The caution labels shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers

Avoid Creating Dust

Breathing Asbestos Dust May Cause
Serious Bodily Harm

7. Criteria for Inclusion of Personnel in the AMSP

a. Inclusion of any individual in the AMSP is determined by his or her degree of exposure to asbestos during the course of their Navy employment. Inclusion of a particular individual in the AMSP is required if the criteria in section 1c are reached or exceeded. (A

b. For past exposures to asbestos, medical personnel attempting to determine whether to place an individual in the AMSP must be guided by the exposure history in the absence of more definitive exposure records. A history of participation in any operation where visible asbestos dust was present, including but not limited to rip-outs, shall be considered to have been an exposure in excess of the ceiling value. Histories are to be obtained utilizing attachment 5 (suggested format). (A

8. Medical Surveillance Examinations

a. Preplacement. All naval personnel, both military and civilian, upon assignment to a position involving work in areas where the airborne concentration of asbestos will equal or exceed the MSAL, shall have a health evaluation. This evaluation shall be performed prior to assignment and shall include the following: (R

(1) A comprehensive occupational history, attachment (5), detailing prior potential exposure to harmful chemical or physical respiratory hazards, particularly asbestos. Any adverse effects related to these exposures must also be recorded. (R

(2) A physical examination with special emphasis on the chest, particularly the presence of persistent "dry rales" or "crackles" at the lung base.

(3) A 14" x 17" posterior-anterior chest roentgenogram. These films shall be interpreted locally in accordance with current radiological practices. In addition, these films shall
R) also be interpreted in accordance with the ILO International Classification of Radiographs of Pneumoconioses - 1980. To obtain ILO interpretations for their films, local medical facilities shall contact the NAVENVIRHLTHCEN - see paragraph 3 of enclosure (3).

(4) Pulmonary function tests, including forced expiratory volume in one second (FEV_1) and forced vital capacity (FVC). Such tests should be performed, calculated, and interpreted in accordance with the NAVENVIRHLTHCEN Technical Manual 77-1, May 1977 (NOTAL).

R) (5) A judgment of the individual's ability to use respiratory protective equipment.

(6) The findings of severe respiratory impairment from any cause, e.g., FEV_1/FVC less than 45% or FVC less than 70% of predicted or the presence of documented actual or probable pulmonary asbestosis, should be considered disqualifying for initial assignment. Any other abnormalities discovered in the course of the preplacement evaluation should be investigated to determine if they could substantially increase the risk of asbestos-induced disease.

b. Periodic and Termination-of-Employment. Medical evaluation identical to the preplacement evaluation shall be conducted
R) in accordance with the medical surveillance examination schedule below. In addition, individuals working in areas where the asbestos concentration did not equal or exceed the MSAL during the past year, but who believe they have been exposed to undetermined levels of asbestos fibers at some time during the course of their Navy employment, shall complete, at least one time, a medical surveillance questionnaire (suggested format, attachment 5). Based on the review of this questionnaire, individuals shall be placed in the ASMP if it can be reasonably concluded that their potential exposures could have been at or above the MSAL. The
R) placement of personnel in the AMSP is based on a history of exposure or potential exposure at or above the MSAL as judged by competent medical personnel. Placement of any individual in the AMSP is a permanent action. Once placed in the AMSP, regardless of the original placement criteria, that individual shall remain in the AMSP for the duration of his or her Navy employment. The frequency of re-examination will vary, according to age, work history, and medical findings. NOTE: If records indicate that the individual has received an annual asbestos examination within the past twelve months, a termination examination is not required.

c. Frequency. Asbestos medical examinations shall be conducted in accordance with the following schedule: (A

Category	Criteria	Schedule for (Re)examination	
1	Preplacement: Upon assignment to a position which involves working in areas where asbestos concentrations will be at or above the MSAL.	Prior to assignment	(A
2	Periodic: Personnel working in areas where the asbestos concentration was at or above the MSAL in the past year.	Annually	(A
3	Periodic: Personnel not working in areas where the asbestos concentration was at or above the MSAL in the past year, but with a history of such work experience (see paragraph 7):		(A
	a. 45 years of age or younger AND less than 15 years history of working in areas where the asbestos concentration was at or above the MSAL.	At 5-year intervals	
	b. Over 45 years of age OR 15 or more years history of working in areas where the asbestos concentration was at or above the MSAL.	Annually	

d. Personnel shall be counselled regarding any abnormalities detected during any screening test, and the medical records so noted and signed by both the counselling physician and the patient. (R

9. Diagnosis of Asbestosis and Related Disorders

a. The diagnosis of "asbestosis" is presumptive with known past exposure to asbestos (the presence of pleural changes or asbestos bodies in the sputum may support or suggest past exposure) and two or more of the following criteria:

(1) Dyspnea (shortness of breath) on exertion,

(2) Persistent basal inspiratory "crackles" or "dry rales,"

(3) Diffuse interstitial changes on the chest roentgenogram

R) (4) Reduction in vital capacity and/or diffusion capacity,

(5) Digital clubbing.

b. In early stages of the disease, dyspnea and roentgenographic changes may not be present and the only screening abnormalities may consist of a slight reduction in the vital capacity, and end-inspiratory rales. A history of exposure to asbestos is
R) critical to the diagnosis. It is unusual for pulmonary asbestosis to develop with less than 10 years of exposure. Individuals with medical findings suggestive of asbestosis, but not supported by an adequate history of exposure, should undergo further evaluation by a pulmonary disease specialist to rule out other diagnoses.

c. Personnel who have been exposed to asbestos in the past and show abnormal lung changes, e.g., pleural plaques and/or pleural thickening, shall be considered as having an asbestos-related disorder and be placed in the AMSP.

10. Medical Records

a. All personnel who are included in the AMSP shall have the exterior of their Health Records prominently marked "ASBESTOS."

b. Each individual record must include the following identifying information:

(1) Name,

(2) Social Security No.,

(3) Date of birth,

(4) Dates of examinations, and

(5) Job titles, job codes, and/or primary and secondary Navy Enlisted Classification Code (NEC).

c. All records of examinations, possible asbestos-related conditions, related x-ray interpretations and all forms and correspondence related to the individual's medical history shall become a permanent part of the Health Record and be retained for a period of 50 years following termination of service or employment. X-ray films shall be retained for a period of five (5) years.

d. The judgment of the occupational health physician concerning the adequacy of the diagnostic information to support the impression of asbestos-related disease shall be entered in the medical record. Lacking definitive information, the evaluating physician must exercise his best medical judgment in each individual case.

e. Each individual currently or previously employed by the Department of the Navy or any other person he or she may designate shall have access to all the records, as defined in paragraph c above, within 15 days of the request. (A

f. Copies of any examinations, x-ray reports, or special studies in an individual's Health Record or compensation folder shall be made available to a physician of the individual's choice after execution of a proper release-of-information form. (R

g. Medical records as defined in paragraphs b and c above shall be maintained locally and data reported to BUMED's Occupational Exposure Data Bank. (A

11. Personnel Notification. Any individual found to have been exposed at any time during the course of their Navy employment to airborne concentrations of asbestos fibers in excess of either PEL shall be notified in writing of the exposure as soon as practicable but not later than 5 days after the finding. The individual shall also be notified in a timely manner of the corrective action being taken. (A

12. Education

a. All personnel currently working in areas where the MSAL is exceeded, as defined in paragraph 1c, and their supervisors, shall receive a detailed indoctrination, and periodic refresher instruction at least semi-annually. (R

b. The initial indoctrination shall include all of the following:

(1) Hazards of asbestos,

(2) Safe handling and disposal procedures,

(3) Proper use of protective equipment,

(4) Association of cigarette smoking and asbestos-related disease, and

(5) Procedures for reporting actual or suspected exposure to asbestos. (R

c. All personnel, including supervisors, who are not in the Asbestos Medical Surveillance Program, as defined in paragraph 1b,
R) but who could incidentally come in contact with asbestos or asbestos-containing materials, shall be informed of the potential risk and proper precautionary procedures.

13. Outside Contractor

a. Each contract for work to be performed by an independent contractor within the United States, which may involve the release of asbestos fibers, shall incorporate the appropriate references or specific contract clause or clauses necessary to assure that:

(1) the contractor is aware of the potential hazard to his/her employees and others,

(2) the contractor shall take such special precautions
R) (i.e., references (a) and (d)) as are necessary and appropriate to protect his/her employees, as well as others, from any physical harm.

b. The Chief of Naval Material shall issue appropriate guidance to all activities which contract for services involving a possible asbestos exposure hazard, including a standard contract clause or clauses and instructions for their use. The contract
A) clause must require the contractor to measure and control asbestos fibers outside his asbestos boundary to less than 0.5 fibers/cc at all times. Appropriate monitoring and enforcement of the contract provisions is required.

We share your concerns regarding exposure of Marines to potentially harmful levels of asbestos in the enlisted housing as expressed in your letter of August 8, 1984. Immediately following the industrial hygiene survey, efforts to secure contract Removal ~~actions were initiated to remove~~ of the asbestos materials were initiated. ~~the asbestos materials.~~ Further, results of ambient air sampling indicated exposure levels less than the permissible concentration (of 2 fibers per cubic centimeter) as established by Navy to which personnel may be exposed.

Contractor efforts to remove the asbestos ceiling coating is scheduled to begin within two to three weeks and continue for 13 months (at a cost of $150,000). The performance standards for this contract are very strict and will require an airtight seal between the workplace and the occupied portion of the building. During the removal and reconstruction, occupants (of each affected wing) will be relocated to other facilities. Relocation, as recommended in the initial survey of the buildings, was not feasbile due to absence of available space.

In order to further protect against potential health hazards, this Command will perform extensive personnel and environmental monitoring ~~will be performed~~ during and after the work by industrial hygienists. Caution signs and labels shall be displayed at each work site and additional personnel ~~education measures~~ (notification and) will be taken.

As described above, ~~A~~ significant effort is being expended to address this complex and potentially serious health problem. We trust this information has fulfilled your needs. If you desire further details on this matter, please contact me at any time.

ATTN
Colonel Lilley
MR ELLSTON

I called the Senator's
admin Asst to
note the change in
ORC's. Letter took 6 days

United States Senate

WASHINGTON, D.C. 20510

August 8, 1984

Gen. Robert Barrow
U.S. Marine Corp HQ
Commandment of the Marine Corps
Washington, D.C. 20380

Dear Gen. Barrow:

I am writing to you about a potential health hazard which has been brought to my attention in the enlisted living quarters at Camp Lejeune, North Caroline.

I have been contacted by enlisted personnel at Camp Lejeune because of their concern about the findings of asbestos in the construction materials in FC 305 and 306. Copies of the letters sent to the commanders on this subject are included.

The residents of the barracks are very concerned because, in spite of the recommendations, they have not been relocated, nor officially advised of the hazard. Many of these people have resided in the barracks for more than a year, and they are alarmed at the prospect of waiting another thirteen months before the problem is resolved.

I would greatly appreciate your immediate attention to this potentially serious problem. The Marines in question feel that they are not being treated fairly, and that adequate attention is not being given to their well-being. It does appear that relocation is warranted.

Thank you for you prompt assistance.

Sincerely,

Donald W. Riegle, Jr.

DWR/gh

Enclosures

705 Washington Square Bldg.

PWO:04:ELR:sj
84-B-7870
9 May 1984

From: Public Works Officer
To: Assistant Chief of Staff, Operations, 2d FSSG, FMF Atlantic, Camp Lejeune, North Carolina

Subj: Contract N62470-84-B-7870, Asbestos Removal, Buildings FC-305 and FC-306, Camp Lejeune, North Carolina

1. It is planned to accomplish certain repair/alterations to Buildings FC-305 and FC-306 in the near future under contract #N62470-84-B-7870. The work includes the removal and disposal of asbestos-containing ceiling coatings in two 2-story barracks, recoating of ceilings, and incidental related work. As such, some user inconvenience may result.

2. Current milestones include:

a. Bid opening around the week of 11 Jun 1984.

b. Preconstruction conference with the contractor, government inspectors, and facility managers within 30 to 60 days after bid opening.

c. Subsequent construction period of around 13 months.

3. Plans and specifications for this work will be available at the Public Works Division, POC: Mr. J. E. Fitch, Manager, Specifications and Estimates Section, extension 5507. User representation at the paragraph 2b preconstruction conference is recommended so potential conflicts of construction and user operation can be highlighted. Date and time of the preconstruction conference will be provided by separate correspondence. Accordingly, request a POC be designated.

E. L. ROUSE
By direction

Copy to:
FAC
MAIN
ROICC Office

1/22/54

Alex,

Please read & discuss w/ me. The thing that really bothers me is that there was no air samples taken. Can the threat be as serious as Winter's recommendation leads one to believe?

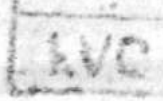
Carl

1/27: Samples requested

BMD: Project initiated

17 JAN 1984

FAC ROUTING	ACTION	INFO	INT
FACO			
4A			
4B			
4C			
4D			
4E			
4F			
4G			


AVC

20 JAN '84

Col Lilley:

1. Appears as if we may have a significant problem here.

2. Need to forward to PWO to come up with a solution. If we have to remove the asbestos, we really have a problem. Return & I'll draft letter to PWO.

f

UNITED STATES MARINE CORPS
2D FORCE SERVICE SUPPORT GROUP (REIN)
FLEET MARINE FORCE, ATLANTIC
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO
42/MJOM/vao
11000

JAN 12 1984

From: Commanding General
To: Commanding General, Marine Corps Base, Camp Lejeune NC
(Attn: Assistant Chief of Staff, Facilities)

Subj: Industrial Hygiene Survey in Bldg FC-305 and FC-306

Ref: (a) Fonecon between Mr. McCLOSKEY and Capt M.J. O'MAHONEY on 9 Jan 84

Encl: (1) CO, Naval Hospital ltr 371-dlm 6260.10 of 30 Dec 83

1. The Industrial Hygiene Survey in enclosure (1) indicates a potentially hazardous condition within the two buildings surveyed. Asbestos was used on the ceiling as a noise inhibitor. Deterioration has resulted in suspension of asbestos fibers in the air. It is believed that the same condition may exist in French Creek buildings 304,309, 310 and 311. They are of the same age and construction. Inspection of these buildings will be undertaken immediately.

2. As discussed during the reference, the spraying of the affected area with a sealant (either latex base paint or a similar type of material) is a suitable, although interim, solution. The ultimate solution is removal of the asbestos.

3. Alternate billeting for approximately 400 personnel during renovation of subject barracks is not currently feasible. Solutions to this problem must be pursued as a matter of utmost priority. Point of contact for this Headquarters is Capt O'MAHONEY (FacO) ext 3456/1042.

R. L. BRINEGAR
Chief of Staff

file 024

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, N.C. 28542

IN REPLY REFER TO
371-dlm
6260.10
30 Dec 1983

From: Commanding Officer
To: Commanding General, 2d Force Service Support Group (Rein), FMFLant, Camp Lejeune, NC 28542

Subj: Industrial Hygiene Survey for Asbestos Materials in Barracks #FC-305 and FC-306; report of

Ref: (a) OPNAVINST 5100.23B, Chap 17

1. The subject survey was conducted on 22 November 1983 by Mr. J. McCloskey, Environmental Health Technician and HMC D. Patton, USN in conjunction with SSgt Smith, 8th Communication Battalion, S-4. The survey was held subsequent to notification that some surfaces in FC 305 and 306 were suspected of being asbestos. Considering present concerns about asbestos, as a disease causing agent the purpose of the survey was directed toward the hazard potential. Telephone confirmation for the presence of asbestos in samples taken from the barracks in question was received on 1 December 1983, from the Industrial Hygiene Laboratory, Naval Shipyard, Charleston, South Carolina.

2. Background. Asbestos used in construction materials may be found in hard substances such as floor or ceiling tiles or soft, loosely bound materials which are often sprayed on surfaces to serve as fire retardants or for accoustical purposes. Asbestos fibers in the hard materials are firmly bound and do not, generally, create an exposure hazard. But, the soft, loosely bound (friable) materials are of much greater concern. Fibers may be released from friable substances as a result of breakdown in the integrity of the material which loses cohesive strength as it ages. Fibers may be released via air currents and vibration. Fall out of fibers from deteriorated surfaces is usually low level but continuous. Fiber release from contact depends upon accessibility and the degree of damage. Contamination in a space can be very high for brief periods of time and then gradually decrease as the fibers settle. Fibers which have settled can be resuspended in breathing zones of individuals by normal activities and custodial work.

3. Findings. The inspection revealed soft, friable ceiling coatings in all living spaces, rec rooms and some passageways. Varying degrees of damage to the material was noted in every space. Apparently, the damage has resulted from the following causes:

a. When the door of the top clothes locker compartment is raised the latch or hasp which extends out scrapes the ceiling.

b. Maintenance work, ie., rearrangement of light fixtures, etc..

c. Deterioration of the material due to water leakage.

d. Damage from pool cues. Some surfaces in the rec rooms show wear in areas which are low and accessible to the extended arm.

ENCLOSURE ( )

371-dlm
6260.10
30 Dec 1983

Subj: Industrial Hygiene Survey for Asbestos Material in Barracks #FC-305 and FC-306; report of

e. There are also various size gouges/holes from unknown causes.

4. Comments and Recommendations. Personnel residing in Barracks FC-305 and 306 should be relocated as soon as arrangements can be made. This action is felt necessary due to the likelihood of low level exposures and intermittent greater exposures from vandalism and/or separation of wet materials from the underlying surfaces. Relocation of the individuals who reside in rooms where water damage has occurred should receive priority. All friable materials containing asbestos should be removed and handled in accordance with the safety precautions contained in reference (a) prior to reassignment of personnel to the Barracks. The following interim measures should be implemented to minimize further exposures where appropriate:

a. Personnel should be advised of the hazard and the possible consequences of further damage to the surfaces.

b. Pool table/cues should be removed unless the friable surfaces are protected by a barrier.

c. Damaged areas, especially those with ragged edges should be painted to seal the material and minimize fiber release.

d. No maintenance work involving the friable material should be performed without implementation of appropriate asbestos safety measures. This includes, at least, temporary relocation of room occupants and isolation of the work site.

e. Hasps/latches on the door of the top clothes locker compartment should be removed or otherwise prevented from coming into contact with the ceilings.

G. L. WINTERS
By direction

Copy to:
CO, 8th Comm Bn
Saf Off, 2d FSSG
Med Off, 2d FSSG
Base Maint Off
Pub Wks Off

UNITED STATES MARINE CORPS
2D FORCE SERVICE SUPPORT GROUP (REIN)
FLEET MARINE FORCE, ATLANTIC
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO
42/MJOM/vao
11000

JAN 12 1984

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To: Commanding General, Marine Corps Base, Camp Lejeune NC
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3. Alternate billeting for approximately 400 personnel during renovation of subject barracks is not currently feasible. Solutions to this problem must be pursued as a matter of utmost priority. Point of contact for this Headquarters is Capt O'MAHONEY (FacO) ext 3456/1042.

R. L. BRINEGAR
Chief of Staff

what kind of samples were taken?
what are exposure levels?

How much should be removed?

can be left w/ changes in optics
(get the word out)

file
OM

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, N.C. 28542

IN REPLY REFER TO
371-dlm
6260.10
30 Dec 1983

From: Commanding Officer
To: Commanding General, 2d Force Service Support Group (Rein), FMFLant, Camp Lejeune, NC 28542

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a. When the door of the top clothes locker compartment is raised the latch or hasp which extends out scrapes the ceiling.

b. Maintenance work, ie., rearrangement of light fixtures, etc..

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ENCLOSURE ( )

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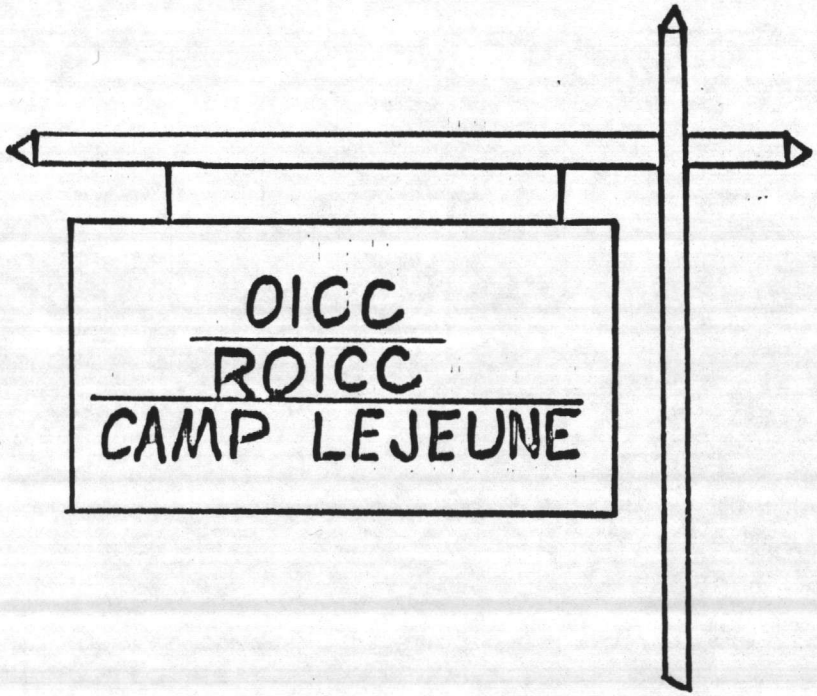
G. L. WINTERS
By direction

Copy to:
CO, 8th Comm Bn
Saf Off, 2d FSSG
Med Off, 2d FSSG
Base Maint Off
Pub Wks Off

ASBESTOS REMOVAL & DISPOSAL ABOARD CAMP LEJEUNE



Written by: G. R. HORNE

Many construction contracts aboard the Marine Corps Base, Camp Lejeune, Complex involves the removal and disposal of construction materials containing asbestos in one form or another. Friable asbestos is found in materials such as pipe and duct insulation in which the asbestos fibers easily become airborne when disturbed. Friable asbestos is considered to be an extremely dangerous material and the ROICC office is legally mandated to ensure that such materials are removed and disposed of properly and safely. Other materials, such as cement asbestos siding and wallboard, are not considered friable if they are removed and handled properly. Removal of such materials, however, must be accomplished in such a manner so as not to free bonded fibers and must be disposed of in accordance with NIOSH and Marine Corps Base regulations. This pamphlet is provided and in an attempt to answer questions contractors may have regarding asbestos demolition and disposal and hopefully will be read in its entirety before your asbestos program is submitted. Nothing in this pamphlet should be construed as modifying or superceding the contract documents.

FRIABLE ASBESTOS

Contracts requiring the removal and disposal of friable asbestos will provide specific and detailed requirements for such work in Section 02075 of the specifications. The "Description of Work" paragraph will usually explain where the asbestos is expected to be found, what type of materials is present, if known, and will also establish the control zone requirements.

Section 02075 should be read carefully before any submittals relating to this section are forwarded. Special attention should be directed toward ensuring that the "Asbestos Plan" is complete and accurate. No demolition work will be allowed to commence until all required submittals are approved and no AROICC or Construction Representative has the authority to waive any or all requirements addressed in Section 02075.

Disposal:

friable

Contracts require that asbestos be deposited at an EPA approved disposal site. The Base Sanitary Landfill, is the State and EPA sanctioned site and is available for use by contractors provided the following requirements are satisfied:

a) The ROICC must be informed at least five days in advance of the anticipated delivery date of the asbestos material to the Landfill. On larger projects, the notification should be accompanied by a cubic yard estimate of the anticipated volume, updated weekly, if the disposal extends for more than one week. This will give the Landfill operators a rough idea of the size and location of the trenches which must be dug to accept the materials. The Government will be responsible for digging the

trenches and covering the debris at the end of the working day. Debris will not be accepted after 3:00 PM.

b) Asbestos disposal is restricted to one designated location in the Landfill so the Landfill operators must be informed of and direct each delivery. Trucks hauling asbestos must be properly covered with tarpaulins or equivalent. Trucks not covered or covered properly will not be allowed to use the Landfill.

c) Asbestos will be accepted only if double-bagged in heavy-duty plastic bags which are clearly marked "Asbestos". If a contractor desires to handle the asbestos in a manner other than double-bagging, written application, along with a description of the proposed deviation, must be submitted to the ROICC.

d) Asbestos insulated steam and condensate piping with the asbestos insulation in tact will be accepted if the following requirements are met:

-The pipe is cut in ten foot or shorter lengths.
-The ends of the insulated pipe must be thoroughly wetted and wrapped in a double layer of plastic wrapping. The entire length of the pipe need not be bagged unless the pipe jacket is damaged.
Delete ~~-The pipe must be properly bagged as explained on paragraph 'c' above.~~
-The pipe is placed in the burial trenches in an orderly, compact fashion with the lengths of pipe all oriented in the same direction and horizontal to the bottom of the pit.

NON-FRIABLE ASBESTOS

Demolition of non-friable asbestos construction materials, such as asbestos-cement siding and shingles, must be accomplished in a careful manner to prevent asbestos fibers from breaking bond and becoming airborne. The ROICC may require monitoring if it is felt that removal is not being handled in a safe manner.

The ROICC must be given at least five working days notice of the initial delivery of asbestos-cement siding or shingles along with a cubic yard bolume estimate. A volume estimate should be provided weekly for multi-week demolition projects. The volume estimates will be used by the Landfill operators to dig sufficiently sized trenches to accept all materials delivered the following week.

Disposal:

The disposal requirements for non-friable asbestos differ from friable asbestos in that it is not required to bag the debris. The following regulations apply, however, if the materials are to be disposed of at the Base Sanitary Landfill:

a) The asbestos-cement siding, wallboard, shingles, or other non-friable materials is free of lumber and other debris and refuse.

b) The asbestos debris is thoroughly mositened.

c) Trucks are securely covered with tarpaulin or equivalent to prevent discharge of asbestos dust or debris during transporation.

d) The contractor will submit the vehcile(s) to inspection by a Landfill operator prior to uncovering.

e) Contractors will dump the debris where

directed by the Landfill operators. After dumping, vehicle(s) will not be moved until securely recovered.

f) Contractor(s) will clean up any asbestos materials improperly dumped or spilled during transporting and/or disposal.

The Landfill operator will normally cover the trenches at 3:00 PM. Debris dumped between 9:00 AM and 2:30 PM must be covered with polyethylene sheets by the contractor to prevent release of dust prior to covering by the Landfill operator. Debris will not be accepted after 3:00 PM sharp.

Any questions or deviation request from the requirements discussed in this pamphlet should be submitted to the OICC/ROICC sufficiently in advance of demolition to prevent delays or misunderstandings.

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

From: Director, Operations Branch
To: A C/S FACILITIES (ATTN BOB ALEXANDER)

Subj: ASBESTOS HANDLING

Bob -

We added one comment in Green on Page 3 concerning acceptance of debris in landfill. Due to our operators schedule we cannot accept betwe 09:00 AM or after 3:00 PM.

Dick Miller

ASSISTANT CHIEF OF STAFF, FACILITIES
HEADQUARTERS, MARINE CORPS BASE

DATE 8 Dec 83

TO:

(BASE MAINT O)	DIR, FAMILY HOUSING
PUBLIC WORKS O	DIR, UNACCOMPANIED PERS HSG
COMM-ELECT O	BASE FIRE CHIEF

Subj: ASBESTOS Brochure developed by ROICC; Review

~~ATTN~~: _____

1. Attached is forwarded for ~~info~~/(action.)

Your comments are requested

2. Please initial, or comment, and return all papers to this office, since all comments will be made on 1 copy.

3. Your file copy

Thanks,
Bob A.

"LET'S THINK OF A FEW REASONS
WHY IT CAN BE DONE"

DEPARTMENT OF THE NAVY

Memorandum

NAV 5216/144A (Rev. 8-81)
0107-LF-052-2320

DATE: 5 Dec 1983

FROM: Env Engr, Acfs Fac
Base Safety Officer
Dir., NREAD

SUBJ: Asbestos Handling Brochure

- Please review for accuracy of wording on disposal and control zone regents.
- Call me w/ your comments on or before 13 Dec 83 (ext 3034/5).
- Keep in mind this should be a brief, but accurate guidance to the contractor.

Thanks,

Bob A.

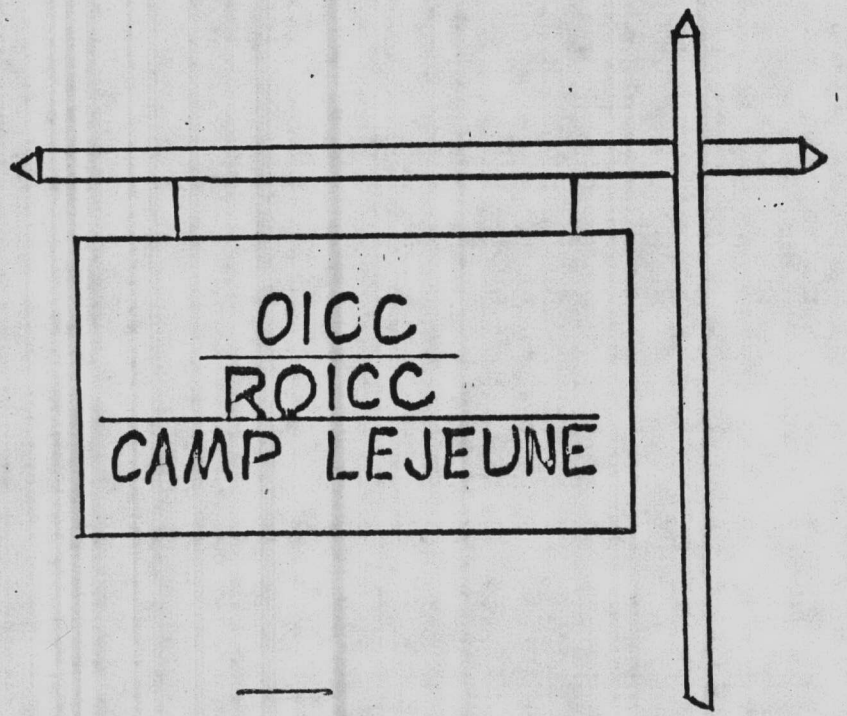
From: Acting Director NREAD
TO: ENV Engr, ACfs FAC
Subj: SAME AS Above
The Attached Brochure has been reviewed and comments penciled in. Recommend BMU be given a Chop on this matter.

I agree. Alex

Danny Sharp
acting Director

7 Dec 83

ASBESTOS REMOVAL & DISPOSAL ABOARD CAMP LEJEUNE



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a) The ROICC must be informed at least five days in advance of the anticipated delivery date of the asbestos material to the Landfill. On larger projects, the notification should be accompanied by a cubic yard estimate of the anticipated volume, updated weekly, if the disposal extends for more than one week. This will give the Landfill operators a rough idea of the size and location of the trenches which must be dug to accept the materials. The Government will be responsible for digging the

trenches and covering the debris at the end of the working day. Debris will not be accepted before 9:00 AM or after 3:00 PM. except in an emergency.

D ~~b)~~ Asbestos disposal is restricted to one designated location in the Landfill so the Landfill operators must be informed of and direct each delivery. Trucks hauling asbestos must be properly covered with tarpaulins or equivalent. Trucks not covered or ~~not~~ covered properly will must be ~~not be allowed to use the Landfill.~~ parked until approval of corrective actions by ROICC.

b) ~~c)~~ Asbestos will be accepted only if double-bagged in heavy-duty plastic bags which are clearly marked "Asbestos". If a contractor desires to handle the asbestos in a manner other than double-bagging, written application, along with a description of the proposed deviation, must be submitted to the ROICC for APPROVAL.

c) ~~d)~~ Asbestos insulated steam and condensate piping with the asbestos insulation in tact will be accepted if the following requirements are met:

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c) Trucks are securely covered with tarpaulin or equivalent to prevent discharge of asbestos dust or debris during transporation.

d) The contractor will submit the vehicle(s) to inspection by a Landfill operator prior to uncovering.

e) Contractors will dump the debris where

directed by the Landfill operators. After dumping, vehicle(s) will not be moved until securely recovered.

f) Contractor(s) will clean up any asbestos materials improperly dumped or spilled during transporting and/or disposal.

The Landfill operator will normally cover the trenches at 3:00 PM. Debris dumped between 9:00 AM and 2:30 PM must be covered with polyethylene sheets by the contractor to prevent release of dust prior to covering by the Landfill operator. Debris will not be accepted after 3:00 PM sharp.

ALL CAPS - New Heading

Spill Cleanup and Reporting

Contractor(s) will clean up any asbestos materials improperly dumped or spilled during transporting or disposal. Any vehicle discovered to be discharging Asbestos will be immediately parked. ROICC will be Notified. Vehicle will Not be moved until Asbestos is properly secured.

Any questions or deviation request from the requirements discussed in this pamphlet should be submitted to the OICC/ROICC sufficiently in advance of demolition to prevent delays or misunderstandings.

5100.23B

MASTER DIRECTIVES FILE
~~HDQTRS, MCB CLNC~~

5 ; 5 H

DEPARTMENT OF THE NAVY
Office of the Chief of Naval Operations
Washington, DC 20350

OPNAVINST 6260.1B
OP-45
12 February 1982

OPNAV INSTRUCTION 6260.1B w/ch1

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Control of Asbestos Exposure to Naval Personnel and Environs

R) Ref:
(a) Code of Federal Regulations, Title 29, Chapter XVII, Part 1910, Sub Part Z, Section 1910.1001 (29 CFR 1910.1001) (NOTAL)
A) (b) OPNAVINST 5100.23A
R) (c) Clean Air Act, as amended, 42 U.S.C. § 7401 *et seq.* (1971) (NOTAL)
(d) 40 CFR Part 61 (1977) (NOTAL)
(e) OPNAVINST 5100.8E

R) Encl:
(1) NAVOSH Exposure Standards, Control, and Medical Surveillance Requirements for Asbestos
(2) National Emission Standard for Asbestos
(3) Industrial Hygiene Technical Assistance Directory

1. Purpose

a. **Occupational Health** - To comply with the national safety and health standards on asbestos, promulgated in reference (a), by issuance of a Navy Occupational Safety and Health (NAVOSH) Standard, in accordance with reference (b).

b. **Environmental Protection** - To comply with the National Emission Standard for asbestos, promulgated by reference (c) and implemented by reference (d).

2. Cancellation. OPNAVINST 6260.1A.

3. Background

a. Asbestos is a general term used to describe several fibrous mineral silicates. Although there are many asbestos minerals, only six are of commercial importance: chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. Major uses of asbestos are: asbestos cement products, floor tiles, fireproofing, high temperature insulation, asbestos cloth, friction materials (such as brake linings and clutch facings), various gasket materials, and miscellaneous other products.

b. Inhalation of asbestos fibers has been demonstrated to cause at least two distinct disease states. (R

(1) Asbestosis is a form of fibrosis of the lung which may become disabling or even fatal. The use of the term "asbestosis" in a generic sense for all asbestos-associated disorders (including pleural plaques) is imprecise and confusing.

(2) Asbestos has also been found to be a causal factor in the development of lung cancer, malignant mesothelioma, and cancer of the gastro-intestinal tract. A latency period of 20-40 years between first exposure to asbestos and the appearance of a malignancy has been observed.

c. Some examples of tasks which can generate concentrations of airborne asbestos which exceed permissible limits are: the fabrication, installation, repair or removal ("rip-out") of asbestos insulation materials; power sawing of asbestos-containing fire retardant building materials; and brake relining and repair work.

d. Although asbestos-free substitute materials are being developed, asbestos materials continue to be used in the Navy in selected applications. In addition, ships presently (R in commission and shore installations both have asbestos boiler and pipe insulation that will eventually require rip-outs. The potential for personnel exposure will there- (R fore exist for another 20 or more years.

e. Recognizing the serious health implications of asbestos exposure, the government has imposed stringent (R occupational health and environmental protection standards (references (a) and (d) respectively) for the control of asbestos. These standards and controls, specified in enclosures (1) and (2), must be strictly enforced and followed by all Navy civilian employees, both appropriated and nonappropriated fund, and by all military personnel, both afloat and at all shore activities.

4. Action

a. The Chief, Bureau of Medicine and Surgery (BUMED), shall centrally manage the Asbestos Medical Surveillance Program ashore and afloat. BUMED shall also provide professional, technical, and health educational assistance (R to commands for the purpose of evaluating the potential for asbestos exposure in accordance with reference (e), and as prescribed in reference (b). Enclosure (3) provides

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a list of activities where industrial hygiene assistance is available.

b. The Chief of Naval Material shall, in coordination with BUMED, provide advice and technical assistance to define appropriate engineering and work practice con-
R) trols, and to identify acceptable asbestos-free substitute materials within the meaning of subparagraph 2c of enclosure (1).

c. Major claimants shall insure program support by budgeting the resources required to meet the regulatory standards for the control of asbestos as prescribed by this instruction.

d. Commanding officers for shore activities shall insure that:

(1) Appropriate occupational health/industrial hygiene control measures and monitoring procedures in enclosure (1), or headquarters-approved alternatives that provide substantially equivalent protection, are applied to processes and procedures using asbestos or asbestos-containing materials.

(2) The National Emmission Standard for Asbestos is complied with as prescribed in enclosure (2).

e. Commanding officers of afloat commands shall comply with the provisions of enclosure (1) to the maximum extent feasible, and shall obtain the necessary protective clothing and equipment to protect ships' force (R
personnel during shipboard removal of thermal asbestos insulation material. The Allowance Equipage List (AEL) (A
2-330024045 of 30 March 1980 has been provided to all afloat units, less those ships with minimal or no asbestos material aboard. Procedures for ship requisitioning of subject items and funding of item requirements resulting from COSAL changes are set forth in NAVSEAINST 7323.1 of 8 June 1977 (NOTAL).

A. M. SINCLAIR
Deputy Chief of Naval Operations (Logistics)
(Acting)

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DEPARTMENT OF THE NAVY
Office of the Chief of Naval Operations
Washington, DC 20350

OPNAVINST 6260.1B CH-1
OP-45
14 June 1983

OPNAV INSTRUCTION 6260.1B
CHANGE TRANSMITTAL 1

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Control of Asbestos Exposure to Naval Personnel and Environs

Encl: (1) Revised page 1, new page 1a and reprinted page 2, of enclosure (1)

1. Purpose. To incorporate the provisions of OSHA Instructions CPL 2-2.21A which establishes a triggering level of 0.1 fibers per cubic centimeter of air (f/cc) time-weighted average asbestos concentration for medical surveillance. The incorporation of this level complements the existing 0.5 f/cc medical surveillance action level (MSAL) provided in subject instruction.

2. Action. Remove pages 1 and 2 of enclosure (1) and replace with enclosure (1) of this change transmittal.

T. J. HUGHES
Deputy Chief of Naval Operations (Logistics)

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Engineering and Work Practice Control Measures

1. Local exhaust ventilation and dust collection systems shall be designed, constructed, installed and maintained in accordance with: (R

a. Industrial Ventilation - A Manual of Recommended Practice. Committee on Industrial Ventilation, American Conference of Governmental Industrial Hygienists, Inc. (R

b. American National Standard: Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2 1971. American National Standards Institute. (R

2. All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the PELs shall be provided with a local exhaust ventilation system.

3. It must be noted that ventilation systems used to control the generation of asbestos fiber exposures or emissions cannot be directly exhausted to the workroom or atmosphere. The use of High Efficiency Particulate Air (HEPA) filters with prefilters, or other collection systems approved by the cognizant industrial hygienist, is required to prevent the inadvertent production of an exposure hazard (see enclosure (2)).

4. Exhaust filtration systems must be meticulously maintained to prevent performance degradation of the ventilation system as a whole. Such maintenance work must be done in accordance with the provisions of the basic instruction.

5. To the extent feasible, local exhaust ventilation connected to HEPA or other approved filters should be provided at the point of airborne fiber generation. Capture velocities must be high enough to entrain generated fibers under the specific environmental conditions. Duct transport velocities must be high enough to prevent accumulation of fibers in the duct, and clean-out ports should be provided where necessary. Specific equipment design parameters (e.g., requirements for static pressure monitors), as well as protective clothing/respiratory protection and system servicing procedures for each operation must be provided/approved by the cognizant industrial hygienist.

6. Procedures shall be established that minimize the accumulation of waste dust or scrap materials. Specific procedures for containment of dust and handling of contained materials shall be instituted so that the possibility of secondary air contamination is minimized. Cleanup procedures based on wetting the material and use of approved vacuum cleaning systems for removal of debris shall be employed whenever possible.

7. Personnel engaged in the removal ("rip-out"), or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with a type "C" continuous flow or pressure demand, supplied air respirator and protective clothing in accordance with attachments (3) and (4). Care shall be taken to minimize the effects of meteorologic conditions, such as wind, to control the spread/increase of airborne concentrations of asbestos. Enclosures or temporary curtains shall be used to control the amount and velocity of air moving through the workplace, whenever possible.

8. Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation of airborne concentrations of asbestos fibers in excess of the PELs shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers and labeled in accordance with paragraph 6b of enclosure (1). Transportation of asbestos waste including piping or other debris resulting from demolition shall be conducted in a manner that does not release airborne asbestos fibers.

Disposal Procedures

1. Asbestos materials, properly contained and disposed of in an approved sanitary landfill that is operated in accordance with 40 CFR 241 guidelines, should not pose a hazard to human health or the environment.* The landfill operator must maintain daily compacted soil cover. Specific locations within landfills used for the disposal of asbestos materials should be recorded by the landfill operators with a copy retained by the cognizant naval facility for future reference. This practice should reduce the possibility of future unearthing and rupturing of disposal containers.

2. In preparation for disposal, asbestos wastes must be adequately wetted, when appropriate, prior to bagging in heavy-duty plastic bags or other suitable impermeable containers. All bags or containers must be provided with standard asbestos caution labels. Asbestos waste containers such as bags, trash cans, dumpsters, etc., shall be distinctively color-coded to assure easy recognition. Dumpsters shall be labeled "ASBESTOS WASTE ONLY" or otherwise marked in accordance with paragraph 6b of enclosure (1). Care must be exercised in order to prevent bags and other containers from rupturing when being moved to a dumpster or other suitable vehicle for transport to a proper disposal site.

3. For guidance concerning specific health-related precautions to be used for specific operations, consult the cognizant industrial hygienist - see enclosure (3). For guidance concerning specific environmental questions, or applicable local regulations, consult the Hazardous Waste Disposal Guide, NESO 20.2-011 of December 1976, Part IV; Directory of Contacts for Disposal Assistance (NOTAL).

*NOTE: Some states may require large quantities of asbestos materials to be disposed of in specially designated landfills. Consult appropriate state regulations prior to disposal.

Respiratory Protection

1. Engineering control measures shall be enployed to control and contain airborne asbestos fibers to the lowest feasible level. Compliance with PELs shall not be achieved by the use of respirators except under the following conditions:

a. during the time period necessary to implement engineering control measures,

b. in work situations for which the control methods prescribed are not technically feasible, or are feasible to an extent insufficient to reduce the airborne concentration of asbestos fibers below the PELs, and

c. during emergencies.

2. A respirator program shall be established as described in the American National Standards Institute (ANSI) publication American National Standard, Practices for Respiratory Protection, ANSI Z88.2-1980 as embodied in 29 CFR 1910.134 (NOTAL). (R

3. Where a respirator is required, it shall be selected from those approved for protection against exposure to asbestos by the National Institute for Occupational Safety and Health (NIOSH)or by the Mine Safety and Health Administration (MSHA). (R

4. Reusable or disposable single-use air purifying respirators should be NIOSH or MSHA approved for protection against pneumoconiosis and fibrosis producing dusts, including asbestos. They shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the PELs when the ceiling or the 8-hour TWA concentration of asbestos fibers is reasonably expected to exceed no more than 10 times the limit, based on data obtained in accordance with paragraph 5 of enclosure (1). (R

5. A full facepiece powered air purifying respirator, or a powered air purifying respirator shall be used to reduce the concentration of airborne asbestos fibers in the respirator below the PELs when the ceiling or the 8-hour TWA concentration of asbestos fibers is reasonably expected to exceed 10 times, but not 100 times, the limit, based on data obtained in accordance with paragraph 5 of enclosure (1).

6. A type "C" continuous flow or pressure-demand supplied-air respirator shall be used to reduce the concentration of airborne asbestos fibers in the respirator below the PELs when the ceiling or 8-hour TWA airborne concentration of asbestos fibers is reasonably expected to exceed 100 times those limits, based on data obtained in accordance with paragraph 5 of enclosure (1).

7. Breathing air or sources of breathing air for self-contained breathing apparatus and supplied-air respirators must conform to the requirements found in the following documents: 29 CFR 1910.134(d) (NOTAL); Federal Specification BB-A-1034a of 21 June 1968 (NOTAL), with Amendment 1 of 15 December 1970; and NAVFACINST 11300.24B of 2 August 1972 (NOTAL).

8. A person shall not be assigned to tasks requiring the use of respirators if, based upon his or her most recent medical examination, the examining physician determines that the person will be unable to function normally wearing a respirator, or that the safety or health of the person or other personnel will be impaired by his or her use of a respirator.

9. When data obtained in accordance with paragraph 5 of enclosure (1) is not available or is not relevant to a specific operation,
A) a type "C" continuous-flow or pressure-demand supplied air respirator shall be used to assure adequate personnel protection.

OPNAVINST 6260.1B
18 FEB 1982

MEDICAL SURVEILLANCE QUESTIONNAIRE

Sample Format

PRIVACY ACT STATEMENT

"The authority for collecting this information is Section 19 of the Occupational Safety and Health Act and the Code of Federal Regulations (29CFR 1960). This information will be used by the Occupational Health Physician, and/or such clinical staff as he may designate, to help identify the causes of adverse health effects and for future epidemiology studies. Providing this information is voluntary; however, failure to provide the information could unnecessarily hamper the identification of potential health problems and preclude any redress of problems identified in the future".

DATE OF SUBMISSION:

NAME	RANK/RATE	HOME ADDRESS/MILITARY UNIT	SEX (M/F)	DATE OF BIRTH	CURRENT JOB DESIGNATION

PART I - OCCUPATIONAL HISTORY

INSTRUCTIONS. Please complete the following work history; begin with your present job or military assignment, and list all jobs you have held. Be as specific as possible; if you held more than one job with the same employer, list each job title and activity. Use additional sheets as needed.

COMPANY OR MILITARY UNIT *•County and state where worked*	DATES WORKED		FULL/PART TIME JOB CHECK		JOB TITLE AND WORK ACTIVITIES	POTENTIAL HAZARDS EXPOSED TO		PROTECTIVE EQUIPMENT WORN *Respirator, ear plugs, etc.*
	FROM MO/YR	TO MO/YR	FULL	PART		PHYSICAL *Noise, vibration, etc.*	CHEMICAL *Heavy metals, Freon, solvents, etc.*	

Attachment (5)
to Enclosure (1)

SECONDARY (MOONLIGHTING) JOBS YOU HAVE HELD (*Firefighter, farmer, etc.*) JOB TITLE	DATES (MO/YR) FROM	TO

HOBBIES & ACTIVE SPORTS (*Past and present, such as painting, woodworking, scuba diving, etc.*)		

WORK-RELATED EXPERIENCES, COMMENT ON (*Those you feel may have been harmful to your health*)

PART II - RESPIRATORY SYMPTOMS

Based on a review of this completed medical surveillance questionnaire, placement in AMSP:

☐ IS RECOMMENDED

☐ IS NOT RECOMMENDED

REVIEWING MEDICAL DEPARTMENT OFFICIAL

Attachment (5)
to Enclosure (1)

National Emission Standard for Asbestos

1. General

a. Section 112 of reference (c) requires the administrator of the Environmental Protection Agency (EPA) to publish a list of hazardous air pollutants for which national emission standards will be promulgated. Reference (d) promulgated emission standards for four hazardous air pollutants: asbestos, beryllium, mercury and vinyl chloride. (R

b. Technical assistance for air pollution control is available upon request from the Engineering Field Divisions of the Naval Facilities Engineering Command.

c. Care must be taken to assure that measures to meet the emission standards are compatible with NAVOSH standards contained in enclosure (1) of this instruction, particularly with regard to collection devices and disposal procedures involved in asbestos fabrication (as in shipyard pipe or lagging shops), installation or removal operations. For additional information contact the industrial hygiene activities listed in enclosure (3). (R

2. Application of National Emission Standards for Asbestos

a. The National Emission Standards for Asbestos are contained in reference (d).

b. This standard became effective immediately upon publication and applies to asbestos mills, manufacture of asbestos products, demolition and renovation, spraying of asbestos, and the fabrication, insulation, and disposal of waste asbestos. It does not include fabrication or repair operations if the operation does not involve the production of asbestos cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving lap, or other textile material. (A

c. Demolition or modification of institutional, commercial or industrial buildings (including residential buildings containing 5 or more dwelling units) containing friable asbestos requires at least 20 days prior notice by prescribed format to the Administrator of EPA. The work must be accomplished in compliance with specific procedures for the removal and handling of friable asbestos-coated or -covered pipe, duct, boiler, tank, turbine, furnace or structural member.

d. Spray applications of materials containing more than 1% asbestos on a dry weight basis requires at least 20 days notice by prescribed format to the Administrator of EPA, and compliance

with emission limitations. Spray application of materials containing 1% or more asbestos is prohibited for buildings, structural members, pipes and conduits.

e. Rip-out of asbestos from commissioned ships is not included in the National Emission Standard; however, Navy ships are subject to state and local standards concerning asbestos rip-out from ships in state waters if such standards are applicable to ships, and are uniformly applied to all ships. Further, Navy ships must comply with NAVOSH Standards in enclosure (1) of this instruction. A)

f. Procedures for the handling, transporting and disposing of waste asbestos are prescribed in the Standards. Waste asbestos or asbestos-contaminated material must be wetted down and placed in impermeable containers prior to transporting for disposal. The containers must be labelled as prescribed in this instruction. The most commonly available disposal method is in a sanitary landfill operated in accordance with the requirements in Chapter 12 of OPNAVINST 6240.3E (NOTAL) and state and local permit requirements for sanitary landfills.

Industrial Hygiene Technical Assistance Directory

1. General. Industrial hygiene personnel at BUMED activities are available to (a) provide consultation on occupational health matters; (b) provide specific assistance in monitoring personnel exposures to toxic contaminants and other hazardous agents; and (c) evaluate the need for, and recommend as appropriate, the administrative and/or engineering controls and/or personal protective equipment required to control personnel exposures in any potentially hazardous situation.

2. Activities Located in non-BUMED Commands. Request industrial hygiene services from the cognizant regional medical center which will provide, or arrange for, the required services. Industrial hygiene services are available in the following centers.

Industrial Hygiene Services

NAVREGMEDCEN	Autovon	Commercial	
Bremerton, WA	439-9550	(206)478-9550	(R
Camp LeJeune, NC	484-5707	(919)451-5707	(R
Camp Pendleton, CA	993-4260	(714)725-4260	(R
Charleston, SC	794-6600	(803)743-6600	(R
Corpus Christi, TX	861-3465	(512)939-3465	
Great Lakes, IL	792-2492	(312)688-2492	(A
Guam, Mariana Islands	322-1110	339-2189	(A
Jacksonville, FL	942-2841	(904)772-2841	
Long Beach, CA	873-6615	(213)547-6615	(R
Newport, RI/Portsmouth, NH	684-2302	(207)439-1000	(R
Oakland, CA	253-2458	(707)646-2458	
Pearl Harbor, HI	430-0111	(808)474-1137	(R
Philadelphia, PA	443-3734	(215)755-3734	(R
Portsmouth, VA	954-7377	(804)444-7377	(R

	NAVREGMEDCEN	Autovon	Commercial
R)	San Diego, CA	727-3850/2442	(714)233-2442
R)	Subic Bay, RP	844-6995	
A)	Yokosuka JA	234-7521	
R)	NAVSUBMEDCEN Groton CT	241-4613	(203)449-4613
R)	NATNAVMEDCEN Bethesda MD	295-5722	(301)295-5722
R)	NAVAEROSPREGMEDCEN Pensacola FL	922-3639	(904)452-3639
R)	NAVHOSP Roosevelt Roads PR	894-3920, Ext: 71-226	863-2000, Ext: 71-226

3. All Other Shore Activities. Request industrial hygiene
R) assistance from the nearest Navy Environmental and Preventive Medicine Unit (NAVENPVNTMEDU), as listed below, or from:

Navy Environmental Health Center
Naval Station
R) Norfolk, Virginia 23511
AV: 690-4657
COM: (804)444-4657

4. Forces Afloat. Forces afloat which are located in a port supported by one of the NAVREGMEDCENs above and which require the
R) services of an industrial hygienist, shall request assistance from the cognizant NAVREGMEDCEN. Others should request assistance from the nearest NAVENPVNTMEDU as follows:

	Unit No.	Location	Autovon	Commercial
	2	Norfolk, VA	690-7671	(804)444-7671
	5	San Diego, CA	958-1261	(714)235-1261
R)	6	Pearl Harbor, HI	430-0111	(808)471-9505
R)	7	Naples, Italy	625-1110 Ext: 724-4468	

Personal Protective Clothing/Change Room/ Shower Facility Requirements

1. Personnel engaged in the handling of asbestos-containing materials where emission of airborne fibers is likely to be in excess of the PELs, such as during insulation rip-out operations, (R shall wear the protective clothing listed below. The cognizant industrial hygienist (see enclosure (3)) shall be consulted regarding the adequacy of and requirements for protective clothing.

a. Full-body, one-piece, disposable coveralls (preferably constructed of Tyvek material, or material comparable in weight, strength, and resistance to penetration by asbestos) over cloth coveralls supplied and laundered by the Navy (see Note 1).

b. Hoods (head covering), which shall extend beyond the collar of the coverall to completely protect the neck area (see Note 2). The hood should be Tyvek material, or a comparable substitute. Use of a Tyvek coverall with attached hood is highly desirable.

c. Medium weight rubber gloves, or thin latex or rubber gloves with cotton "over glove" (see Note 1).

d. Slip-resistant plastic shoe covers, or heavy polyethylene shoe covers with slip-resistant soles, or light-weight rubber boots (see Note 1).

e. Safety glasses with side shields, goggles, or a full-length face shield when full-face respirators are not in use (see Note 1).

2. Change rooms shall be provided as close as practical to the asbestos work areas. Protective clothing removal procedures shall be promulgated, to include vacuuming of clothing (before removal) (R using a vacuum approved by the cognizant industrial hygienist (and while still wearing a respirator if one was required for the task).

3. Shower facilities shall be located between the "clean" and "dirty" change rooms and each room shall have separate clothing lockers or containers to prevent contamination.

4. Laundering of asbestos-contaminated clothing shall be done so as to prevent release of airborne asbestos fibers in excess of the PELs. Contracts governing the laundering of asbestos-contaminated clothing shall specifically require that contractors comply with the precautions specified in Section (d)(4)(iii) of reference (a). Bags of asbestos-contaminated clothing should be transported

in sealed impermeable bags or containers to which is affixed the standard caution label.

Note 1: The proper use of protective clothing requires that all openings be closed and that garments fit snugly about the neck, wrists, and ankles. Accordingly, the wrist and ankle junctions, and the collar opening on the disposable coveralls shall be taped as necessary to prevent contamination of skin and underclothing without restricting physical movement.

DEPARTMENT OF THE NAVY
Office of the Chief of Naval Operations
Washington, DC 20350

OPNAVINST 6260.1B CH-1
OP-45
14 June 1983

OPNAV INSTRUCTION 6260.1B
CHANGE TRANSMITTAL 1

From: Chief of Naval Operations
To: All Ships and Stations (less Marine Corps field addressees not having Navy personnel attached)

Subj: Control of Asbestos Exposure to Naval Personnel and Environs

Encl: (1) Revised page 1, new page 1a and reprinted page 2, of enclosure (1)

1. Purpose. To incorporate the provisions of OSHA Instructions CPL 2-2.21A which establishes a triggering level of 0.1 fibers per cubic centimeter of air (f/cc) time-weighted average asbestos concentration for medical surveillance. The incorporation of this level complements the existing 0.5 f/cc medical surveillance action level (MSAL) provided in subject instruction.

2. Action. Remove pages 1 and 2 of enclosure (1) and replace with enclosure (1) of this change transmittal.

T. J. HUGHES
Deputy Chief of Naval Operations (Logistics)

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d. Permissible Exposure Limits (PELs)

(1) "Time-Weighted Average (TWA)" - The 8-hour TWA airborne
R) concentration of asbestos fibers to which personnel may be exposed shall not exceed two fibers per cubic centimeter of air (2 f/cc).

(2) "Ceiling Limit" - Personnel shall not be exposed at any
R) time to airborne concentrations of asbestos in excess of ten fibers per cubic centimeter of air (10 f/cc).

2. Engineering and Work Practice Control Measures

a. Local exhaust ventilation is frequently required to ensure that atmospheric levels of asbestos do not exceed the PELs. General requirements for the design and use of ventiliation to reduce exposures can be found in attachment (1). Specific guidance in adapting attachment (1) to each asbestos operation may be obtained from the cognizant industrial hygienist - see enclosure (3).

b. As practicable, asbestos shall be handled, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the PELs.

c. Asbestos-free substitute materials shall be tested under the technical management of cognizant headquarters activity and, if acceptable, shall be used in place of asbestos-containing materials.

d. All external surfaces in the work area where asbestos is handled shall be maintained free of visible accumulations of loose asbestos fibers which could result in airborne concentrations in excess of the PELs set forth in paragraph 1d.

e. Disposal of asbestos, asbestos-containing materials, and asbestos-contaminated waste shall be in accordance with the procedures listed in attachment (2).

f. To minimize exposure potential, shipboard or shore facility asbestos removal operations shall, to the maximum extent feasible, be performed during the second or third shifts or on weekends and holidays.

3. Personal Protective Equipment

a. Compliance with the PELs shall not be achieved by the use of respirators except as indicated in attachment (3). Assistance in the specific application of attachment (3) may be obtained from the cognizant industrial hygienist - see enclosure (3).

b. Special clothing such as coveralls, disposable whole body clothing, hoods, gloves and foot coverings shall be supplied

NAVOSH EXPOSURE STANDARDS, CONTROL, AND MEDICAL SURVEILLANCE REQUIREMENTS FOR ASBESTOS

1. Definitions

a. Fiber. A rod-shaped particle whose length-to-diameter ratio, or aspect ratio, is equal to or greater than 3:1, and whose length is greater than 5 micrometers. Airborne asbestos concentrations will be expressed as "counts," i.e., the number of fibers per cubic centimeter of air (f/cc). Sampling and counting methodologies are prescribed in paragraphs 4 and 5 below.

b. Asbestos Medical Surveillance Program (AMSP). This program consists of a periodic medical screening examination, which may include special purpose histories, physical examinations and laboratory tests, directed at detecting early changes in specific organ systems which have been identified with asbestos disease. Those individuals who, because of the nature of their job, must work with, or be in the vicinity of, operations which generate airborne asbestos shall be included in the medical surveillance program; and inclusion is not based solely on the determination that an individual has been overexposed.

c. Medical Surveillance Action Level (MSAL). The MSAL is (R
the airborne concentration of asbestos fibers used to qualify an employee for placement in the AMSP. This MSAL has three separate and distinct criteria designed to assure that all individuals, currently or previously exposed, will be included in the AMSP. The MSAL is defined to include any individual, who because of Navy employment is:

(1) Required to enter or work in areas which could potentially contain an 8-hour time-weighted average (TWA) concentration of asbestos at or above 0.1 fibers/cubic centimeter (f/cc), or

(2) Required to enter or work on a regular basis in areas which could potentially contain concentrations of asbestos at or above 0.5 f/cc for any length of time ("on a regular basis" is defined as 15 separate days in any quarter during a calendar year or 45 days per year), or

(3) Exposed at any time, for any length of time, to airborne concentrations of asbestos at or above the "ceiling limit" of 10.0 f/cc.

The aforementioned term "Medical Surveillance Action Level" is defined and used only for the purpose spelled out specifically in this instruction and to identify those individuals who will be included in the Asbestos Medical Surveillance Program. The MSAL criteria are summarized as follows:

CONCENTRATION (F/CC)	DURATION	FREQUENCY
Equal to or greater than 0.1	8-hour TWA	On any occasion
or		
Equal to or greater than 0.5	For any length of time per day	15 days/quarter or 45 days/year
or		
Equal to or greater than 10.0	For any length of time	On any occasion

August 11, 1983

Bob

Here is our guidespec from which the specification writer has to make a few choices, tailored to each project.

Also enclosed is the spec for 82-2097, Midway Park Housing Units, Repair 699. With spec section 02075 Clipped.

Jim Fitch PE

Bob Alexander called

He needs a

copy of the

Standard Contract

Specification for

removal of asbestos

DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-02075 (February 1982)

SECTION 02075

REMOVAL AND DISPOSAL OF ASBESTOS MATERIALS

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-02075 (February 1982)

SECTION 02075 (B)

REMOVAL AND DISPOSAL OF ASBESTOS MATERIALS (A)

PART 1 - GENERAL

1.1 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. (C)

1.1.1 Military Standard (Mil. Std.):

MIL-STD-101B	Color Code for Pipelines and for Compressed-Gas Cylinders

1.1.2 Federal Standard (Fed. Std.):

Fed. Std. 595 & Notice 4	Colors

1.1.3 Code of Federal Regulations (CFR) Publications:

29 CFR 1910. 1001	Asbestos
29 CFR 1910. 134	Respiratory Protection
29 CFR 1910. 145	Specifications for Accident Prevention Signs and Tags
40 CFR 61, Subpart A	General Provisions
40 CFR 61, Subpart B	National Emission Standard for Asbestos

1.1.4 American National Standard Institute (ANSI) Publications:

Z9.2-79	Fundamentals Governing The Design and Operation of Local Exhaust Systems
Z88.2-80	Practices for Respiratory Protection

1.2 REMOVAL AND DISPOSAL:

1.2.1 Description of Work: The work covered by this section includes the handling of friable materials containing asbestos which are encountered during removal and demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos containing materials. The asbestos work includes the demolition and removal of _____ located _____. The asbestos control area for the removal of _____ shall be considered _____. (D) (E) (F)

** OR **

1.2.1 Description of Work: The work covered by this section includes the handling of nonfriable materials containing asbestos which are encountered during removal and demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos containing materials. The asbestos work includes the demolition and removal of _____ located _____. Under normal conditions this material would not be considered hazardous; however, this material will release airborne concentrations of asbestos fibers during demolition and removal and therefore shall be handled in accordance with the removal and disposal procedures as specified herein. The asbestos control area for the removal of _____ shall be considered _____. (G) (E) (F)

1.2.2 Definitions:

1.2.2.1 Amended Water: Water containing a wetting agent or surfactant.

1.2.2.2 Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

1.2.2.3 Asbestos Control Area: An area where asbestos removal operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

1.2.2.4 Asbestos Fibers: This expression refers to asbestos fibers having an aspect ratio of 3:1 and longer than 5 micrometers.

1.2.2.5 Ceiling Concentration: An exposure of airborne concentrations of asbestos fibers at any time in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air.

1.2.2.6 Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone.

1.2.2.7 Friable Asbestos Material: Material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

1.2.2.8 HEPA Filter Equipment: High efficiency particulate absolute filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns or larger.

1.2.2.9 NonFriable Asbestos Material: Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not release fibers in excess of the asbestos control limit during any appropriate use, handling, demolition, storage, transportation, processing, or disposal.

1.2.2.10 Personal Monitoring: Sampling of asbestos fiber concentrations within the breathing zone of an employee.

1.2.2.11 Time Weighted Average (TWA): Three samples are required to establish the 8-hour time weighted average. The TWA is an 8-hour time weighted average airborne concentration of fibers, longer than 5 micrometers, per cubic centimeter of air.

1.2.3 Title to Materials: All materials resulting from demolition work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified herein.

1.2.4 Protection of Existing Work to Remain: Perform demolition work without damage or contamination of adjacent work. Where such work is damaged or contaminated, it shall be restored to its original condition.

1.2.5 Medical Requirements: 29 CFR 1910.1001.

1.2.5.1 Medical Examinations: Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1910.1001. This examination is not required if adequate records show the employee has been examined as required by 29 CFR 1910.1001 requirements within the past year. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within 30 calendar days before or after the termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist and mark medical record jackets with the word "ASBESTOS."

1.2.5.2 Medical Records: Maintain complete and accurate records of employees' medical examinations for a period of [40] [20] [___] years after termination of employment and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health, The Director of The National Institute for Occupational Safety and Health (NIOSH), authorized representatives of either of them, and an employee's physician upon the request of the employee or former employee. (H)

1.2.6 Training: Within 3 months prior to assignment to asbestos work, instruct each employee with regard to the hazards of asbestos, safety and health precautions, and the use and requirements for protective clothing and equipment including respirators. Fully cover engineering and other hazard control techniques and procedures.

1.2.7 Permits and Notifications: Secure necessary permits in conjunction with asbestos removal, hauling, and disposition and provide timely notification of such actions as may be required by federal, state, regional, and local authorities. Notify the Regional Office of the United States Environmental Protection Agency (USEPA) in accordance with 40 CFR 61.22 (d)(1) and provide copies of the notification to the Contracting Officer and the State Environmental Regulatory Agency 20 days prior to commencement of the work. (I)

1.2.8 Safety Compliance: In addition to detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1910.1001 and 40 CFR 61, Subparts A and B. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification and referenced documents vary, the most stringent requirement shall apply.

1.2.9 Respirator Program: Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134.

1.2.10 Industrial Hygienist: Conduct monitoring and training under the direction of an industrial hygienist certified by the American Board of Industrial Hygiene.

1.3 SUBMITTALS: The following items shall be submitted to and approved by the Contracting Officer prior to commencing work involving asbestos materials.

1.3.1 Certificates of Compliance: Submit manufacturers' certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2.

1.3.2 Asbestos Plan: Submit a detailed plan of the work procedures to be used in the removal and demolition of materials containing asbestos. Such plan shall include location of asbestos control areas, change rooms, layout of change rooms, interface of trades involved in the construction, sequencing of asbestos related work, disposal plan, type of wetting agent and asbestos sealer to be used, air monitoring, and a detailed description of the method to be employed in order to control pollution. This plan must be approved prior to the start of any asbestos work.

1.3.3 Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected for the monitoring of airborne concentrations of asbestos fibers along with certification that persons counting the samples have been judged proficient by successful participation in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing (PAT) Program.

1.3.4 Industrial Hygienist: Submit the name, address, and telephone number of the industrial hygienist selected to direct monitoring and training and certification that the industrial hygienist is certified by the American Board of Industrial Hygiene.

1.3.5 Monitoring Results: Fiber counting shall be completed and results reviewed by the industrial hygienist within 16 hours. The industrial hygienist shall notify the Contractor and the Contracting Officer immediately of any exposures to asbestos fibers in excess of the acceptable limits. Submit all monitoring results to the Contracting Officer within 3 working days.

1.3.6 Monitoring of Nonfriable Materials: A copy of all monitoring reports of nonfriable asbestos, including a discription of the work procedure at the time of air monitoring, shall be sent to: Naval Facilities Engineering Command (Code 046) 200 Stovall St., Alex. VA 22332.

1.3.7 Notification: Notify the Contracting Officer 3 working days prior to the start of asbestos work. [Notify the local fire department 3 days prior to removing fireproofing material from the building and notify them when the new fireproofing material has been applied.]

1.3.8 Landfill: Submit written evidence that the landfill for disposal is approved for asbestos disposal by the USEPA and state or local regulatory agency(s). (J)

1.3.9 Local Exhaust System: Pressure differential recordings for each work day shall be reviewed by the industrial hygienist and submitted to the Contracting Officer within 24 hours from the end of each work day. The industrial hygienist shall notify the Contractor and the Contracting Officer immediately of any variance in the pressure differential which could cause exposure of adjacent unsealed areas to asbestos fiber concentrations in excess of the TWA. (K)

1.3.10 Training: Submit certificates signed by each employee that the employee has received training in the proper handling of materials that contain asbestos; understands the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of the respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment.

PART 2 - EXECUTION

2.1 EQUIPMENT: Make available to the Contracting Officer two complete sets of personal protective equipment as required herein for entry to the asbestos control area at all times for inspection of the asbestos control area. (L)

2.1.1 Respirators: Select respirators from those approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

2.1.1.1 Respirators for Handling Asbestos: Provide personnel engaged in the removal and demolition of asbestos materials with Type C supplied-air respirators, continuous flow or pressure demand class.

2.1.1.2 Optional Respirators for Handling Asbestos: Use Type C continuous flow or pressure-demand, supplied-air respirators until the Contractor establishes that the average airborne concentrations of asbestos the employees will confront will not exceed 100 times the permissible exposure limits; i.e., 8-hour time-weighted average (TWA) and ceiling limit. When the exposure limits are established, the respirators presented in 29 CFR 1910.1001 that afford adequate protection at such upper concentrations of airborne asbestos may be used. If the Contractor decides to provide respirators other than a Type C continuous flow or pressure-demand, supplied-air respirator, the Contractor shall determine the exposure of each employee to airborne asbestos during each type of removal operation. Determine both the ceiling limit and the 8-hour, time-weighted average concentration of asbestos to which each of the employees is exposed during each type of removal operation.

2.1.2 Special Clothing:

2.1.2.1 Protective Clothing: Provide personnel exposed to airborne concentrations of asbestos fibers with fire retardant disposable protective whole body clothing, headcoverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape.

2.1.2.2 Work Clothing: Provide cloth work clothes for wear under the disposable protective coveralls and foot coverings.

2.1.3 Change Rooms: Provide a temporary unit with a separate decontamination locker room and a clean locker room for personnel required to wear whole body protective clothing. Provide two separate lockers for each asbestos worker, one in each locker room. Keep street clothing and street shoes in the clean locker. Vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators at the boundary of the asbestos work area and seal in impermeable bags or containers for disposal. Do not remove disposable protective clothing in the decontamination locker room. Remove cloth work clothing in the decontamination room. Tag and bag cloth work clothes for laundering and keep work shoes in the decontamination locker. Do not wear work clothing between home and work. Locate showers between the decontamination locker room and the clean locker room and require that all employees shower before changing into street clothes. Clean asbestos contaminated work clothing in accordance with 29 CFR 1910.1001.

2.1.4 Eye Protection: Provide goggles to personnel engaged in asbestos operations when the use of a full face respirator is not required.

2.1.5 Caution Signs and Labels: Provide [[bilingual] caution signs at all approaches to asbestos control areas containing concentrations of airborne asbestos fibers. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

2.1.5.1 Caution Sign: Vertical format comforming to 29 CFR 1910.145(d)(4), minimum 20 by 14 inches displaying the following legend in the lower panel:

Legend	Notation
Asbestos	1 inch Sanss Serif Gothic or Block
Dust Hazard	3/4 inch Saans Serif Gothic or Block
Avoid Breathing Dust	1/4 inch Gothic
Wear Assigned Protective Equipment	1/4 inch Gothic
Do Not Remain in Area Unless Your Work Requires It	1/4 inch Gothic

Breathing Asbestos Dust May
Be Hazardous To Your Health 14 point Gothic

Spacing between lines shall be at least equal to the height of the upper of any two lines.

2.1.5.2 Caution Labels: Provide labels of sufficient size to be clearly legible, displaying the following legend:

CAUTION

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

2.1.6 Tools and Local Exhaust System: Provide a local exhaust system in the asbestos control area. The local exhaust system shall be in accordance with ANSI Z9.2. Equip exhaust with absolute (HEPA) filters. Local exhaust equipment must be sufficient to maintain a minimum pressure differential of minus 0.02 inch of water column relative to adjacent, unsealed areas. Provide continuous 24-hour per day monitoring of the pressure differential with an automatic recording instrument. In no case shall the building ventilation system be used as the local exhaust system for the asbestos control area. Filters on vacuums and exhaust equipment shall conform to ANSI Z9.2. (K)

2.2 WORK PROCEDURE: Perform asbestos related work in accordance with 29 CFR 1910.1001 and as specified herein. Use [wet] [or] [dry] removal procedures. Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, or drinking shall not be permitted in the asbestos control area. Personnel of other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection provisions of this specification are complied with by the trade personnel. Shut down the building heating, ventilating, and air conditioning system [and provide temporary heating, ventilation, and air conditioning.] [Disconnect electrical service when wet removal is performed and provide temporary electrical service.] (M)

2.2.1 Furnishings: Furniture [___] and equipment will be removed from the area of work by the Government before asbestos work begins. (N)

** OR **

2.2.1 Furnishings: Furniture [____] and equipment will remain in the building. Cover all furnishings with 6-mil plastic sheet or remove from the work area and store in a location on site approved by the Contracting Officer. (N)

** OR **

2.2.1 Furnishings: If [furniture,] [books,] [equipment,] [carpeting,] [draperies,] [venetian blinds,] and [_____] in the work area [is] [are] contaminated with asbestos fibers, transfer these items to an area on site approved by the Contracting Officer set aside for cleaning (wet cleaning where possible) and then store until the room from which they came is declared clean and safe for entry. [Carpets, draperies, and other items which may not be susceptible to on-site wet cleaning methods shall be laundered in accordance with 29 CFR 1910.1001.] At the conclusion of the asbestos removal work and cleanup operations, transfer all objects so removed and cleaned back to the area from which they came and re-install them. (N)

2.2.2 Masking and Sealing:

2.2.2.1 Asbestos Control Area Requirements: Seal openings in areas where the release of airborne asbestos fibers is expected. Establish an asbestos control area with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated asbestos control area. In all possible instances, control area development shall include protective covering of walls, and ceilings with a continuous membrane of two layers of minimum 4-mil plastic sheet sealed with tape to prevent water or other damage. Provide two layers of 6-mil plastic sheet over floors and extend a minimum of 12 inches up walls. Seal all joints with tape. Provide a local exhaust system in the asbestos control area. Openings will be allowed in enclosures of asbestos control areas for the supply and exhaust of air for the local exhaust system. Replace filters as required to maintain the efficiency of the system. (O)

[2.2.2.2 Asbestos Control Area Requirements: The construction of an enclosed asbestos control area is impractical for the removal of _____ located _____. Establish designated limits for the asbestos work area. With the use of rope or other continuous barriers maintain all other requirements for asbestos control areas. Also, where an enclosure is not provided, conduct area monitoring of airborne asbestos fibers during the work shift at the designated limits downwind of the asbestos work area at such frequency as recommended by the Industrial Hygienist. If the quantity of airborne asbestos fibers monitored at the designated limits at any time reaches the time-weighted average specified, evacuate personnel in adjacent areas or provide personnel with approved protective equipment. If adjacent areas are contaminated, clean the contaminated areas, monitor, and visually inspect the area as specified herein.] (O)

2.2.3 Asbestos Handling Procedures:

2.2.3.1 General Procedures: [Sufficiently wet asbestos material with a fine spray of amended water during removal, cutting, or other handling so as to reduce the emission of airborne fibers.] Remove material and immediately place in plastic disposal bags. Where unusual circumstances prohibit the use of plastic bags, submit an alternate proposal for containment of asbestos fibers to the Contracting Officer for approval. For example, in the case where both piping and insulation are to be removed, the Contractor may elect to wet the insulation and wrap the pipes and insulation in plastic and remove the pipe by sections.

2.2.3.2 Sealing and Removal of Asbestos-Contaminated Items Designated for Disposal: Remove contaminated architectural, mechanical, and electrical appurtenances such as venetian blinds, full-height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit, panels, and other contaminated items designated for removal by completely coating the items with an asbestos sealer at the demolition site before removing the items from the asbestos control area. Remaining asbestos residue shall not be of such size so as to allow dislodging by means other than vacuuming. These items need not be vacuumed. The asbestos sealer shall be tinted a contrasting color. It shall be spray-applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces. Sealers shall be equal to the following products: (P)

a. "Asbestite 2000" manufactured by Arpin Products, Inc., PO Box 262 Oak Hurst, NJ 07755, phone (201) 531-0674. (Application rate as recommended by manufacturer.)

b. "Wedbestos Sealer" distributed by Webco Products, Stinnes Western Chemical, 3270 East Washington Blvd., Los Angeles, CA 90023, phone (213) 269-0191. (Application rate as recommended by manufacturer.)

c. "Dust-Set" manufactured by Mateson Chemical Corp., 1025 E. Montgomery Ave., Phila., PA 19125, phone (215) 423-3200. (Application rate as recommended by manufacturer.)

2.2.3.3 Exposed Pipe Insulation Edges: Contain edges of asbestos insulation to remain that is exposed by a removal operation. Wet and cut the rough ends true and square with sharp tools and then encapsulate the edges with a 1/4-inch-thick layer of insulating cement troweled to a smooth hard finish. When cement is dry, lag the end with a layer of fiber glass cloth, overlapping the existing ends by 4 inches. When insulating cement and cloth is an impractical method of sealing a raw edge of asbestos, take appropriate steps to seal the raw edges as approved by the Contracting Officer. (Q)

2.2.4 Identification of Asbestos Free Insulation: Apply "ASBESTOS-FREE" markings to the exterior jacket of all non-asbestos insulated piping installed under this contract. Letter size shall be in accordance with MIL-STD-101. Apply such marking at maximum of 20-foot intervals. Indicate the limits of new "ASBESTOS-FREE" insulation with a one-inch wide band with attached arrow pointing in the direction of the label "ASBESTOS-FREE." Paint markings in orange, No. 12246 of Fed. Std. 595, and as specified in Section 09910, "Field Painting." (Q)

2.2.5 Monitoring: Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1910.1001 and as specified herein.

2.2.5.1 Monitoring Prior to Asbestos Work: Provide area monitoring and establish the reference TWA one day prior to the masking and sealing operations for each demolition site.

2.2.5.2 Monitoring During Asbestos Work: Provide personal and area monitoring and establish the TWA during the first exposure to airborne concentrations of asbestos. Thereafter, provided the same type of work is being performed, provide area monitoring once every 4 hours during the work shift inside the asbestos control area, outside the entrance to the asbestos control area, and at the exhaust opening of the local exhaust system. If monitoring outside the asbestos control area shows airborne concentrations have reached the specified TWA, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately. [In areas where the construction of an asbestos control area is not required, after initial TWA's are established and provided the same type of work is being performed, provide monitoring at the designated limits of the asbestos work area at such frequency as recommended by the Industrial Hygienist.] (R)

2.2.5.3 Monitoring After Final Clean-Up: Provide area monitoring of asbestos fibers and establish the TWA of less than 0.5 fibers/cc after final clean-up but before removal of the enclosure of the asbestos control area. Provide area monitoring and establish the TWA 2 days, 5 days, [15 days, and 30 days] after the enclosure of the asbestos control area is removed [or after final clean-up when an enclosure is not required.] The fiber counts from these samples shall be less than 0.5 fibers/cc or be not greater than the reference TWA, whichever is less. Should any of the final samplings indicate a higher value, the Contractor shall take appropriate actions to reclean the area and shall repeat the monitoring. (R)

2.2.6 Site Inspection: While performing asbestos removal work, the Contractor shall be subject to onsite inspection by the Contracting Officer who may be assisted by safety or health personnel. If the work is found to be in violation of this specification, the Contracting

Officer will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time required to resolve the violation shall be at the Contractor's expense.

2.3 CLEAN-UP AND DISPOSAL:

2.3.1 Housekeeping: Essential parts of asbestos dust control are housekeeping and clean-up procedures. Maintain surfaces of the asbestos control area free of accumulations of asbestos fibers. Give meticulous attention to restricting the spread of dust and debris; keep waste from being distributed over the general area. Do not blow down the space with compressed air. When asbestos removal is complete, all asbestos debris is removed from the worksite, and final clean-up is completed, certify the area as safe before the signs are removed. After final clean-up, remove all filters on the building HVAC system and provide new filters. Dispose of filters as asbestos-contaminated materials. Reestablish HVAC, mechanical, and electrical systems in proper working order. The Contracting Officer will visually inspect the affected surfaces for residual asbestos material and accumulated dust and the Contractor shall re-clean all areas showing dust or residual asbestos materials. If re-cleaning is required, monitor the asbestos airborne concentration after re-cleaning. Notify the Contracting Officer before unrestricted entry is permitted. The Government shall have the option to perform monitoring to certify the areas are safe before entry is permitted.

2.3.2 Disposal of Asbestos: (S)

2.3.2.1 Procedure for Disposal: Collect asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed impermeable bags. Affix a caution label to each bag. Dispose of waste asbestos material [by burial under at least 6 inches of (T) daily compacted cover of non-asbestos materials and by final cover of at least 2 feet of compacted earth.] [at an Environmental Protection Agency (EPA) or state-approved sanitary landfill off Government property.] For temporary storage, store sealed impermeable bags in asbestos waste drums or skips. An area for interim storage of asbestos waste-containing drums or skips will be assigned by the Contracting Officer or his authorized representative. Procedure for hauling and disposal shall comply with 40 CFR 61 (Subpart B), state, regional, and local standards. Sealed plastic bags may be dumped from drums into the burial site unless the bags have been broken or damaged. Damaged bags shall remain in the drum and the entire contaminated drum shall be buried. Uncontaminated drums may be recycled. Workers unloading the sealed drums shall wear appropriate respirators and personal protective equipment when handling asbestos materials at the disposal site.

*** END OF SECTION ***

GENERAL NOTES

1. This guide specification shall not be referenced but is to be used as a manuscript in preparing project specifications. APPROPRIATE CHANGES AND ADDITIONS AS MAY BE NECESSARY AND AS REQUIRED BY THE NOTES MUST BE MADE. Where the phrase "unless indicated or specified otherwise", "as indicated", or words of similar import are used, appropriate requirements, as necessary, shall be included in the project drawings of specifications.

2. The capital letters in the right hand margins indicate that there is a technical note pertaining to that portion of the guide specification. It is intended that the letters in the margins be deleted before typing the project specification.

3. Where numbers, symbols, words, phrases, clauses, or sentences in this specification are enclosed in brackets [], a choice or modification must be made; delete inapplicable portion(s) carefully. Where blank spaces occur in sentences, insert the appropriate data. Where more than one paragraph has the same number, delete those paragraphs that are not applicable. Where entire paragraphs are not applicable, they should be deleted completely.

4. CAUTION: Coordination of this section with other sections of the specification and with the drawings is mandatory. If materials or equipment are to be furnished under this section, but installed, connected, or placed in operation under other sections of the specification and/or the drawings, then state that fact clearly and concisely in this section and in all other sections involved. EACH DISCIPLINE SHALL REVIEW THE ENTIRE SPECIFICATION TO INSURE THAT LANGUAGE IS INCLUDED TO PROVIDE COMPLETE AND OPERABLE SYSTEMS AND EQUIPMENT.

5. DO NOT INCLUDE TABLE OF CONTENTS, GENERAL NOTES, AND TECHNICAL NOTES IN THIS SECTION IN FINAL MANUSCRIPT.

6. Suggestions for improvement of this specification will be welcomed and should be forwarded to:

COMMANDER
NAVAL FACILITIES ENGINEERING COMMAND
Code 0432
200 Stovall Street
Alexandria, VA 22332

TECHNICAL NOTES

A. This guide specification covers the safety procedures and requirements for the removal and demolition of friable material containing asbestos. Nonfriable materials containing asbestos

normally do not require special handling and disposal procedures unless such materials are sawn, pulverized, or handled in such a manner that will cause dust and airborne asbestos fibers to be released. If the project contains nonfriable asbestos that is considered to be hazardous due to material condition (broken down or excessively old and decayed) or demolition procedures to be used, then the nonfriable asbestos shall be specified to be removed in accordance with procedures established herein for friable asbestos. In such case, the wording in the second paragraph 1.2.1 should be used.

On small asbestos removal operations an "enclosed" asbestos control area may not be required. The location of the area, type of material, and potential hazard must be reviewed and a judgement made by the designer. In a case where an enclosed area is not provided, many of the requirements in this specification should be deleted (see Notes F, O, and R).

NAVFAC policy is to eliminate the use of materials containing asbestos in cases where asbestos-free materials are available and suitable for the intended use; however, this is not intended to eliminate the use of asbestos materials completely since some items containing asbestos have no suitable substitute. The specifier should strive wherever possible to limit the use of asbestos in accordance with this policy.

When specifying the removal of asbestos materials, add the following to paragraph 1.2 of Section 02050, "Demolition and Removal": "The demolition and removal of materials containing asbestos shall be in accordance with Section 02075, "Removal and Disposal of Asbestos Materials."

B. Specification, section, and page numbers shall be centered at the bottom of each page of this section.

EXAMPLE:

05-76-1776
02075-1

C. Paragraph 1.1: The listed designations for publications are those that were in effect when this guide specification was being prepared. Designations that are known to be out of date when project specifications are prepared should be changed to those current at that time, and the nomenclature, type, grades, classes, etc., referenced in the guide should be checked for conformance to the latest revision or amendment. To minimize the possibility of error, the letter suffixes, amendments, and dates indicating specific issues should be retained here and omitted elsewhere in the project specification.

D. Paragraph 1.2.1: Use this paraggraph for projects with the demolition or removal of friable asbestos mmaterials. The most common material in this category is asbestos inssulation. The limits of asbestos removal must be indicated on thee drawings or in the specification in sufficient detail for the Contraactor to submit an accurate bid. Portions of the building where aasbestos work will take place must be unoccupied during the removal opperation. It is highly recommended in order to reduce exposure risk too occupants of the building that the entire building be unoccupied duuring asbestos removal operations. If portions of the building where aasbestos removal is not taking place must remain occupied, additionall requirements must be added for temporary heating/cooling and otther utilities to the occupied portions of the building. The bbuilding heating/cooling system for example cannot be operated in thhe asbestos control area and due to wet removal procedures, electriccal service to the asbestos control area may need to be shut off.

E. Paragraph 1.2.1: Insert the asbbestos material to be removed in the first blank and the location of the material in the second blank. Example: "The asbestos work incliudes the demolition and removal of asbestos insulation located on eexisting steam piping indicated to be removed in the boiler room."

F. Paragraph 1.2.1: Insert the asbbestos material to be removed in the first blank and the asbestos conntrol area in the second blank. The asbestos control area is the areea where asbestos operations are performed and is isolated by phyysical boundaries to prevent the spread of asbestos dust, fibers,, or debris (see paragraph 2.2.1). Example: "The asbestos control aarea for the removal of asbestos insulation shall be considered tto be the boiler room." If an "enclosed" asbestos control areaa is impractical and therefore not required, specify a distance froom the asbestos work for the establishment of boundaries of tthe asbestos control area (see Note O).

G. Paragraph 1.2.1: Use this paraggraph for projects where the demolition or removal of nonfriaable asbestos is considered to be hazardous. The following materiials are a few examples of nonfriable asbestos materials which are hazzardous during removal:

a. Cement asbestos sidingg and roofing releases asbestos dust when sawn, broken, driilled, or sanded. Due to its brittleness, it is exttremely difficult to remove cement asbestos without breakkage and the release of asbestos dust.

b. Plaster materials withh asbestos fibers, sprayed or troweled types.

c. Vinyl asbestos floor ttile releases asbestos dust when scraping and grinding is required to remove tile and glue residue to level the eexisting subfloor.

Portions of the building where asbestos work will take place must be unoccupied during the removal operation. It is highly recommended in order to reduce exposure risk to occupants of the building that the entire building be unoccupied during asbestos removal operations. If portions of the building where asbestos removal is not taking place must remain occupied, additional requirements must be added for temporary heating/cooling and other utilities to the occupied portions of the building. The building heating/cooling system for example cannot be operated in the asbestos control area and due to wet removal procedures, electrical service to the asbestos control area may need to be shut off.

H. Paragraph 12.5.2: OSHA 29 CFR 1910.1001 requires that medical records be retained at least 20 years. Some states require longer retention periods, the maximum being 40 years. Check with the state in which the project is located for the required retention time.

I. Paragraph 1.2.7: This paragraph may not be applicable for some overseas locations due to local government requirements. Verify the need for this requirement with the station safety officer.

J. Paragraph 1.3.7: Use this paragraph for all projects except projects in overseas locations where local Government regulations do not require a USEPA approved landfill.

K. Paragraph 1.3.8 and 2.1.6: When an enclosed asbestos control area is not required, delete the requirements for the local exhaust system and pressure differential recording (see Note O).

L. Paragraph 2.1: Modify the number of sets of protective equipment as required, depending on the size of the asbestos removal project.

M. Paragraph 2.2: Use wet removal procedures in most cases. Wet removal is the preferred method and the least hazardous. Dry removal as an option can be used to allow the contractor to use dry removal where wet removal may damage adjacent areas. Dry removal as the only method of removal should only be specified if severe water damage to equipment, etc., would occur during wet removal. If dry removal alone is allowed, carefully edit the specification to remove all reference to amended water and wetting down procedures.

N. Paragraph 2.2.1: In most projects, the Government will remove furniture and equipment before the contractor begins work. In this case the 1st paragraph should be used. The third paragraph should only be used when existing furnishings have been contaminated with asbestos fibers and the contractor will be required to clean these items.

O. Paragraph 2.2.2.1 and 2.22.2.2: When an "enclosed" asbestos control area is impractical, such as for the removal of cement asbestos roofing, or on a very small friable asbestos removal operation, use

paragraph 2.2.2.2 and delete paragraph 2.2.2.1. If the project has both areas which can be enclosed and areas which cannot be enclosed, retain both paragraphs and identify the areas which must be enclosed and the areas which cannot be enclosed.

P. Paragraph 2.2.3.2: Use this paragraph only when asbestos-contaminated items are also designated for removal and disposal.

Q. Paragraphs 2.2.3.3 and 2.2.4: These paragraphs shall be included when new hot insulated piping is provided in a renovation project in which some existing asbestos insulation will remain in the building. This paragraph is not intended for new buildings or existing buildings without asbestos pipe insulation. This paragraph shall be coordinated with the Section 09910, "Field Painting." Also, a reference to the marking requirements of this section should be noted in the section in which the insulation is specified.

R. Paragraphs 2.2.5.2 and 2.2.5.3: When an "enclosed" asbestos control area is not required, retain the portion in brackets.

S. Paragraph 2.3.22: Disposal procedures and sites for asbestos materials vary considerably with each location. Contact local station Public Works and the NAVFAC division hazardous waste manager or industrial hygienist for local procedures.

T. Paragraph 2.3.22.1: Use the first portion in brackets or insert host country procedures for projects in overseas locations where local Government regulations apply and EPA has no jurisdiction. Use the second portion in brackets for all projects where EPA has jurisdiction.

*** E N D ***

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS: This form is provided to solicit beneficial comments which may improve this document and enhance its use. DoD contractors, government activities, manufacturers, vendors, or other prospective users of the document are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity. A response will be provided to the submitter, when name and address is provided, within 30 days indicating that the 1426 was received and when any appropriate action on it will be completed.

NOTE: This form shall not be used to submit requests for waivers, deviations or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

DOCUMENT IDENTIFIER *(Number)* AND TITLE

~~XXX~~ NFGS-02075, REMOVAL AND DISPOSAL OF ASBESTOS MATERIALS

NAME OF ORGANIZATION AND ADDRESS OF SUBMITTER

☐ EFD ☐ PWO ☐ ARCHITECT/ENGR ☐ SUBCONTRACTOR ☐ OICC/ROICC

☐ VENDOR ☐ USER ☐ MANUFACTURER ☐ GENERAL CONTRACTOR

1. ☐ HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? ☐ IS ANY PART OF IT TOO RIGID, RESTRICTIVE, LOOSE OR AMBIGUOUS? PLEASE EXPLAIN BELOW.

A. GIVE PARAGRAPH NUMBER AND WORDING

B. RECOMMENDED WORDING CHANGE

C. REASON FOR RECOMMENDED CHANGE(S)

2. REMARKS

SUBMITTED BY *(Printed or typed name and address — Optional)*

TELEPHONE NO.

DATE

DD Form 1426
1 OCT 76
NAVFAC Overprint

EDITION OF 1 JAN 72 WILL BE USED UNTIL EXHAUSTED.

EPA PROPOSED AMENDMENTS TO STANDARD REGULATING ASBESTOS AS HAZARDOUS AIR POLLUTANT (48 FR 32126; July 13, 1983)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 61

[AD-FRL-3219-4]

National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Proposed rule and notice of public hearing.

SUMMARY: These proposed amendments to the national emission standard for asbestos would reinstate work practice and equipment provisions of the standard that were held not to be emission standards by the Supreme Court in 1978. They would also reword and rearrange other portions of the standard for clarity.

A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, and arguments concerning the proposed amendments.

DATES: *Comments.* Comments must be received on or before September 9, 1983.

Public Hearing. If anyone contacts EPA requesting to speak at a public hearing by July 27, 1983, a public hearing will be held on August 9, 1983 beginning at 10:00 a.m.

Request to Speak at Hearing. Persons wishing to present oral testimony must contact EPA by August 3, 1983.

ADDRESSES: *Comments.* Comments should be submitted (in duplicate if possible) to: Central Docket Section (LE–131), Attention: Docket Number A–83–02, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

Public Hearing. If a public hearing is held, it will be held at the Environmental Research Center Auditorium, Corner of Highway 54 & Alexander Drive, Research Triangle Park, North Carolina. Persons wishing to present oral testimony should notify Mrs. Naomi Durkee, Standards Development Branch (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

Docket. Docket number A–83–02, containing supporting information used in developing the proposed amendments, is available for public inspection and copying between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section, West Tower Lobby, Gallery 1, Waterside Mall, 401 M Street, SW., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. Gene W. Smith, Standards Development Branch, Emission Standards and Engineering Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711, telephone number (919) 541–5624.

Persons interested in attending the hearing should call Mrs. Naomi Durkee at (919) 541–5578 to verify that a hearing will occur.

SUPPLEMENTARY INFORMATION: On April 6, 1973 (38 FR 8826), EPA promulgated national emission standards for hazardous air pollutants (NESHAP) for asbestos in Subpart B of 40 CFR Part 61, pursuant to Section 112 of the Clean Air Act, as amended in 1970. Amendments to the NESHAP were promulgated on May 3, 1974 (39 FR 15398), October 14, 1975 (40 FR 48299), and March 2, 1977 (42 FR 12127). Parts of the NESHAP were in the form of work-practice standards, which were later held by the Supreme Court not to be emission standards within the meaning of Section 112, as amended in 1970. *Adamo Wrecking Company v. United States*, 434 U.S. 275 (1978).

On August 7, 1977, Section 112 of the Acts was amended to specifically authorize "design, equipment, work-practice and operational standards," Section 112(e). On June 19, 1978 (43 FR 26372), EPA repromulgated many of the work-practice standards in the NESHAP, pursuant to Section 112, as amended in 1977. The provisions so repromulugated were 40 CFR 61.22(d), (d)(1), (d)(2)(iii), (d)(4)(i)-(iv), (e), (e)(2) (in part), and (e)(3).

Work-practice standards contained in other portions of the NESHAP were not repromulgated in 1978 [§ 61.22(b), (d)(4)(v) and (vi), (d)(6)(iii) and (iv), (f), (i), (j)(2) and (3), (k)(2) and (3), (l)(2)-(5); § 61.23; and § 61.25(b)-(e)]. Some of these paragraphs contain both emission limits and work-practice standards. EPA intended that owners and operators could comply with either the emission limit or the work-practice standards at their option. The emission limits were not affected by the Court's ruling. The rulemaking being proposed today would reinstate the work-practice standards contained in these paragraphs. It would also reinstate the work-practice standards in other paragraphs that do not contain an alternative emission limit.

Many of these privisions are being complied with now, and most owners and operators of asbestos sources are conscientiously minimizing asbestos emission. Therefore, today's proposed action would have minimal adverse economic effects. However, this action is intended to make clear EPA's intent that asbestos emissions be controlled.

Another purpose of the proposed rulemaking is to reword and rearrange various provisions of the NESHAP for clarity. This has resulted in the addition of several sections and the redesignation of the NESHAP as Subpart M. The discussion below, however, will refer to the old paragraph numbering system for ease of understanding. A listing is provided to show the new section numbers in which the provisions contained under the old numbers can be found.

Old Designation (Subpart B) (section)	New Designation (Subpart M) (section)
61.20	61.140
61.21	61.141
61.22	
(a)	61.142
(b)	61.143
(c)	61.144
(d)	61.145
(d)(1)(i)	61.145
(d)(1)(ii)	61.146
(d)(2)	61.146
(d)(3)(i)(A), (B)	61.145
(d)(3)(ii)	61.145
(d)(4)	61.147
(d)(5)	61.145
(d)(6)	61.145
(e)	61.148
(f)	61.142-61.152
(g)	61.141
(h)	61.149
(i)	61.150
(j)	61.152
(k)	61.151
(l)	61.153
61.23	61.154
61.24	61.155
61.25	61.156

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The authority and basis for this proposal is contained in Section 112(e) of the Clean Air Act, as amended in 1977. This Section provides that the Administrator may promulgate a "design, equipment, work practice, or operational standard, or combination thereof" for control of a hazardous air pollutant if it is infeasible to prescribe an emission standard under Section 112(b) for the pollutant. Such infeasibility occurs, for example, when "a hazardous pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant" or when "the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations." For some asbestos emission sources affected by this proposed rulemaking, the Administrator finds that it is not feasible to prescribe a numerical emission limitation because the asbestos cannot be emitted through a conveyance that readily captures emissions for measurement and because such measurement, in any event, would be technologically and economically impracticable. An example of such a source is the emission of asbestos fibers during the demolition of a building containing friable asbestos materials. For other types of asbestos emission sources, a numerical emission limitation would be feasible under certain conditions but not under others. For example, under normal conditions, a waste disposal site could be operated with no visable emissions. Under high-wind conditions, however, visible emissions could occur even if good work procedures were followed. Therefore, a no visable emission limitation that would be achievable under normal operating conditions would be technologically impracticable during windy conditions. Work-practice standards provide an alternative means of compliance that would represent best available technology under these and other abnormal conditions. The Administrator believes it is important to provide alternative work-practice standards for sources that may not always be able to achieve no visible emissions even though they employ good asbestos emission control procedures. Therefore, the proposed amendments to the asbestos standard would reinstate work practice and other non-numerical standards as the only requirement for some asbestos sources and as an alternative to a numerical emission limit for other sources.

Summary of Proposed Amendments

The following sections and paragraphs were either repromulgated in June 1978 or do not contain work practice or equipment requirements. The Agency is proposing only to reword these for clarity. Therefore, only comments regarding the new wording and not the substantive content of these paragraphs will be considered in this rulemaking. The reworded sections and paragraphs are as follows: § 61.20; § 61.21; § 61.22(a), (c), (d)(1)–(3), (d)(4)(i)–(iv) and (vii), (d)(5), (d)(6)(i)–(ii), (e), (g), (h), (j)(1) and (4), (k)(1), (l)(1); § 61.24; § 61.25(a).

The following sections and paragraphs are being proposed for comment on their content as well as being reworded for clarity: § 61.22(b), (d)(4)(v) and (vi), (d)(6)(iii) and (iv), (f), (i), (j)(2) and (3), (k)(2) and (3), (1)(2)-(5); § 61.23; § 61.25(b)-(e). A discussion of these portions of the asbestos NESHAP is presented below.

Alternative Non-numerical Standards

Several of the paragraphs that are being proposed do not impose any new requirements. Some of these reinstate work practice or equipment specifications that are an alternative to the current no visible emissions standard (an emission limit not affected by the 1978 Supreme Court decision). Others reinstate means of compliance that are alternatives to work practice requirements that were repromulgated in June 1978. All of these are being proposed today to reinstate the alternative means of compliance that EPA believes should be available to those who must comply with the asbestos NESHAP. Since these paragraphs do not impose any new requirements, they would not result in adverse economic or energy impacts to source owners and operators. Following is a discussion of these paragraphs.

Section 61.22(d)(4)(vi)

This paragraph reinstates alternative work practices that may be used in lieu of those required in paragraph (d)(4)(ii) (wetting during stripping) during freezing weather. Without this alternative, it might not be possible to carry out demolition operations during freezing weather in some cases. Therefore, beneficial economic impacts may result in those cases, and there would be no adverse economic impacts.

Section 61.22(d)(6)(iii) and (iv).

Paragraph (d)(6) reinstates provisions exempting demolition operations for structurally unsound buildings from most of the NESHAP, although some requirements would apply. Paragraphs (d)(6)(iii) and (iv) contain two of these requirements. The exemption, even with the requirements in paragraphs (d)(6)(iii) and (iv), provides a less restrictive alternative for certain demolition operations. Therefore, proposal of these paragraphs would not result in any adverse economic impacts on demolition operations.

Section 61.22(f), (j)(3), (k)(3)(i) and (ii), (1)(5); § 61.23; and § 61.25(e)

These paragraphs reinstate alternative work practices that may be used in lieu of complying with a no visible emission limit. They would impose no additional costs and, therefore, would result in no adverse economic impacts.

Non-numerical Standards With No Alternatives

The remaining paragraphs being proposed for comment reinstate specific work-practice requirements for which there are no alternatives. EPA believes that these proposed requirements would not impose significant adverse economic impacts on source owners and operators, as discussed below.

Section 61.22(b)

This paragraph reinstates the prohibition of surfacing roadways with asbestos tailings or asbestos-containing waste. This prohibition is not expected to cause serious adverse economic impacts because road surfacing with asbestos tailings or waste materials is not commonly practiced in the United States. The prohibition is necessary, however, to prevent such surfacing in isolated cases.

Section 61.22(d)(4)(v)

This paragraph would reinstate the requirement that asbestos removed during demolition or renovation be kept wet until disposal is completed. It would also require that the asbestos not be dropped or thrown to the ground or a lower floor and that asbestos removed more than 50 feet above level be transported to the ground in dust-tight chutes or containers (unless it is removed in units or sections).

There would be no significant adverse economic impact resulting from this paragraph. Provisions of the asbestos NESHAP that do not require reinstatement require that the asbestos be adequately wetted during stripping and removal. They also require that there be no visible emissions during the collection, handling, and transporting of the asbestos waste. Demolition and renovation contractors typically transport the asbestos they remove from a facility to a waste disposal site on a daily basis. In order to meet no visible emissions during the collecting and transporting activities, they keep the asbestos wet until it is placed into containers and trucks, and they place it

into containers as soon as possible to keep it from drying out and unnecessarily exposing workers to asbestos fibers. Therefore, this paragraph would not significantly affect asbestos removal and collection activities that would occur in its absence. EPA believes it is necessary, however, to ensure that effective asbestos emission control techniques are followed after the asbestos is stripped or removed and before it is taken away to a waste disposal site.

Section 61.22(i)

This paragraph reinstates the prohibition of commercial asbestos in certain molded and wet-applied insulating materials. It is not expected to result in significant adverse economic materials in the United States since economical substitutes are widely available. EPA believes that there is general compliance with this provision but that the prohibition is necessary to make it clear that this use of asbestos should not be reinstituted.

Section 61.22(j)(2) and (k)(2)

These paragraphs simply refer to the requirements of § 61.25. Those portions of § 61.25 that require repromulgation are discussed below.

Section 61.22(1)(2)–(4) and § 61.25(b)–(d)

These paragraphs reinstate the requirement for warning signs and fencing around asbestos waste disposal sites if: (1) The owner or operator chooses to comply with a no visible emission limit rather than follow specified work practices, and (2) there is no natural barrier to deter access by the general public. Most disposal site owners and operators currently follow the work practices specified and thus would not be required by these amendments to install warning signs and fences, although many States require fencing for all landfills. For the few cases where signs and fencing would not be installed in the absence of these proposed paragraphs, the cost of the signs and fences would be minimal when compared to the cost of the disposal site and its operation. Therefore, there would be no significant adverse economic impacts resulting from these paragraphs.

Public Hearing

A public hearing, if requested, will be held to discuss the proposed amendments to the asbestos standard in accordance with Sections 112(b)(1)(B) and 307(d)(5) of the Clean Air Act. Persons wishing to make oral presentations on the proposed amendments should contact EPA at the address given in the **ADDRESSES** section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be addressed to the Central Docket Section address given in the **ADDRESSES** section of this preamble and should refer to docket number A–83–02.

A verbatim transcript of the hearing and written statements will be available for public inspection and copying during normal working hours at EPA's Central Docket Section in Washington, D.C. (see **ADDRESSES** section of this preamble).

Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by EPA in the development of this proposed rulemaking. The principal purposes of the docket are: (1) To allow interested parties to identify readily and locate documents so that they can effectively participate in the rulemaking process; and (2) to serve as the record in case of judicial review, except for interagency review materials [§ 307(d)(7)(A)].

Miscellaneous

The Administrator will welcome comments on all aspects of the proposed amendments in § 61.22(b), (d)(4)(v) and (vi), (d)(6)(iii) and (iv), (f), (i), (j)(2) and (3), (k)(2) and (3), (1)(2–5); § 61.23; and § 61.25(b)–(e), including economic and technological issues. For proposed amendments to the remaining portions of the asbestos standard, only comments pertaining to the rewording and rearranging of those portions will be considered by the Administrator.

This regulation will be reviewed within 5 years from the date of promulgation. This review will include an assessment of such factors as the need for intergration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology and health data, and reporting requirements.

Under E.O. 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This regulation is not major because it does not meet any of the criteria specified in the Executive Order regarding the annual effect on the economy; increase in cost or prices; or adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S. enterprises to compete with foreign enterprises.

These information collection requirements have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq* and have been assigned OMB control number 2000–0264.

This regulation was submitted to the Office of Management and Budget (OMB) for review as required by E.O. 12291.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule, if promulgated, will not have a significant economic impact on a substantial number of small entities because no significant impact will result.

Dated: June 29, 1983.

William D. Ruckelshaus,

Administrator.

PART 61—[AMENDED]

It is proposed to amend 40 CFR Part 61 by redesignating Subpart B (§§ 61.20–61.25) as Subpart M and revising New Subpart M to read as follows:

Subpart M—National Emission Standard for Asbestos

Sec.

61.140 Applicability.
61.141 Definitions.
61.142 Standard for asbestos mills.
61.143 Standard for roadways.
61.144 Standard for manufacturing.
61.145 Standard for demolition and renovation: Applicability.
61.146 Standard for dimolition and renovation: Notification requirements.
61.147 Standard for dimolition and renovation: Procedures for asbestos emission control.
61.148 Standard for spraying.
61.149 Standard for fabricating.
61.150 Standard for insulating materials.
61.151 Standard for waste disposal for asbestos mills.
61.152 Standard for waste disposal for manufacturing, demolition, renovation, spraying, and fabricating operations.
61.153 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fibricating operations.
61.154 Air-cleaning.
61.155 Reporting.
61.156 Active waste disposal sites

Authority: Sec. 112 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7412, 7601(a)), and additional authority as noted below.

Subpart M—National Emission Standard for Asbestos

§ 61.140 Applicability

The provisions of this subpart are applicable to those sources specified in §§ 61.142 through 61.153.

§ 61.141 Definitions

All terms that are used in this subpart and are not defined below are given the same meaning as in the Act and in Subpart A of this part.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wetted means sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions.

Asbestos means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actionlite-tremolite.

Asbestos-containing waste material means any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes asbestos mill tailings, asbestos waste from control devices, friable asbestos waste material, and bags or containers that previously contained commercial asbestos. However, as applied to demolition and renovation operations, this term includes only friable asbestos waste and asbestos waste from control devices.

Asbestos material means asbestos or any material containing asbestos.

Asbestos mill means any facility engaged in converting asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected in a pollution control device.

Commercial asbestos means any asbestos that is extracted from asbestos ore.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event. This term includes operations necessitated by nonroutine failures of equipment.

Fabricating means any processing of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites for the construction or restoration of facilities.

Facility means any institutional, commercial, or industrial structure, installation, or building (including apartment buildings having more than four dwelling units).

Friable asbestos material means any material containing more than 1 percent asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

Functional member means any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material will not be deposited and where the surface is not disturbed by vehicular traffic.

Manufacturing means the combining of commercial asbestos—or, in the case of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product.

Outside air means the air outside buildings and structures.

Particulate asbestos material means divided particles of asbestos material.

Planned renovation operation means a renovation operation, or a number of such operations, in which the amount of friable asbestos material that will be removed or stripped within a given period of time can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time.

Remove means to take out friable asbestos materials from any facility.

Renovation means refurbishing that includes the removal of friable asbestos materials.

Roadways means surfaces on which motor vehicles travel. This term includes highways, roads, streets, parking areas, and driveways.

Strip means to take off friable asbestos materials from any part of a facility.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emissions means any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

§ 61.142 Standard for asbestos mills.

Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.143 Standard for roadways.

No owner or operator of a roadway may deposit asbestos tailings or asbestos-containing waste material on that roadway, unless it is a temporary roadway on an area of asbestos ore deposits.

§ 61.144 Standard for manufacturing.

(a) *Applicability:* This section applies to the following manufacturing operations using commercial asbestos:

(1) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap, or other textile materials.

(2) The manufacture of cement products.

(3) The manufacture of fireproofing and insulating materials.

(4) The manufacture of friction products.

(5) The manufacture of paper, millboard, and felt.

(6) The manufacture of floor tile.

(7) The manufacture of paints, coatings, caulks, adhesives, and sealants.

(8) The manufacture of plastics and rubber materials.

(9) The manufacture of chlorine.

(10) The manufacture of shotgun shell wads.

(11) The manufacture of asphalt concrete.

(b) *Standard:* Each owner or operator of any of the manufacturing operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.145 Standard for demolition and renovation: Applicability.

The requirements of §§ 61.146 and 61.147 apply to each owner or operator of a demolition or renovation operation as follows:

(a) If the amount of friable asbestos materials in a facility being demolished is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on structural or other functional members, all the requirements of §§ 61.146 and 61.147 apply, except as provided in paragraph (c) of this section.

(b) If the amount of friable asbestos materials in a facility being demolished is less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on structural and other functional members, only the notification requirements of paragraphs (a), (b), and (c) (1), (2), (3), (4), and (5) of § 61.146 apply.

(c) If the facility is being demolished under an order of a State or local governmental agency, issued because

the facility is structurally unsound and in danger of imminent collapse, only the requirements in § 61.146 and in paragraphs (d), (e), and (f) of § 61.147 apply.

(d) If more than 80 linear meters (260 linear feet) of friable asbestos materials on pipes or more than 15 square meters (160 square feet) of friable asbestos materials on other functional and structural members are stripped or removed at a facility being renovated, all the requirements of §§ 61.146 and 61.147 apply.

(1) To determine whether paragraph (d) of this section applies to planned renovation operations involving individual nonscheduled operations, predict the additive amount of friable asbestos materials to be removed or stripped over the maximum period of time a prediction can be made, not to exceed 1 year.

(2) To determine whether paragraph (d) of this section applies to emergency renovation operations, estimate the amount of friable asbestos materials to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

(e) Owners or operators or demolition and renovation operations are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

§ 61.146 Standard for demolition and renovation: Notification requirements.

Each owner or operator to which this section applies shall:

(a) Provide the Administrator with written notice of intention to demolish or renovate.

(b) Postmark or deliver the notice as follows:

(1) At least 10 days before demolition begins if the operation is described in § 61.145(a);

(2) At least 20 days before demolition begins if the operation is described in § 61.145(b);

(3) As early as possible before demolition begins if the operation is described in § 61.145(c);

(4) As early as possible before renovation begins.

(c) Include the following information in the notice:

(1) Name and address of owner or operator.

(2) Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.

(3) Estimate of the approximate amount of friable asbestos material present in the facility. For facilities descried in § 61.145(b), explain techniques of estimation.

(4) Location of the facility being demonlished or renovated.

(5) Scheduled starting and completion dates of demolition or renovation.

(6) Nature of planned demolition or renovation and method(s) to be used.

(7) Procedures to be used to comply with the requirements of this section.

(8) Name and location of the waste disposal site where the friable asbestos waste material will be deposited.

(9) For facilities described in § 61.145(c), the name, title, and authority of the State or local governmental representative who has ordered the demolition.

§ 61.147 Standard for demolition and renovation: Procedures for asbestos emission control.

Each owner or operator to whom this section applies shall comply with the following procedures to prevent emissions of particulate asbestos material to the outside air:

(a) Remove friable asbestos material from a facility being demolished before any wrecking or dismantling that would break up the materials or preclude access to the materials for subsequent removal. However, friable asbestos materials need not be removed before demolition if:

(1) They are in a structural or functional member that is encased in concrete or other similar material; and

(2) These materials are adequately wetted whenever exposed during demolition.

(b) When a functional or structural member covered or coated with friable asbestos materials is being taken out of the facility as units or in sections:

(1) Adequately wet any friable asbestos materials exposed during cutting or disjointing opeations; and

(2) Carefully lower the units or sections to ground level, not dropping them or throwing them.

(c) Adequately wet friable asbestos materials when they are being stripped from functional or structural members before the members are removed from the facility. In renovation operations, wetting that would unavoidably damage equipment is not required if the owner or operator:

(1) Asks the Administrator to determine whether wetting to comply with this paragraph would unavoidably damage equipment, and, before beginning to strip, supplies the Administrator with adequate information to make this determination; and

(2) When the Administrator does determine that equipment damage would be unavoidable, uses a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the friable asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(d) After a functional or structural member has been taken out of the facility as units or in sections, either:

(1) Adequately wet friable asbestos materials during stripping; or

(2) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(e) For friable asbestos materials that have been removed or stripped:

(1) Adequately wet the materials to ensure that they remain wet during all remaining stages of demolition or renovation and related handling operations; and

(2) Carfully lower the materials to the ground or a lower floor, not dropping or throwing them; and

(3) Transport the materials the ground via dust-tight chutes or containers if they have been removed or stripped more than 50 feet above ground level and were not removed as units or in sections.

(f) When the temperature at the point of wetting is below 0°C (32°F):

(1) Comply with the requirements of paragraphs (d) and (e) of this section. The owner or operator need not comply with the other wetting requirements in this section; and

(2) Remove functional and structural members coated or covered with friable asbestos materials as units or in sections to the maximum extent possible.

(g) For facilities described in § 61.145(c), adequately wet the portion of the facility that contains friable asbestos materials during the wrecking operation.

§ 61.148 Standard for spraying.

The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

(a) Use materials that contain 1 percent asbestos or less on a dry weight basis for spray-on application on buildings, structures, pipes, and conduits, except as provided in paragraph (c) of this section.

(b) For spray-on application of materials that contain more than 1 percent asbestos on a dry weight basis on equipment and machinery, except as provided in paragraph (c) of this section:

(1) Notify the Administrator at least 20 days before beginning the spraying

operation. Include the following information in the notice:

(i) Name and address of owner or operator.

(ii) Location of spraying operation.

(iii) Procedures to be followed to meet the requirements of this paragraph.

(2) Discharge no visible emissions to the outside air from the spray-on application of the asbestos-containing material or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(c) The requirements of paragraphs (a) and (b) of this section do not apply to the spray-on application of materials where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

(d) Owners and operators of sources subject to this paragraph are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

§ 61.149 Standard for fabricating.

(a) *Applicability.* This section applies to the following fabricating operations using commercial asbestos:

(1) The fabrication of cement building products.

(2) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.

(3) The fabrication of cement or silicate board for ventilation hoods; ovens; electrical panels; laboratory furniture, bulkheads, partitions, and ceilings for marine construction; and flow control devices for the molten metal industry.

(b) *Standard.* Each owner or operator of any of the fabricating operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.150 Standard for insulating materials.

After the effective date of this regulation, no owner or operator may install insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this paragraph do not apply to spray-applied insulating materials regulated under § 61.148.

§ 61.151 Standard for waste disposal for asbestos mills.

Each owner or operator of any source covered under the provisions of §61.142 shall:

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of § 61.156; and

(b) Discharge no visible emissions to the outside air from the transfer of asbestos waste from control devices to the tailings conveyor, or use the methods specified by § 61.154 to clean emissions containing particulate particuate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with §61.152(b) or paragraph (c) of this section; and

(c) Discharge no visible emissions to the outside air during the collection, processing, packaging, transporting, or deposition of any asbestos-containing waste material, or use one of the disposal methods specified in paragraphs (c)(1) or (2) of this section, as follows:

(1) Use a wetting agent as follows:

(i) Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the particular dust by the manufacturer of the agent.

(ii) Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(iii) Wetting may be suspended when the ambient temperature at the waste disposal site is less than -9.5°C (15°F). Determine the ambient air temperature by an appropriate measurement method with an accuracy of ±1°C (±2°F), and record it at least hourly while the wetting operation is suspended. Keep the records for at least 2 years in a form suitable for inspection.

(2) Use an alternative disposal method that has received prior approval by the Administrator.

§ 61.152 Standard for waste disposal for manufacturing, demolition, renovation, spraying, and fabricating operations.

Each owner or operator of any source covered under the provisions of §§ 61.144–61.149 shall:

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of § 61.156; and

(b) Discharge no visible emissions to the outside air during the collection, processing (inclucing incineration), packaging, transporting, or deposition of any asbestos-containing waste material generated by the source, or use one of the disposal methods specified in paragraphs (b)(1), (2), or (3) of this section, as follows:

(1) Treat asbestos-containing waste material with water:

(i) Mix asbestos waste from control devices with water to form a slurry; adequately wet other asbestos-containing waste material; and

(ii) Discharge no visible emissions to the outside air from collection, mixing, and wetting operations, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air; and

(iii) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; and

(iv) Label the containers specified in paragraph (b)(l)(iii) as follows:

CAUTION

Contains Asbestos

Avoid Opening or

Breaking Container

Breathing Asbestos is Hazardous

to Your Health

Alternatively, use warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.1001(g)(2)(ii).

(2) Process asbestos-containing waste material into nonfriable forms:

(i) Form all asbestos-containing waste material into nonfriable pellets or other shapes; and

(ii) Discharge no visible emissions to the outside air from collection and processing operations, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Use an alternative disposal method that has received prior approval by the Administrator.

§ 61.153 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.

Each owner or operator of any inactive waste disposal site that was operated by sources covered under §§ 61.142, 61.144, or 61.149 and received deposits of asbestos-containing waste material generated by the sources, shall

(a) Comply with one of the following:

(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or

(2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted

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nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material; or

(3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

(4) For inactive waste disposal sites for asbestos tailings, apply a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Use the agent as recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent. Obtain prior approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

(1) Display warning signs at all entrances and at intervals of 100 m (330 feet) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements for 51 cm × 36 cm (20" × 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site.	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) Fence the perimeter of the site in a manner adquate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.

§ 61.154 Air-cleaning.

(a) The owner or operator who elects to use air-cleaning, as permitted by §§ 61.142, 61.144, 61.147(c)(2), 61.147(d)(2), 61.148(b)(2), 61.149(b), 61.150(b)(1)(ii), and 61.150(b)(2)(ii) shall:

(1) Use fabric filter collection devices, except as noted in paragraph (b) of this section, doing all of the following:

(i) Operating the fabric filter collection devices at a pressure drop of no more than 4 inches water gage, as measured across the filter fabric; and

(ii) Ensuring that the airflow permeability, as determined by ASIM Method D737–75, does not exceed 9 m^3/min/m^2 (30 $ft^3/min/ft^2$) for woven fabrics or 11$m^3/min/m^2$ (35 $ft^3/min/ft^2$) for felted fabrics, except that 12 m^3/min/m^2 (40 $ft^3/min/ft^2$) for woven and 14 $m^3/min/m^2$ (45 $ft^3/min/ft^2$) for felted fabrics is allowed for filtering air from asbestos ore dryers; and

(iii) Ensuring that each square meter of felted fabric weighs at least 237 grams (14 ounces) and is at least one-sixteenth inch thick throughout; and

(iv) Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(2) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this section. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(b) There are the following exceptions to paragraph (a)(1):

(1) If the use of fabric filters creates a fire or explosion hazard, the Administrator may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals.

(2) The Administrator may authorize the use of filtering equipment other than that described in paragraphs (a)(1) and (b)(1) of this section if the owner or operator demonstrates to the Administrator's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

§ 61.155 Reporting.

(a) Within 90 days after the effective date of this subpart, each owner or operator of any existing source to which this subpart applies shall provide the following information to the Administrator:

(1) A description of the emission control equipment used for each process; and

(2) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches water gage; and

(i) If the fabric filter device uses a woven fabric, the airflow permeability in $m^3/min/m^2$ and; if the fabric is synthetic, whether the fill yard is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m^2, the minimum thickness in inches, and the airflow permeability in $m^3/min/m^2$.

(3) For sources subject to §§ 61.151 and 61.152:

(i) A brief description of each process that generates asbestos-containing waste material; and

(ii) The average weight of asbestos-containing waste material disposed of, measured in kg/day; and

(iii) The emission control methods used in all stages of waste disposal; and

(iv) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(4) For sources subject to § 61.153:

(i) A brief description of the site; and

(ii) The method or methods used to comply with the standard, or alternative procedures to be used.

(b) The information required by paragraph (a) of this section must accompany the information required by § 61.10. The information described in this section must be reported using the format of Appendix A of this part.

(Sec. 114, Clean Air Act as amended (42 U.S.C. 7414)

§ 61.156 Active waste disposal sites.

To be an acceptable site for disposal of asbestos-containing waste material under §§ 61.151 and 61.152, an active waste disposal site must meet the requirements of this section.

(a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.

(b) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) or (c)(2) of this section must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

(i) Be posted in such a manner and location that a person can easily read the legend; and

(ii) Conform to the requirements of 51 cm × 36 cm (20" × 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

(iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site.	2.5 cm (1 inch) Sans Serif, Gothic or Block.
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block.
Breathing Asbestos is Hazardous to Your Health.	14 Point Gothic.

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbetos-containing waste material which was deposited at the site during the operating day or previous 24-hour period is covered with either:

(1) At least 15 centimeters (6 inches) of compacted nonasbestos-containing material, or

(2) A resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. This agent must be used as recommended for the particular dust by the manufacturer of the dust suppression agent. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(d) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if an alternative control method for emissions that has received prior approval by the Administrator is used.

(Secs. 112 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7412, 7601(a))

[FR Doc. 83-18716 Filed 7-12-83; 8:45 am]
BILLING CODE 6560-50-M

Journal

CONGRESS

Bills Introduced

House

June 23

(AIR POLLUTION) to amend the Clean Air Act to control certain sources of sulfur dioxide and nitrogen oxides to reduce acid deposition, and for other purposes. HR 3400 (Sikorski) Energy and Commerce.

July 1

(AIR POLLUTION) to amend the Clean Air Act to promote competitiveness in the motor vehicle aftermarket and to preserve consumer freedom of choice to select parts and service of the consumer's own choosing, and for other purposes. HR 3476 (Dannemeyer) Energy and Commerce.

(AIR POLLUTION) to amend the Clean Air Act to repeal the requirement that state implementation plans provide for periodic inspection and testing of motor vehicles. HR 3477 (Dannemeyer) Energy and Commerce.

Senate

June 23

(WATER POLLUTION) to amend the federal Clean Water Act with respect to ocean waivers. S 1536 (Mathias) Environment and Public Works.

EXECUTIVE BRANCH

Departments and Agencies

Department of the Interior, June 22 proposed listing the population of woodland caribou found in Washington, Idaho, and Southern British Columbia as endangered under the Endangered Species Act (48 FR 28500); proposed listing the clay-loving wild buckwheat as an endangered species (48 FR 28504).

Environmental Protection Agency, June 21 granted Kentucky a 150-day extension beyond the July 26 deadline for applying for interim authorization of Phase II, Component C of its hazardous waste managment program (48 FR 28273); announced that the Olvine Corp.'s proposed municipal waste incinerator at Smith Island, Wash., is not subject to prevention of significant deterioration review under the Clean Air Act (48 FR 28327); June 24 granted Oklahoma interim authorization of Phase II, Component C of its hazardous waste management program (48 FR 28989); June 29 granted Connecticut interim authorization of Phase II, Components A, B, and C of its hazardous waste management program (48 FR 29864); announced a public hearing Aug. 11 on the Arkansas Oil and Gas Commission's application for primacy of Class II underground injection wells, 10 a.m. at the King's Inn Motel, Convention Center, Highways U.S. 82 and 167 By-Pass, El Dorado, Ark. (48 FR 29888); determined that, although the "Cyclone Z" fuel economy retrofit device may significantly reduce carbon monoxide emissions for some motor vehicles, it probably will not have a significant effect on emissions of hydrocarbons or nitrogen oxides, or on fuel economy (48 FR 29952); July 1 announced that a draft environmental impact statement will be prepared on the Turpentine Run wastewater facilities plan for St. Thomas, Virgin Islands (48 FR 30437); July 6 announced that it received an application from American Methyl Corp for a waiver of the Air Act's prohibition on certain fuels and fuel additives for a fuel additive, Methyl-10, consisting of methanol and co-solvent alcohols combined with 460 milligrams of American Methyl 1A-7 (48 FR 31083).

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NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

NREAD/DDS/th
6240
15 Sep 1983

From: Director
To: Assistant Chief of Staff, Facilities

Subj: Proposed BO P5101.20; comments concerning

Ref: (a) Base Safety Mgr ltr SAFD/TWR/twr P5101.20 of 8 Aug 1983

1. The subject letter has been reviewed as requested by the reference and the following comments are provided:

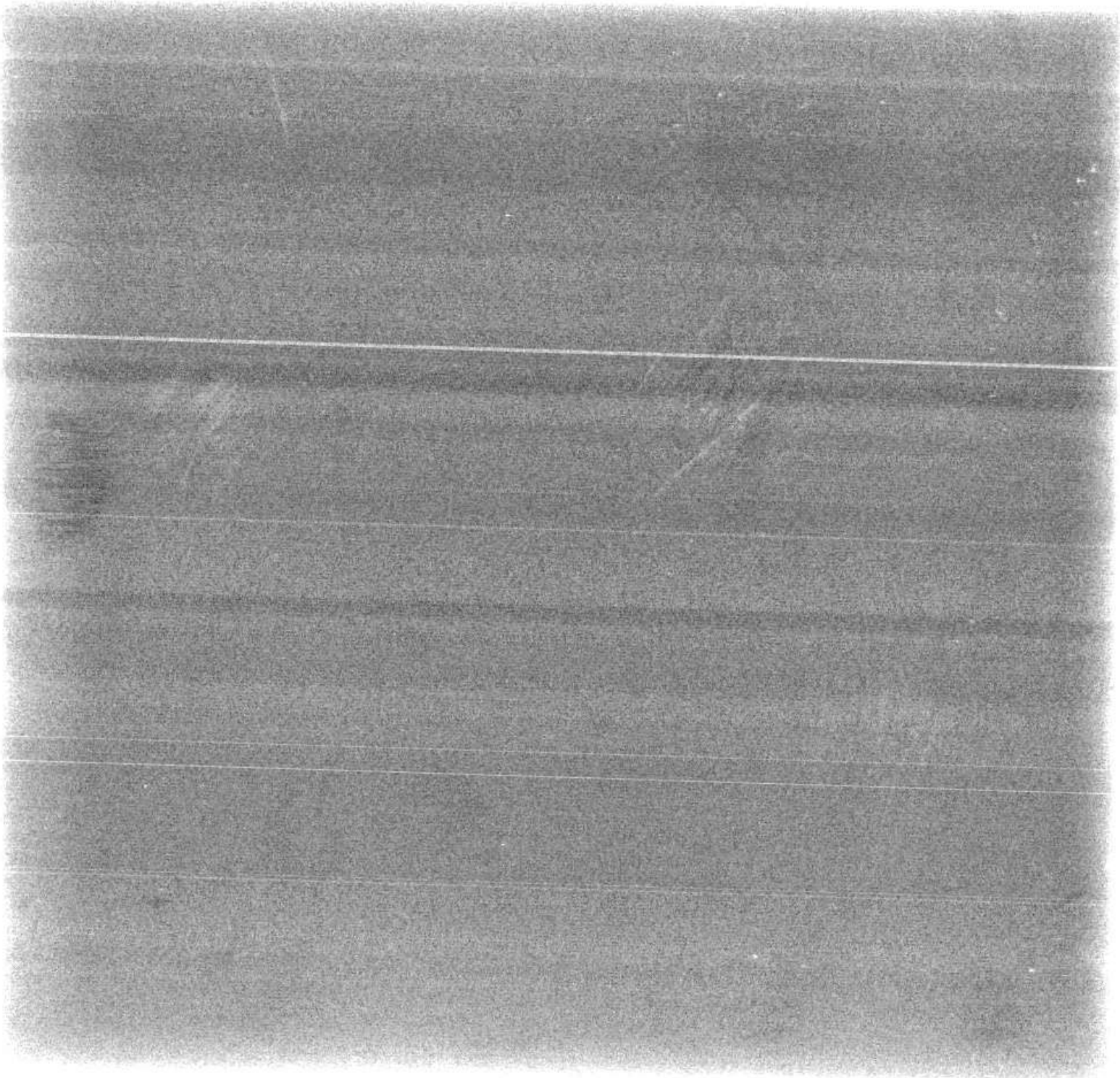
a. Add the following to paragraph 2000.2: "Do not intermingle asbestos wastes and non-asbestos wastes."

b. In section 2007.3 add the following to paragraph (c): "Asbestos-cement-type wastes will be wet down with water and transported in bulk in a securely covered truck in a manner which ensures that accidental spillage will not occur during transit."

c. Change paragraph 2007.4 to read: "In the event that friable asbestos wastes arrive at disposal site improperly covered or bagged, the vehicle operator will be instructed to park vehicle. Base Fire Dispatcher (x3333) will be notified in accordance with BO 11090.1B that a hazardous material spill emergency has occurred. Transporters repeatedly failing to comply with paragraph 2007.3 will be barred from using the landfill."

d. If the above changes are made, enclosure (2) to the subject Order may be deleted.

e. Reference (g) should read: "BO 11090.1B."

J. I. Wooten

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