U.S. Coast Guard 1980

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS: (G-MVI-2)
U. S. Coast Guard
Washington, DC 20593
202-426-1464

NVC 5-80
13 MAR 1980

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 5-80

Subj: Recommended Procedures for Control of Asbestos Hazard on Board Merchant Vessels, OCS Facilities and Deepwater Ports

Ref:
(a) U. S. Department of Labor, Occupational Safety and Health Administration, General Safety and Health Standards (29 CFR 1910.1001)
(b) U. S. Department of Health, Education and Welfare, National Institute for Occupational Safety and Health "NIOSH" Revised Recommended Asbestos Standard, December 1976 (NIOSH Pub 77-169)
(c) CG-190 Equipment List
(d) Industrial Ventilation, A Manual of Recommended Practice, American Conference of Governmental Industrial Hygienist, Lansing, Michigan
(e) U. S. Department of Health, Education and Welfare, National Institute for Occupational Safetyand Health "NIOSH", A guide to Industrial Respiratory Protection, June 1976 (NIOSH Pub 76-189)

1. PURPOSE. This Circular establishes recommended procedures for controlling potentially hazardous exposure to airborne asbestos fibers by crewmembers on board merchant vessels, OCS facilities and deepwater ports.

2. BACKGROUND. Asbestos is a general term used to describe a group of fibrous minerals that do not burn and are excellent thermal insulators. In the past four decades, asbestos has been used for a great number of purposes with two-thirds of all asbestos being used in the construction and shipbuilding industries. Some of the major uses of asbestos are for asbestos cement products, fireproofing, thermal insulation, asbestos cloth, brake lining and gasket materials. Exposure to airborne asbestos fibers significantly increases the risk of incurring four serious diseases: lung cancer, asbestosis (a progressively debilitating lung disease that impairs breathing and increases the risk of serious illness

DISTRIBUTION - SDL No. 110

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A																										
B		2	10		3		3	1		2				45	1	1	6	1								
C					4*		1					1	4*													
D	1	1		1							1														1	
E		1											1*	1*	2											
F			1								1					1										
G																										
H																										

NON-STANDARD DISTRIBUTION: (See Page 5)

Published by AsbestosClaims.Law
asbestosclaims.law/library/21604/1

2.(cont'd) infections), mesothelioma (a cancer of the linings of the chest and abdominal cavities) and certain gastro intestinal cancers such as colon cancer. A long latent period of 10-40 years from first exposure to development of the disease is frequently noted.

3. DISCUSSION. All vessels have some asbestos insulation material on board. Depending on the individual vessel/facility and year built, the amount and type of asbestos can vary from very little to significant amounts, especially in the engine room spaces. The degree of deterioration of installed asbestos insulation, release of asbestos fibers due to motion of a vessel working in a seaway, exposure to crewmembers incidental to asbestos work on board by others and work performed involving asbestos by crewmembers engaged in maintenance and repair are of major concern. The procedures outlined in this circular are intended to serve as a guide to vessel/faciltiy owners, operators and crewmembers in identifying the hazards involved and prescribing the controls available to minimize the risk of asbestos fiber exposure. Extensive government sponsored studies are currently underway which will serve as a basis for detailed Coast Guard regulations concerning this hazard; however in the interim this circular will provide sufficient information for effective action by all concerned.

4. Action.

a. Recommended Exposure Limits.

Where possible, the exposure of unprotected vessel/facility crewmembers to airborne asbestos should be prevented. If it cannot be prevented, it should be controlled by the methods prescribed in Enclosures (1), (2), (3) and (4) to the exposure limits given below:

(1) Working Environments.

Unprotected persons should not be exposed to airborne asbestos fiber concentrations in excess of 2.0 fibers (longer than five micrometers) per cubic centimeter of air (2.0 f/cc) averaged over an eight-hour work day. Unprotected persons should never be exposed to airborne asbestos fiber concentrations in excess of ten fibers (longer than five micrometers) per cubic centimeter of air for 15 minutes as a ceiling, reference (a).

(2) Living Environment.

Persons should not be exposed to airborne asbestos fiber concentrations in excess of 0.1 fibers (longer than five micrometers) per cubic centimeter of air (0.1 f/cc).

Recommended Procedures for Control of Asbestos Hazard on Board Merchant Vessels, OCS Facilities and Deepw... Published by AsbestosClaims.Law
ACL Doc 21604 · Page 2 of 5 asbestosclaims.law/library/21604/2

4.a.(2)(cont'd) NOTE: The U. S. Maritime Administration Study "Assessment of Asbestos Concentrations in the Engineroom Environment of Marine Vessels, Phase II" will provide additional data to better address ambient levels of asbestos.

b. Limitation on Fabrication, Installations and Use

The fabrication, installation or use of asbestos containing materials should be prevented except where no acceptable substitute material exists.

c. Substitute Materials.

Enclosure (5) contains a list of commonly used asbestos materials for which acceptable substitutes are available.

d. Removal or Rip-Out Restricted.

(1) NOTE: Scientific research and experience has shown that asbestos repair operations and removal or rip-out operations conducted on board ship and on shore, asbestos brake and clutch maintenance work and asbestos gasket fabrications work will most likely exceed the working environment exposure limits.

(2) Removal or rip-out of asbestos insulation or other asbestos materials should not be done by crewmembers, except for repair work which has been approved by the master. Such work should normally be conducted by persons specifically trained in safe removal procedures and ventilation controls, work practice controls, personal protection controls and environmental monitoring listed in enclosures (1), (2), (3) and (4). Asbestos removal should be supervised by a person specifically trained in safe removal procedures. The work practice controls and personnel protective controls listed in enclosures (2) and (3) should be followed.

e. Repair Deteriorated or Damaged Asbestos.

Damaged or deteriorated asbestos should be repaired at the earliest opportunity to prevent the spread of airborne asbestos fibers. Insulation should be repaired rather than ripped out or removed unless damage is severe, or if the insulation has become ineffective. Supervision by a person trained in asbestos removal, work practice controls and personnel protective controls listed above should be followed.

f. Asbestos Exposure Control Training.

Enclosure (6) contains information regarding the availability of training in Asbestos Exposure Control Procedures.

Recommended Procedures for Control of Asbestos Hazard on Board Merchant Vessels, OCS Facilities and Deepw... Published by AsbestosClaims.Law
ACL Doc 21604 · Page 3 of 5 asbestosclaims.law/library/21604/3

4.g. Identification.

(1) Asbestos containing material is believed to have been installed on all types of vessels. Enclosure (5) contains a list of commonly encountered asbestos containing material. Since visual recognition is unreliable, all suspect material should be considered to be asbestos containing unless known to be otherwise. Suspect materials that are damaged, deteriorated or scheduled for removal,can be analyzed at a chemical laboratory using high x-ray diffraction techniques to determine the presence of asbestos prior to repair/rebuilding work.

(2) Following the removal or rip-out of asbestos thermal insulation, the replacement material should be identified as "asbestos free" by the application of a red undercoat sealer (enclosure (2)). During subsequent rip-out or repair, the repairer will be able to determine if asbestos or asbestos free insulation is installed by scraping through the exterior paint to determine if a red undercoat is present.

h. Medical Monitoring.

Personnel occupationally exposed to asbestos should be medically monitored (enclosure (8)).

Chief, Office of Merchant Marine Safety

Encl: (1) Asbestos Ventilation Controls for Working Environment
(2) Asbestos Work Practice Controls
(3) Asbestos Personnel Protective controls for Working Environments
(4) Asbestos Environmental Monitoring
(5) Frequently Encountered Asbestos Containing Materials
(6) Asbestos Exposure Control Training
(7) Asbestos Protective Equipment Lists
(8) Medical Surveillance
(9) List of Suggested References

Recommended Procedures for Control of Asbestos Hazard on Board Merchant Vessels, OCS Facilities and Deepw... Published by AsbestosClaims.Law
ACL Doc 21604 · Page 4 of 5 asbestosclaims.law/library/21604/4

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO.

NON-STANDARD DISTRIBUTION:

Ce:	Baltimore (75); San Francisco, Mobile, Guam, Pittsburgh, Providence, Norfolk (50); Galveston (30); Cleveland & Portland, OR, Sturgeon Bay (25); San Diego, Savannah, Buffalo, Corpus Christi (20); Tampa, Milwaukee, Louisville, Detroit, Toledo, Anchorage (15); Portland, ME, Duluth, Charletson, Huntington, Minneapolis-St. Paul(Dubuque), San Juan (10); Juneau, Cincinnati, Memphis, Wilmington, Paducah, Albany (5) extra
Cm:	New Orleans (250); New York (200); Seattle (100); Houston (50); Terminal Is.(LA-LB), Philadelphia (40) extra
Em:	New London, Houma (30); Ludington (8) extra
En:	Ketchikan, Lake Charles (5) extra,
List	CG-12

Recommended Procedures for Control of Asbestos Hazard on Board Merchant Vessels, OCS Facilities and Deepw... Published by AsbestosClaims.Law
ACL Doc 21604 · Page 5 of 5 asbestosclaims.law/library/21604/5