34 Box 4 – JGR/Asbestos Legislation (3) - Roberts, John G.: Files
SERIES I: Subject File

3rP3

FH/VRS

JJ-32P3-(9-5-Da)

13 SEP 1933

Gentlemen:-

Receipt is acknowledged of your letter of September 5,1933, in answer to the Bureau's letter of August 31,1933.

The Bureau's records show that your KNOBNO brand of High Temperature insulation has a density of 26.24 pounds per cubic foot and a moisture content of 0.91,indicating that in this respect you can comply with a maximum density of 27 pounds per cubic foot, which is now under consideration. The Bureau would be pleased to be able to obtain a suitable high temperature insulation having a maximum density of 30 pounds per cubic foot.

The material covered by Specification 32P3 has apparently been satisfactory for temperatures heretofore encountered, namely, not in excess of 600°F. It is now proposed to increase the steam temperature up to 850°F. To provide satisfactory living conditions in confined spaces thicker insulation will have to be used for temperatures up to 850°F.

Test data to date indicates that insulation materials of low weight per cubic foot are more efficient from a temperature drop standpoint than those of high weight. It was this fact which led the Bureau to set the maximum limit of 25 pounds as a basis for discussion and not by reason of any suggestion orally or otherwise by any manufacturer of this material.

With respect to the change in thicknesses, this information was obtained from a manufacturer's catalogue and was assumed to be standard practice of all of the manufacturers of this material. To verify this a letter similar to that sent to you was sent to each known manufacturer of this material.

In your letter of September 5th,1933, you say that these thicknesses are standard only to Johns Manville Inc. but you do not offer any information as to your own standard from which it is assumed that your standards are those shown in present Specification 32P3.

As explained above these thicknesses are to be changed toprovide pipe covering suitable for pipe temperatures of 850°F. Your ENDURA brand of high temperature pipe covering when tested on a 3 inch pipe with insulation thickness of 3 inches gives a surface temperature of approximately 117°F. with a room temperature of approximately 84°F. A thickness of 2-1/8 inches as now provided will show a much higher surface temperature and 117°F. is as much as can be tolerated.

The Bureau will be pleased to receive your recommendations for a combination pipe covering for temperatures of 850°F. The thickness of the inner layer of high temperature insulation and the outer layer of 85% magnesia should be stated for each pipe size 8 inch to 12 inches.

In conclusion the Bureau wishes to assure you that it does not prepare specifications in the interest of any manufacturing source. All changes in specification are dictated by necessities of the Naval service and are made after careful consideration.

Respectfully,

C. S. [illegible]
By direction

Karet Magnesia Manufacturing Co.,
Valley Forge,
Pa.

EXHIBIT A

TITLE 32 - NATIONAL DEFENSE

CHAPTER IX - OFFICE OF PRODUCTION MANAGEMENT

Subchapter B - PRIORITIES DIVISION

Part 1084 - ASBESTOS

III C

TION ORDER NO. M-79 CURTAILING THE USE OF CERTAIN TYPES OF ASBESTOS

ational defense requirements have created a shortage of certain types of asbestos for the combined s, private account, and export; and the supply now in and will be insufficient for defense and es- n requirements unless their use in certain products manufactured for civilian use is curtailed; and is the public interest, to promote the defense of the United States, to conserve the supply and ribution thereof:

FORE, IT IS HEREBY ORDERED THAT:

trictions on the Use of Certain Types of Asbestos

Unless otherwise specifically authorized by the Director of Priorities, after February 1, 1942, no person shall fabricate, spin, or process in any other way asbestos fibre imported from South Africa except where such fabrication, spinning or processing is necessary to fill Defense Orders as defined in Priorities Regulation No. 1, as amended from time to time.

In addition to the above limitation, unless otherwise specifically authorized by the Director of Priorities, after February 1, 1942, no person shall fabricate, spin or process in any other way:

(i) Chrysotile asbestos fibre (Rhodesian) Grade C and G-1 and 2 except where such fabrication, spinning or processing is necessary to fill Defense Orders for:

(a) core rovings to meet Navy specification Number 17-I-29 (INT); (Insulation, electrical, asbestos fibre, treated and untreated, dated October 1, 1941, or as same may be amended.)

(b) tapes and cloth which are required by specification to be of a non-ferrous nature;

(c) non-ferrous lapps.

(ii) Amosite asbestos fibre (Grade B-1 or amosite asbestos having a fibre length equivalent to that of Grade B-1) except where such fabricating, spinning or processing is necessary to fill Defense Orders for Amosite woven felt blankets and mattresses for turbine insulation for use on naval and maritime ships.

(iii) Amosite asbestos fibre (Grade B-2, D-2 or amosite asbestos having a fibre length equivalent to that of Grade B-2 or D-2) except where such fabricating, spinning or processing is necessary to fill Defense Orders for:

(a) Woven felt blankets and mattresses and fittings for turbine insulation for use on naval and maritime ships;

(b) Fire proof board;

(c) Sprayed Amosite;

(d) Eighty-five per cent magnesia pipe covering and blocks;

(e) Molded Amosite pipe covering and blocks;

(f) Flexible amosite pipe insulations.

(g) Dry pack insulation.

) In addition to the above limitations unless otherwise specifically authorized by the Director of Priorities, after February 1, 1942, no person shall install eighty-five per cent magnesia or other high temperature pipe covering except in installations where temperatures of 300° Fahrenheit or over occur.

ports.

) Any person who manufactures or processes asbestos fibre shall, on or before the 10th day of February, 1942, and on or before the 10th day of each calendar month thereafter, file with the Office of Production Management, Ref: M-79, all of he information required by Forms PD-251 and PD-252, whichever is applicable.

; In addition, any person who manufactures or processes asbestos fibre shall, when requested, file with the Office of Production Management, Ref: M-79, all the information required by Form PD-253.

ohibitions against Sales or Deliveries. No person shall hereafter sell or deliver asbestos fibre to y person if he knows, or has reason to believe, such material is to be used in violation of the terms this Order.

mitation of Inventories. No manufacturer shall receive delivery of asbestos fibre or products there- , in the form of raw materials, semi-processed materials, finished parts or sub-assemblies, nor shall put into process any raw material, in quantities which in either case shall result in an inventory such raw-semi-processed or finished material in excess of a minimum practicable working inventory, king into consideration the limitations placed upon the production of asbestos fibre products by this der.

scellaneous Provisions.

) Applicability of Priorities Regulation No. 1. This Order and all transactions affected thereby are subject to the provisions of Priorities Regulation No. 1, (Part 944) as amended from time to time, except to the extent that any provision hereof may be inconsistent therewith, in which case the provisions of this Order shall govern.

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eal. Any person affected by this Order who considers that compliance therewith would work exceptional and unreasonable hardship upon him or that it would result in a degree of unloyment which would be unreasonably disproportionate compared with the amount of asbestos re conserved, or that compliance with this Order would disrupt or impair a program of conion from non-defense work to defense work, may appeal to the Office of Production Manage-t, Ref: M-79, setting forth the pertinent facts and the reason he considers he is entitled relief. The Director of Priorities may thereupon take such action as he deems appropriate.

licability of Order. The prohibitions and restrictions contained in this Order shall apply the use of material in all articles hereafter manufactured irrespective of whether such icles are manufactured pursuant to a contract made prior or subsequent to the effective date of, or pursuant to a contract supported by a preference rating. Insofar as any other Or- of the Director of Priorities may have the effect of limiting or curtailing to a greater nt than herein provided, the use of asbestos fibre in the production of any article, the itations of such other Order shall be observed.

espondence and Communication. All reports required to be filed hereunder, and all communions concerning this Order, shall, unless otherwise directed, be addressed to:

"Office of Production Management,
Washington, D. C. Ref: M-79"

ations. Any Person who wilfully violates any provision of this Order, or who by any Act mission falsifies records to be kept or information to be furnished pursuant to this Order, be prohibited from receiving further deliveries of any Material subject to allocation, and further action may be taken as is deemed appropriate, including a recommendation for protion under Section 35 A of the Criminal Code (18 U.S.C. 80).

ctive Date. This Order shall take effect immediately and shall continue in effect until ked.

(P.D. Reg. 1, Amended, Dec. 23, 1941, 6 F.R. 6680; O.P.M. Reg. 3 Amended, Sept. 2, 1941, 6 F.R. 4865; E.O. 8629, Jan. 7, 1941, 6 F.R. 191; E.O. 8875, Aug. 28, 1941, 6 F.R. 4483; sec. 2(a), Public No. 671, 76th Congress, Third Session, as amended by Public No. 89, 77th Congress, First Session).

ed this 30th day of January, 1942.

J. S. Knowlson
Acting Director of Priorities

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53.A

RAW MATERIALS DATA SHEET

Prepared for the
ANALYSIS AND REPORTS DIVISION, OFFICE OF IMPORTS
BOARD OF ECONOMIC WARFARE
by the
BUREAU OF FOREIGN AND DOMESTIC COMMERCE
DEPARTMENT OF COMMERCE

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~~CONFIDENTIAL Information Indicated by Asterisk~~ *

COMMODITY

Asbestos (Crude)

Canadian and African Critical Grades

Unit: Short ton

Conversion Factor:

1. DESCRIPTION, GRADES:

Description: "Asbestos" is a commercial term applied to fibrous varieties of several minerals differing widely in composition, the fibre being diverse in strength, flexibility, and consequent usefulness. The three varieties of asbestos in greatest use commercially are: (a) Chrysotile, a highly fibrous material employed in the manufacture of asbestos textiles, compressed sheet packings, asbestos-cement materials, and other asbestos products; (b) Amosite, a coarse, long, resilient fibre used principally for insulations; (c) Crocidolite (Blue), a fibre with high tensile strength used mainly in asbestos-cement pipe and also, because of its acid-resistant qualities, in certain packings. Chrysotile comprises the major portion of the world production and consumption of both long and short fibres.

The United States produces only about 2½ percent of its present required supplies of asbestos. Domestic production is chiefly chrysotile, mined principally in Vermont and Arizona. The Vermont fibre is short and is comparable to short Canadian fibres. Arizona production includes some long fibres which can be substituted for low iron imported types. Canada accounted for about 85 percent of all asbestos imported in 1942. Imports from Canada are chrysotile and now average 8 percent crudes and spinning or textile fibres, the remainder being shorter, nonspinnable fibres. The supplies of these short fibres are adequate. The major source of imports other than Canada is South Africa, which produces blue, amosite, and the bulk of the *critical grades* of low iron chrysotile.

Critical Grades: African fibres (chrysotile Grades C & C 1, 2, 3, and 4; amosite B-1, B-3, or D-3, 3/DW-1 and M-1; and blue asbestos) are essential for direct and indirect military use and cannot be replaced to any great extent by the spinning grades of Canadian fibre, the supply of which also is limited. African chrysotile grades, chiefly from Rhodesia, have relatively low iron content and are required to meet Navy specifications for essential types of electrical insulation. Amosite, found only in the Union of South Africa, is essential for the manufacture of certain types of insulation for the Navy and the U. S. Maritime Commission. Blue asbestos is produced principally in the Union of South Africa, although some of inferior quality is found in the Transvaal. The blue is used because of its high tensile strength in asbestos-cement pipes and also, owing to its acid-resistant qualities, in packings, filter cloths, etc. Canadian spinning fibres represent the three highest groups of Canadian chrysotile, and are used principally in the manufacture of asbestos textiles.

2. BASIC STATISTICS:

1942 U. S. SITUATION*

Consumption[a]		Supplies	
Military	52,345	Stocks 1/1/42	23,476
Civilian		U. S. prod.	None
Exports		Imports	54,038
Total req.	52,345	African	26,401
		Canadian	27,637
		Total sup.	77,513

Gov't stockpile:		Industry stocks:	
1/1/43	692	1/1/43	25,311
Objective	None		

[a] Military and Civilian requirements for crude asbestos are negligible. Requirements are for manufactured products for which a breakdown is not available. Consumption of African grade was 25,610; Canadian grade 26,735.

CANADIAN AND AFRICAN PRODUCTION, 1942*

Country	Amount	% of total
South Africa	31,000	25.4
Southern Rhodesia[a]	56,000	45.9
Canada[b]	35,000	28.7
Total	122,000	100.0

[a] Estimated.
[b] Represents production of critical grades of crude of a total production of 897,378 tons of crude of all grades.

U. S. IMPORTS[a]

Source	1937-39 average	% of total	1942*	% of total
Africa[b]	8,820	40.1	26,401	48.9
Canada	12,880	59.9	27,637	51.1
Total	21,800	100.0	54,038	100.0

[a] Schedule A Nos: 8590.0; 8590.1; 8591.0.
[b] Rhodesia and Union of South Africa.

U. S. EXPORTS, 1942*

Exports of Canadian and African grades of asbestos are not shown separately.

U. S. PRODUCTION AND CONSUMPTION

	1937-39 average	1941	1942*
Production	None	None	None
Consumption	n.a.	n.a.	52,345

(Continued on other side)

April 22, 1943

3. USES, SUBSTITUTES, RESTRICTIONS:

Uses: The white, highly fibrous, chrysotile from Canada and Southern Rhodesia is used in the production of textiles (including brake linings and clutch facings) and certain grades of building materials.

The brownish gray coarse fibred amosite from the Union of South Africa is used in the production of fireproof board, high temperature insulation, pipe covering, blankets for insulating turbines on combat ships.

The blue crocidolite from the Union of South Africa is used in the production of acid packings, filter cloth, asbestos cement and pipe, because of its resistance to acids.

Substitutes: There is no generally acceptable substitute for asbestos in specific applications where resistance to heat, electricity, acid erosion are prime considerations.

Mineral wool, glass wool and the shorter fibres have been utilized for insulation in some instances in lieu of the critical grades. Asbestos is, however, being used in the war program as a substitute for other materials, e. g., asbestos pipe is being used in some applications in lieu of cast iron and steel pipe. Short fibre in some instances is being used as a substitute for critical grades of long fibre.

Restrictions: Conservation Order M-79, as amended June 18, 1942, restricts the use of fibre from South Africa to priority rated orders and confines certain grades and types to specific uses. Asbestos from the Union of South Africa and Rhodesia was placed under General Imports Order M-63, January 13, 1942. Conservation Order M-123, as amended December 14, 1942, prohibits the use or delivery of asbestos textiles for certain nonessential uses. Conservation Order M-283 provides for the allocation of asbestos textiles.

4. PRICES AND STOWAGE:

Prices (March 18, 1943):

Canadian grades:

Crude No. 1	$650-$750
Crude No. 2 and sundry crudes	$165-$385
Spinning fibres	$124-$233

Per ton, f.o.b. Quebec Mines, tax and bags included (Quotations in U. S. funds):

African grades:

Crocidolite crudes	$105-$138
Amosite crudes	$100-$122
Rhodesian chrysotile	$ 75-$285

Per ton, f.o.b. African port:

Stowage: Crude asbestos is packed in cloth bags with no inner liner; gross weight 101 pounds, tare one pound. Cubic measurement, 1.8 cubic feet; stowage factor 34. Some grades occupy 3.4 cubic feet per bag of 99 pounds gross weight and have stowage factor of 78. Stowage factors for crude asbestos from Africa vary from 78 to 90 depending upon the degree of fibre concentration from crude rock.

5. SPECIAL PROBLEMS:

Since only African varieties of asbestos satisfy certain critical military requirements, the essential problem is that of maintaining uninterrupted imports from Rhodesia and Union of South Africa.

Further references: "Asbestos—Critical Grades" in "Commodity Chart Book." W.P.B. Statistics Division, Materials Branch.
U. S. Tariff Commission has studies on Asbestos.

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$0.59 akum, $0.85; Young, $0.83; Zapata, $0.83; and Zavala, $0.80.

Wisconsin: Adams, $0.88; Ashland, $1.09; Barron, $1.20; Bayfield, $1.19; Brown, $1.32; Buffalo, $1.33; Burnett, $1.09; Calumet, $1.42; Chippewa, $1.22; Clark, $1.25; Columbia, $1.27; Crawford, $1.33; Dane, $1.37; Dodge, $1.50; Door, $1.13; Douglas, $1.22; Dunn, $1.26; Eau Claire, $1.26; Florence, $1.03; Fond Du Lac, $1.42; Forest, $1.13; Grant, $1.41; Green, $1.40; Green Lake, $1.32; Iowa, $1.36; Iron, $1.13; Jackson, $1.21; Jefferson, $1.46; Juneau, $1.13; Kenosha, $1.41; Kewaunee, $1.25; La Crosse, $1.30; Lafayette, $1.36; Langlade, $1.20; Lincoln, $1.14; Manitowoc, $1.43; Marathon, $1.18; Marinette, $1.08; Marquette, $1.04; Milwaukee, $1.46; Monroe, $1.31; Oconto, $1.14; Oneida, $1.05; Outagamie, $1.35; Ozaukee, $1.45; Pepin, $1.30; Pierce, $1.32; Polk, $1.23; Portage, $1.03; Price, $1.14; Racine, $1.48; Richland, $1.33; Rock, $1.36; Rusk, $1.24; St. Croix, $1.30; Sauk, $1.26; Sawyer, $1.11; Shawano, $1.25; Sheboygan, $1.44; Taylor, $1.23; Trempealeau, $1.27; Vernon, $1.33; Vilas, $1.04; Walworth, $1.40; Washburn, $1.09; Washington, $1.47; Waukesha, $1.43; Waupaca, $1.29; Waushara, $1.02; Winnebago, $1.38; and Wood, $1.15.

Wyoming: Campbell, $0.61; Converse, 0.61; Crook, $0.77; Goshen, $0.74; Johnson, $0.86; Laramie, $0.56; Niobara, 0.55; Platte, $0.73; Sheridan, $0.93; and Veston, $0.79.

Done at Washington, D. C., this 23th ay of August, 1941. Witness my hand nd the seal of the Department of Agiculture.

[SEAL] CLAUDE R. WICKARD,
Secretary of Agriculture.

F. R. Doc. 41-6514; Filed, August 29, 1941; 11:18 a. m.]

TITLE 32—NATIONAL DEFENSE

CHAPTER VI—SELECTIVE SERVICE SYSTEM

[Amendment No. 109]

AN AMENDMENT TO AUTHORIZE STATE MEDICAL OFFICERS TO CONDUCT PHYSICAL EXAMINATIONS IN EMERGENCIES

By virtue of the Selective Training and ervice Act of 1940 (54 Stat. 885) and he authority vested in me by the rules nd regulations prescribed by the Presient thereunder, I hereby amend, effecve fifteen (15) days after the filing ereof with the Division of the Federal egister, the Selective Service Regulaions, Volume One,[1] Section IV, by strikg out the present Paragraph 123 and ubstituting therefor the following:

123. *State medical officers.* *a.* In each tate, one or more medical officers of the rmy, Navy, National Guard, Naval Reerves, or Organized Reserves shall be ssigned by the President, upon recomendation of the Governor. Medical officers shall report to the Governor for duty at State Headquarters.

b. In emergencies, State medical officers may either assist examining physicians in conducting physical examinations of registrants or may themselves perform such examinations in place of the examining physicians; in the latter event, the State medical officers shall sign the Reports of Physical Examination (Form 200).

LEWIS B. HERSHEY,
Director.

AUGUST 28, 1941.

[F. R. Doc. 41-6491; Filed, August 28, 1941; 4:17 p. m.]

[No. 27]

ORDER PRESCRIBING FORMS

By virtue of the Selective Training and Service Act of 1940 (54 Stat. 885) and the authority vested in me by the rules and regulations prescribed by the President thereunder, and more particularly the provisions of Paragraph 163 and Appendix A to Volume One[1] of the Selective Service Regulations, I hereby prescribe the following changes in DSS forms:

Revision of DSS Form 21, entitled "Oath of Office," by combining it with and eliminating DSS Form 257, entitled "Waiver of Pay," effective fifteen (15) days after the filing hereof with the Division of the Federal Register. The supply of original DSS Form 21 and DSS Form 257 on hand will be used until exhausted.

The foregoing revision shall, effective fifteen (15) days after the filing hereof with the Division of the Federal Register, become a part of Appendix A to Volume One, Selective Service Regulations.

LEWIS B. HERSHEY,
Director.

AUGUST 27, 1941.

[F. R. Doc. 41-6492; Filed, August 28, 1941; 4:17 p. m.]

CHAPTER IX—OFFICE OF PRODUCTION MANAGEMENT

SUBCHAPTER B—PRIORITIES DIVISION

[Priorities Regulation No. 1]

PART 944—REGULATIONS APPLICABLE TO THE OPERATION OF THE PRIORITIES SYSTEM

Establishing Provisions and Definitions Applicable to the Operation of the Priorities System

The following Regulation is issued by the Director of Priorities to promote the defense of the United States and for the purpose of improving and facilitating the operation of the Priorities System.

§ 944.1 *Definitions.* (a) "Person" means any individual, partnership, association, corporation or other form of enterprise.

(b) "Defense Order" means:

(1) Any contract or order for material or equipment to be delivered to, or for the account of:

(i) The Army or Navy of the United States, the United States Maritime Commission, the Panama Canal, the Coast and Geodetic Survey, the Coast Guard, the Civil Aeronautics Authority, the National Advisory Commission for Aeronautics, the Office of Scientific Research and Development;

(ii) The government of any of the following countries: The United Kingdom, Canada and other Dominions, Crown Colonies and Protectorates of the British Empire, Belgium, China, Greece, The Kingdom of the Netherlands, Norway, Poland, Russia and Yugoslavia.

(2) Any contract or order placed by any agency of the United States Government for material or equipment to be delivered to, or for the account of, the government of any country listed above, or any other country, including those in the Western Hemisphere, pursuant to the Act of March 11, 1941, entitled "An Act to Promote the Defense of the United States," (Lend-Lease Act).

(3) Any other contract or order to which the Director of Priorities assigns a preference rating of A-10 or higher.

(4) Any contract or order for material or equipment required by the Person placing the same to fulfill his contracts or orders on hand, provided such material or equipment is to be physically incorporated in material or equipment to be delivered under contracts or orders included under (1), (2) or (3) above.

(c) "Material" means any commodity, equipment, accessories, parts, assemblies or products of any kind.*

*§§ 944.1 to 944.21, inclusive, issued under the authority contained in O.P.M. Regulation 3, March 7, 1941, 6 F.R. 1556; E.O. 8629, January 7, 1941, 6 F.R. 191; sec. 2 (a), Public No. 671, 76th Congress, Third Session, as amended by Public No. 89, 77th Congress, First Session; sec. 9, Public No. 783, 76th Congress, Third Session.

§ 944.2 *Acceptance of defense orders.* Defense Orders for any Material, whether or not accompanied by a Preference Rating Certificate, must be accepted and fulfilled in preference to any other contracts or purchase orders for such Material, subject to the following provisions:

(a) Defense Orders must be accepted even if acceptance will render impossible, or result in deferment of:

(1) Deliveries under non-defense orders previously accepted, or

(2) Deliveries under Defense Orders previously accepted bearing lower preference ratings, unless rejection is specifically permitted by the Director of Priorities;

(b) Defense Orders need not be accepted:

(1) Delivery on schedule thereunder would be impossible by reason of the requirements of Defense Orders previ-

[1] 5 F.R. 3779.

[1] 5 F.R. 3779.

orly accepted bearing higher or equal ference ratings, unless acceptance is s, ..ifically directed by the Director of Priorities;

(2) If the Person seeking to place the Defense Order is unwilling or unable to meet regularly established prices and terms of sale or payment, but there shall be no discrimination against Defense Orders in establishing such prices or terms;

(3) If the Material ordered is not of the kind usually produced or capable of being produced by the Person to whom the Defense Order is offered;

(4) If such Defense Orders specify deliveries within fifteen days, and if compliance with such delivery dates would require the termination before completion of a specific production schedule already commenced.*

§ 944.3 *Rejected orders.* When a Defense Order for any Material has been rejected in violation of this Regulation, the Person seeking to place such Order may file with the Division of Priorities a verified report in form to be prescribed, setting forth the facts in connection with the alleged rejection. When the facts set forth justify such action, the Director of Priorities will thereupon direct the Person against whom complaint is made to submit a sworn statement setting forth the circumstances concerning the alleged rejection. Thereafter, such action will be taken by the Director of Priorities as he deems appropriate.*

§ 944.4 *Assignment of preference ratings.* Preference ratings may be assigned to contracts, purchase orders or deliveries by means of Preference Rating Certificates issued by authority of the Director of Priorities, or by regulations or Orders issued by the Director of Priorities assigning ratings to particular deliveries or to specified classes of deliveries. Such ratings may be assigned to deliveries under accepted contracts or purchase orders, and also, in the case of Defense Orders, to purchase orders which have not been placed or accepted at the time the rating is applied for. The Director of Priorities may also issue specific directions as to particular deliveries, without assigning ratings thereto.*

§ 944.5 *Sequence of preference ratings.* Preference Ratings, in order of precedence, are: AA, A–1–a, A–1–b, etc., . . . A–1–j; A–2, A–3, etc., . . . A–10; BB, B–1, B–2, etc., . . . B–8, AA being the highest rating presently assigned.*

§ 944.6 *Doubtful cases.* Whenever there is doubt as to the preference rating applicable to any delivery, or as to whether a particular order is a Defense Order, the matter is to be referred to the Division of Priorities for determination, with a statement of all pertinent facts.*

§ 944.7 *Sequence of deliveries.* (a) Every delivery under a Defense Order shall be made in preference to deliveries under all other contracts or orders whichever, and to the extent, necessary to fulfill the delivery schedule provided in the Preference Rating Certificate covering such delivery, or in the contract or purchase order if no Certificate has been issued. Deliveries bearing no preference rating or lower preference ratings shall be deferred to the extent necessary to assure those deliveries bearing higher preference ratings, even though such deferment may cause defaults under other contracts or purchase orders. Each Person who has Defense Orders on hand must so schedule his production and deliveries that deliveries under Defense Orders will be made on the dates required, giving precedence, in case of unavoidable delay, to deliveries bearing the higher preference ratings.

(b) The sequence of deliveries bearing the same preference rating shall be determined by the delivery dates specified in their respective Preference Rating Certificates, or if the ratings were assigned by Order or direction of the Director of Priorities, but no Certificates were issued, then by the dates specified in the contracts or purchase orders. In any case where both preference ratings and delivery dates are the same, and it is impossible to make all deliveries on schedule, the matter is to be referred to the Division of Priorities for instructions as to sequence.*

§ 944.8 *Delivery schedules.* No earlier delivery date shall be specified in any Defense Order than required by the production or delivery schedules of the Person placing the Defense Order. No preference rating will be assigned to any contract or purchase order specifying delivery dates earlier than required by the production or delivery schedules of the Person placing the contract or purchase order.*

§ 944.9 *Deferred deliveries.* When deliveries under Defense Orders have been unreasonably or improperly deferred, the Person entitled to delivery may file with the Division of Priorities a verified report in form to be prescribed, setting forth the facts in connection with the alleged deferment. When the facts set forth justify such action, the Director of Priorities will thereupon direct the Person against whom complaint is made to submit a sworn statement, setting forth the circumstances concerning the alleged deferment of deliveries. Thereafter, such action will be taken by the Director of Priorities as he deems appropriate.*

§ 944.10 *Allocations.* When specific allocations of a Material are made by the Director of Priorities, such allocations may, in the discretion of the Director, be made without regard to any preference ratings which have been assigned to deliveries under particular contracts or purchase orders.*

§ 944.11 *Use of material obtained under allocation or preference rating.* Any Person who obtains a delivery of any Material under an Order or specific direction of the Director of Priorities, or a delivery of Material bearing a preference rating, must use such Material, or an equivalent amount thereof, for the purpose specified in connection with t issuance of the Order, direction o. rating.*

§ 944.12 *Intra-company deliveries.* When any Order of the Director of Priorities prohibits or restricts deliveries of any Material by any Person, such prohibition or restriction shall, in the absence of a contrary direction, apply not only to deliveries to other Persons, including affiliates and subsidiaries, but also to deliveries from one branch, division or section of a single enterprise to another branch, division or section of the same or any other enterprise owned or controlled by the same Person.*

§ 944.13 *Effect of order: damages.* When any Order of the Director of Priorities prohibits or restricts deliveries of any Material, such prohibition or restriction shall, in the absence of a contrary direction, apply to all deliveries made after the effective date of the Order, including deliveries under contracts or purchase orders accepted either prior or subsequent to the effective date of the Order. No Person shall be held liable for damages or penalties for any default under any contract or purchase order which shall result directly or indirectly from his compliance with any rule, regulation or Order issued by the Director of Priorities.*

§ 944.14 *Inventory restriction.* Unless specifically authorized by the Director of Priorities, no Person shall, after the effective date of this Regulation, knowingly make delivery of any Material whatever, and no Person shall accept delivery thereof, in an amount, quantity or number which will increase for any current month the inventory of such Material of the Person accepting delivery, in the same or other forms, in excess of the amount, quantity or number necessary to meet required deliveries of the products of the Person accepting delivery, on the basis of his current method and rate of operation. This provision shall not prohibit or restrict:

(a) Deliveries for direct export out of the United States, provided that such exports shall have been licensed by the Administrator of Export Control;

(b) Deliveries of imported Material to any Person importing the same, either directly or through an agent.*

§ 944.15 *Records.* All Persons affected by any Order of the Director of Priorities shall keep and preserve for a period of not less than two years accurate and complete records of their inventories of the Material covered by such Order, and of the details of all transactions in the Material covered by such Order. Such records shall include the dates of all contracts or purchase orders accepted, the delivery dates specified in such contracts or purchase orders, and in any Preference Rating Certificates accompanying them, the dates of actual deliveries thereunder, description of the Material covered by such contracts or purchase orders, description of deliveries

by classes, types, quantities, weights and values, the parties involved in each transaction, the preference ratings, if any, assigned to deliveries under such contracts or purchase orders, details of all Defense Orders either accepted or offered and rejected, and other pertinent information.*

§ 944.16 *Audit and inspection.* All records required to be kept by this Regulation or by any Order of the Director of Priorities shall, upon request, be submitted to audit and inspection by duly authorized representatives of the Office of Production Management.*

§ 944.17 *Reports.* All Persons affected by any Order of the Director of Priorities shall execute and file with the Office of Production Management such reports and questionnaires as said Office shall from time to time request. No reports or questionnaires are to be filed by any Person until forms therefor are prescribed by the Office of Production Management.*

§ 944.18 *False statements.* Any Person who wilfully falsifies any records which he is required to keep by the Director of Priorities, or who otherwise wilfully furnishes false information to the Director of Priorities or to the Office of Production Management, and any Person who obtains a delivery, an allocation of Material or a preference rating by means of a material and wilful misstatement, may be prohibited by the Director of Priorities from making or obtaining further deliveries of Material under allocation and may be deprived of further priorities assistance. The Director of Priorities may also take any other action deemed appropriate, including the making of a recommendation for prosecution under section 35A of the Criminal Code (18 U. S. C. 80).*

§ 944.19 *Appeal.* Any Person affected by any Regulation or Order of the Director of Priorities who considers that compliance therewith would work an exceptional and unreasonable hardship upon him, may appeal to the Division of Priorities by addressing a letter to the Division of Priorities, Office of Production Management, Social Security Building, Washington, D. C., setting forth the pertinent facts and the reasons such Person considers that he is entitled to relief. The Director of Priorities may thereupon take such action as he deems appropriate.*

§ 944.20 *Notification of customers.* Any Person who is prohibited from, or restricted in, making deliveries of any Material by the provisions of any Order of the Director of Priorities shall, as soon as practicable, notify each of his regular customers of the requirements of such Order, but the failure to give such notice shall not excuse any customer from the obligation of complying with the terms of such Order.*

§ 944.21 *Effect of regulation; ratification of prior acts.* This regulation shall take effect at once, and shall hereafter regulate and govern all matters embraced herein, except where inconsistent with the specific provisions of any existing or future Order or direction of the Director of Priorities. All existing Orders, directions and actions of the Director of Priorities are hereby ratified and confirmed and shall remain in full force and effect until they expire by their terms or are specifically revoked or amended.*

Issued August 27th, 1941, effective immediately.

E. R. STETTINIUS, Jr.,
Director of Priorities.

Approved:

WILLIAM S. KNUDSEN,
Director General.

SIDNEY HILLMAN,
Associate Director General.

[F. R. Doc. 41-6490; Filed, August 28, 1941; 1:49 p. m.]

CHAPTER XI—OFFICE OF PRICE ADMINISTRATION AND CIVILIAN SUPPLY

PART 1337—RAYON[1]

AMENDMENT OF CIVILIAN ALLOCATION PROGRAM FOR RAYON YARN

It is hereby directed that the amendment to § 1337.1 which was issued August 15, 1941, be amended by deleting the expiration date "August 31, 1941", and substituting in lieu thereof the expiration date "September 30, 1941."

It is further directed that the amendment to § 1337.1 which was issued August 19, 1941, be amended by deleting the expiration date "August 31, 1941", and substituting in lieu thereof the expiration date "September 30, 1941", and it is further directed that such amendment be amended by deleting the figure "95%" and substituting in lieu thereof the figure "100%.".

Section 1337.1, as amended, is also hereby further amended by adding at the end thereof the following:

§ 1337.1 *Allocation of materials.* * * * *Provided further,* That the rayon yarn expressly required by this program to be made available to hosiery manufacturers and to other former users of silk shall be used only to replace silk, and the amount thereof shall therefore be computed apart from the quantities of rayon yarn which will, in the reduced amounts available by reason of this program, be supplied to persons who prior to August 1, 1941 were purchasers of rayon yarn, and *Provided also,* That nothing herein contained shall be taken to be any representation on the part of the Government as to the suitability of any process of manufacture of rayon yarn for the manufacture of hosiery or other products formerly made largely or wholly from silk, nor shall anything herein contained be construed to prevent any producer of rayon yarn from selling yarn not covered by this section to any manufacturer.

Section 1337.2 is hereby amended by adding at the end thereof the following:

§ 1337.2 *Disposal of yarn allocated but not purchased.* * * * *Provided, however,* That if on the last day of August any of the amounts of rayon yarn required to be set aside during the month of August have not been purchased by persons permitted to make purchases under Section 1337.1, such yarn shall not be disposed of by the producer thereof but shall continue to be held by the producer thereof for disposition in accordance with the terms of this program.

Issued this 28th day of August 1941.

LEON HENDERSON,
Administrator.

[F. R. Doc. 41-6512; Filed, August 29, 1941; 11:15 a. m.]

[Schedule No. 26]

PART 1343—FATS AND OILS AND THEIR PRODUCTS

ELIMINATION OF SPECULATIVE AND INFLATIONARY PRICE PRACTICES WITH RESPECT TO FATS AND OILS AND THEIR PRODUCTS

The Office of Price Administration and Civilian Supply is charged with the maintenance of price stability and civilian supply. Present stocks and production of fats and oils and their products are ample. However, during the past few months, speculation in and hoarding of fats and oils and their products has created the impression of a shortage and has imposed an artificial influence upon prices detrimental to the public interest and national defense. The exhaustive investigation by this Office, and the information and counsel furnished this Office by the trade, have established the necessity for, and the willingness of the trade to cooperate in, the elimination of certain of these speculative and inflationary price practices.

Therefore, under the authority vested in me by Executive Order No. 8734,[1] it is hereby directed that:

§ 1343.1 *Elimination of speculative resales.* No person shall buy or offer to buy, and no person shall sell or offer to sell, fats or oils or their products for the purpose of reselling them at a profit without either (a) further processing them or (b) performing some other recognized function in the distribution or manufacture thereof.

Any purchase or sale of a futures contract made on an organized commodity exchange to hedge a position, or any purchase or sale made to fill an order on hand, to avoid transportation expenses, or to facilitate any other recognized

[1] 6 F.R. 3922, 4145, 5214.

[1] 6 F.R. 1917.

FORM GA-1-A
(7-20-43)

UNITED STATES OF AMERICA
WAR PRODUCTION BOARD

MANUAL OF POLICY AND PROCEDURES

GENERAL ADMINISTRATIVE ORDER NO. 3-39 (Amended)

POLICY DOCUMENT NO. 2780

EFFECTIVE DATE
August 20, 1943

PAGE 1 OF 4

SUBJECT

CLASS

IB

COMPLIANCE ACTIVITIES OF THE WAR PRODUCTION BOARD

Section 1. Purpose:

.01 The purpose of this Order is to regulate the compliance activities of the War Production Board, and to establish rules and procedures for the taking of administrative action and the institution of civil or criminal proceedings in cases of noncompliance with orders and regulations issued by or under the authority of the Chairman of the War Production Board.

Section 2. Responsibility for Compliance:

.01 Responsibility for obtaining compliance with orders and regulations of the War Production Board is vested in the Director of the Compliance Division, the General Counsel, and (subject to policy direction from either of them) in the Regional Directors and Regional Compliance Chiefs.

.02 All officials of the War Production Board shall promptly refer to the Compliance Division all cases of violation of an order or regulation which involve a substantial diversion of material or productive capacity, or which appear to be wilful or the result of gross negligence.

.03 The Director of the Compliance Division shall have sole authority and responsibility for authorizing and conducting investigations and surveys relating to compliance with orders and regulations. Such authority and responsibility may be delegated by the Director of the Compliance Division to Regional Directors with authority to redelegate with the consent of the Director of the Compliance Division to other regional officers. Until otherwise ordered all employees of the Compliance Division, all regional employees assigned to compliance activities in their respective offices, and all employees of other agencies of the United States who may be requested by the Director of the Compliance Division or by a Regional Director to assist in War Production Board compliance activities may, in the course of their official duties, exercise the authority conferred upon the President by the Second War Powers Act to make inspections and investigations in connection with the enforcement or administration of said Act.

.04 Except as otherwise provided in this Order, no official of the War Production Board shall deal with any violation either by the taking of administrative action or by the adjustment of a case unless under specific delegation from the Director of the Compliance Division.

Section 3. Compliance Procedures:

.01 Compliance with orders and regulations of the War Production Board may be enforced by criminal prosecutions and civil injunction proceedings under the Second War Powers Act, or by the taking of administrative action against persons violating such regulations and orders, including the issuance of suspension orders in proper cases.

.02 Criminal or civil prosecution under the Second War Powers Act shall be the customary method of enforcing compliance. All wilful and substantial violations of War Production Board orders or regulations are to be referred to the Department of Justice for criminal or civil prosecution in lieu of taking administrative action against the violator, unless the General Counsel determines that such prosecution is impracticable or inappropriate.

Section 4. Institution of Civil or Criminal Proceedings:

.01 In any case where it appears to the Director of the Compliance Division or to a regional compliance chief that the institution of civil or criminal proceedings for violation of orders and regulations or for misrepresentations to the War Production Board is proper, such case shall be immediately referred to the Office of the General Counsel for appropriate action. (The Office of the General Counsel as used in this Order includes the regional attorneys.)

.02 The decision of the General Counsel as to the necessity for such proceedings shall be final, unless overruled by the Chairman of the War Production Board.

(OVER)

1 30285

(Amended)

.03 The General Counsel may recommend the institution of civil or criminal gs on his own initiative in any case where he deems it appropriate to do so.

.04 Except as authorized by this Section 4, no officer or employee of the War n Board, except members of the Office of the General Counsel, shall take any any kind with respect to current or contemplated civil or criminal proceedings alleged violations of WPB regulations or orders.

. Administrative Action in Cases of Noncompliance:

.01 Suspension orders may be issued in the name and under the authority of the ption Board, in cases of violations of WPB regulations or orders resulting from l misconduct or gross negligence of the person or firm involved, and in cases resentations to the War Production Board in connection with operations under itions, orders, or directives.

.02 Suspension orders may:

1 Withdraw or withhold priority assistance from a respondent;

2 Withdraw of withhold allocations or allotments of scarce materials or products from a respondent;

3 Prohibit or restrict a respondent in the acquisition, delivery, production, use or disposition of scarce materials or products; or

4 Otherwise regulate the business conducted by respondent in order to assure future compliance by him.

. Compliance Commissioners:

.01 The Chairman of the War Production Board will appoint persons to act as e commissioners. The Chairman will also appoint a Chief Compliance Commis- i a Deputy Chief Compliance Commissioner. The Chief Commissioner, the Deputy i all other compliance commissioners shall be responsible solely to the Chair- e War Production Board and shall have no other duties than those specified Budgetary and other administrative matters affecting the commissioners shall i through the Office of the Executive Secretary.

.02 Compliance commissioners will consider all charges of violation presented mpliance Division or the Regional Compliance Chiefs, will preside at hearings this purpose, and will recommend administrative action, including the issuance sion orders, in appropriate cases pursuant to this Order.

.03 Compliance commissioners will also preside at hearings held in connection stigations of alleged violations, though no specific charge has been made.

.04 For the purpose of obtaining any information, verifying any report re- r making any investigation concerning the violation of any order or regulation, e commissioners may administer oaths and affirmations and may require by sub- ued in the name of the War Production Board the attendance and testimony of wit- i the production of any books, records, or any other documentary or physical which may be relevant.

.05 All subpoenas shall be returnable before a compliance commissioner, pro- t, if prior to the return date specified in the subpoena, the person against subpoena is issued furnishes the compliance commissioner with a true certified uch books, records, or other documentary evidence, then the production of such cords or evidence shall not be required at any place other than the place where n against whom the subpoena is issued resides or transacts business.

.06 The Chief Compliance Commissioner will hear and determine appeals from de- f compliance commissioners, and will perform the further duties specified in . He will also exercise general supervision over the work of compliance com- s, subject to direction of the Chairman. He may establish policies, standards dures to be followed by the commissioners, not inconsistent with this Order; policies, standards and procedures must be approved by the General Counsel issuance. He may also himself act as compliance commissioner from time to

.07 The Deputy Chief Compliance Commissioner will hear and determine such ap- may be referred to him from time to time by the Chief Compliance Commissioner. so himself act as compliance commissioner from time to time.

Section 7. Administrative Proceedings:

.01 When the Director of the Compliance Division, a regional director, or a regional compliance chief, after investigation, has reason to believe that there has been a violation of any order or regulation which in his opinion warrants criminal, civil or administrative proceedings, he will refer the case to the Office of the General Counsel (or to the regional attorney). If the Office of the General Counsel determines that administrative proceedings should be instituted, a charging letter or telegram will be prepared for the signature of the Director of the Compliance Division or the regional compliance chief, advising the respondent of the specific violations charged and the administrative action that may be taken against him. The respondent will be afforded an opportunity to offer a written explanation of the charges, or to appear at a hearing when the charges against him are considered by a compliance commissioner. No suspension order (except a temporary order referred to in paragraph .05) will be issued except after such a hearing.

.02 Upon reasonable notice to the respondent, the hearing will be held on the charges against him. The commissioner will consider all of the facts relevant to the violations charged submitted by the Compliance Division and the respondent, including oral testimony, written statements and exhibits. After considering the facts submitted at the hearing, the compliance commissioner will file his report and recommendation with the regional office of the War Production Board. The report will contain a statement of the facts found relative to the violations charged, together with the commissioner's conclusion as to whether or not such facts constituted a violation of the orders and regulations of the War Production Board, and if so, whether or not the violation was wilful or the result of gross negligence. The report will be accompanied by a separate recommendation of the administrative action to be taken or for the closing or other disposition of the case, including, where appropriate, a recommendation for transmission of the case to the Department of Justice for civil or criminal proceedings. Instead of filing a recommendation, the commissioner may direct that no final disposition be made of the case for a specified period of time pending a determination of the possibility of continuing violations in the future. The report of the commissioner as to the facts found shall be binding upon the Compliance Division for the purpose of the compliance proceeding, but may be reviewed by the Chief Compliance Commissioner on an appeal filed by the respondent.

.03 If the compliance commissioner concludes that the facts found do not constitute either a wilful violation or a violation caused by the gross negligence of the respondent, he will close the case with a letter to the respondent.

.04 When the compliance commissioner recommends the taking of administrative action, his recommendation shall be incorporated in a proposed suspension order and submitted to the Office of the General Counsel and to the Director of the Compliance Division, upon whose approval such order shall issue in the name of the War Production Board, witnessed or attested by the Executive Secretary or the Recording Secretary. The Office of the General Counsel and the Director of the Compliance Division may also jointly direct the issuance of a suspension order differing from the suspension order proposed by the compliance commissioner only in that the terms of the suspension are less, or the restrictions imposed are less severe. No suspension order shall be issued unless approved by both the Office of the General Counsel and the Director of the Compliance Division, unless otherwise directed by the Chairman.

.05 The Director or Deputy Director of the Compliance Division may at any time, with the approval of the Office of the General Counsel, direct the issuance of a temporary suspension order with or without notice. In all such cases, however, the respondent will be informed of the charges against him and a hearing will be held as soon as practicable after the issuance of the temporary suspension order, and in any event before such order is made permanent.

.06 The Director or Deputy Director of the Compliance Division may at any time, with the approval of the Office of the General Counsel, direct the issuance of a suspension order upon the consent of the respondent, and the issuance of specific exceptions or authorizations under suspension orders; this authority may be delegated by the Director to other officials of the War Production Board.

.07 Any person affected by the provisions of a suspension order issued in accordance with a report of a compliance commissioner may appeal from any or all of the provisions of such order to the Chief Compliance Commissioner. When the appeal is from a decision of the Chief Compliance Commissioner acting as a commissioner, the appeal shall be to the Deputy Chief Compliance Commissioner. The appeal must be taken in accordance with the rules and procedures laid down from time to time by the Chief Compliance Commissioner, and his decision thereon shall be final. In determining such appeals, the Chief Compliance Commissioner may direct the closing of the case or the modification of the Order in any respect, including an increase of the suspension period or the restrictions imposed, subject, however, to the approvals specified in paragraph .04 above.

(Amended)

.08 Pending the determination of an appeal from the provisions of a suspener, the Chief Compliance Commissioner or his Deputy, upon a showing of irreparm, may direct the issuance of an order staying the operation of the suspension In any case in which an appeal is taken from a decision of the Chief Compliance oner acting as a commissioner, a stay may be issued by the Deputy Chief Compliissioner.

.09 The Chief Compliance Commissioner may also, at any time, with the consent ffice of the General Counsel, revoke or modify any suspension order by diminishperiod of suspension or the restrictions imposed though no appeal from the order taken by the respondent.

.10 The Director of the Compliance Division shall prepare and transmit to the tion Bureau for issuance in the booklet "Priorities", a list containing names esses of persons, firms, and corporations against whom suspension orders have ued and the provisions of such orders.

.11 No preference rating certificates, orders, allocations, allotments, or ations shall be issued by any employee of the War Production Board when proby the provisions of any suspension order.

8. Closing Compliance Cases:

.01 Prior to submission of a case to the Office of the General Counsel, it losed or a warning letter may be issued to the respondent at any time by the of the Compliance Division, the regional director, or the regional compliance

.02 After a case has been submitted to the Office of the General Counsel, it losed only by, or with the consent of, that Office.

.03 After a hearing has been held in a case before a compliance commissioner, ay be closed only by the commissioner.

9. Orders Superseded:

.01 This Order supersedes General Administrative Order No. 2-29 as amended 18, 1942.

10. Effective Date:

.01 This Order will be effective on and after August 20, 1943.

I CERTIFY THAT THE ORIGINAL OF THIS ORDER DULY APPROVED AND SIGNED BY THE COMPETENT EXECUTIVE WAS FILED WITH ME ON THE 21 DAY OF August, 1943. Francis P. Lawley BUDGET OFFICER

Donald M. Nelson
Chairman

Priorities and Industry

DIVISION OF INFORMATION
WAR PRODUCTION BOARD
WASHINGTON, D.C.
AUGUST, 1942

PART I

THE OVERALL PATTERN

The Priorities System is the primary method of controlling the flow of materials and finished products in the war economy. It has grown from small beginnings, just as war production has grown from a defense program of less than $100,000,000 in the Spring of 1940 to a giant which will be larger next year than the total national income of the depression years.

In the early days of the defense program, priorities simply meant putting first things first—giving a preference to military orders when they conflicted with ordinary civilian production. That was sufficient when military production was only a small part of the total national output. It is obviously not enough now that direct spending for war amounts to more than all of the rest of the economic activities of the United States put together.

The easiest way to understand the priorities system as it exists today is to look back on how it has grown. It would have been impossible a year ago to devise a system to meet today's needs, and by the same token it has not been possible at any time during the last year to take time out for the development and application of a wholly new system based on today's conception of war requirements. The development of priorities has necessarily been a continuous adaptation of controls to a situation which changed with disconcerting rapidity, and it will clearly be necessary to keep on changing the system until the war is over. Constant change may be inconvenient but rigidity under the conditions of modern war would be fatal. There are, however, a few basic instruments of the priorities system which have been used in one form or another virtually from the beginning and which are likely to remain in use as long as priorities are necessary.

The first of these is the priority rating or preference rating. These ratings, expressed in a continuous series from AAA to B–8, indicate the relative importance of various uses of materials in the war economy. An order which has been assigned an AAA rating is of the utmost urgency, followed in importance by those in the AA series, the A–1 series and ratings of A–2, A–3, A–4, etc. This pattern of ratings is established with the full force of law by Priorities Regulations No. 1, which says that any purchase order bearing a preference rating must be accepted and given its proper place in production and delivery schedules. The preference rating, in other words, is the tag on a purchase order which governs the place that order will take in the war economy.

Preference ratings are assigned by authority of the War Production Board in a number of different ways which will be described in greater detail later on in this booklet. Briefly, the principal methods used to assign preference ratings are as follows:

Individual preference rating certificates, PD–1A's and PD–3A's.—These certificates are used by the War Production Board and by procurement officers of the Army, Navy, and other authorized Government agencies, to assign ratings to orders for specific quantities of material or equipment for a specific purpose. These individual certificates were used very extensively in the earlier days of the priorities system but their importance has been diminishing since it has become necessary to schedule the flow of materials on a broad basis over a longer period of time.

Limited blanket rating orders, "P" orders.—These orders permit the use of preference ratings without further authorization by certain companies, industries or groups of industries for specified purposes, both to obtain production materials and materials for maintenance, repair, and operating supplies. Most of these orders have been canceled or allowed to expire, because they did not provide a sufficiently tight control over the quantity of materials to which ratings could be applied under their terms. A few of them remain in effect, however, especially for the use of smaller companies and companies to which no other form of priority assistance is appropriate.

Project ratings.—These are a special type of limited blanket rating used for construction projects. A manufacturer putting up a new plant, for example, can be granted a project rating. This rating can be applied to all the orders for materials going into the project, but when the project is finished the rating expires. Because materials needed for new construction projects have become scarce, the kinds of new construction projects which may be undertaken have been strictly limited, particularly by a "Directive for War-Time Construction" issued jointly by the War and Navy Departments and WPB.

Production Requirements Plan.—This is a combined preference rating and allocation system. Under it WPB determines the amount of material available and allots it on the basis of an industry's importance to the war effort. With a few exceptions, PRP is mandatory for all concerns using $5,000 worth of metal a quarter, which means approximately 90 percent of all metal used.

Manufacturers operating under PRP are assigned preference ratings for definite quantities of material to be used by them during a 3-month period. The grade of the preference rating still depends on the importance of the product, but the amount of material the manufacturer may obtain with his rating depends also on how much of that material is available. A significant feature of PRP is that no company operating under it is permitted to use or extend any other form of preference rating for material used in production.

These are the principal methods by which priority assistance is extended. There is also a special form of assistance granted occasionally for capital equipment, and a special distributor's form, PD–1X. Provisions also are made for appeals for releasing frozen inventories.

Finally, priorities enter into the field of foreign trade, where assistance is given for Land-Lease and other foreign requirements.

The priorities system, however, is concerned with more than assistance. The other side of the picture is the rules and regulations which insure that the system works—in a word, control. Of course, these two factors overlap frequently, but there are certain clearly distinguishable types of priorities control which may be covered briefly here.

Priorities Regulation No. 1.—Mention already has been made of Regulation No. 1, the basis of the priorities system. This regulation does more than merely set up a system whereby companies can obtain materials. It specifically states what producers and suppliers can and cannot do under the priorities system. Probably its most important provision is that all rated orders, civilian as well as war, must be accepted. Delivery dates must be specified, and no one is permitted to ask for delivery any sooner than required by his own production or delivery schedules. Regulation No. 1 also forbids the building up of excessive inventories.

Materials control, the "M" orders.—The purpose of these orders is to bring certain raw materials under the control of WPB. Usually this is done by simply forbidding delivery of the raw material to the manufacturer unless it is to be used for specified war purposes. In other cases the same end is accomplished by asking that producers of certain raw materials submit their shipping schedules to WPB for approval.

Machine tools, "E" orders.—These are like M orders, except that they apply to the distribution of equipment, chiefly machine tools and cutting tools. These are subject to E orders, in exactly the same manner as raw materials are subject to M orders. Close control is kept over allocation of new machine tools among purchasers in this country and abroad, and also over the sale and delivery of second-hand machine tools.

End products, "L" orders.—This type of regulation is issued to prohibit or curtail production of less essential goods which use up large quantities of scarce raw materials. In addition, stoppage or limitation of production through an L order often makes more production facilities available to the war effort. Production of automobiles was stopped by the issuance of an L order.

Enforcement, "S" orders.—A special Compliance Branch, with investigative and legal sections and an extensive field organization, is charged with enforcement of priorities orders. By means of industry-wide surveys, spot checks and individual investigation of apparent violations it maintains a constant watch over the use of critically needed scarce materials. Under the Second War Powers Act priorities violators are subject to severe penalties, ranging from a fine of $10,000 up to imprisonment of 1 year, or both.

Requisitioning.—In addition to the above controls, WPB also has the authority to requisition idle material and equipment essential to the war effort. So far, most requisition orders have been issued to acquire valuable material held in warehouses and other storage places for the accounts of European firms on orders placed before the outbreak of war.

These, then, are the chief controls and the chief methods of granting assistance in the priorities system. But priorities cannot be thought of as simply a series of orders and controls superimposed on our normal business life. They are today the basis of our entire economy, because our entire economy is devoted to the war effort.

One way of defining the priorities system is to say that its primary function is to schedule deliveries of materials and products in such a way as to bring about the maximum production of war and absolutely essential products which the United States with all its vast resources is capable of supplying.

Every worker and every factory, every bit of material and every machine is now a part of the war program. No use of material is unimportant and no company has a right to think of its own operations except in connection with the war program. Priorities must be accepted on this basis, and a strict observance, not only of the letter but also of the spirit of the priorities system, is a high patriotic duty.

There are no longer distinctions between soldiers and civilians when the bombs fall, and there likewise are no distinctions between soldiers and civilians in massing the forces of the Nation for total war.

Material has become just as important as fighting man power, and any failure to produce material which might help to win a battle is just as serious as failure of soldiers under fire.

Priorities orders are the basis for production of planes and ships, and a day's delay in carrying out orders on the home front may mean a day's delay in achieving final victory.

VI A

UNITED STATES NAVY DEPARTMENT
BUREAU OF MEDICINE AND SURGERY

ANNUAL REPORT OF THE
SURGEON GENERAL, U. S. NAVY

CHIEF OF THE BUREAU OF MEDICINE AND SURGERY

TO THE SECRETARY OF THE NAVY

CONCERNING

STATISTICS OF DISEASES AND INJURIES IN THE UNITED STATES NAVY

FOR THE CALENDAR YEAR

1939

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1941

ious action of the light.

INDUSTRIAL MEDICINE

Navy Yard, Charleston, S. C.--In order that claims for industrial injury may be confined to those receiving such injury by reason of their employment in the navy yard, all applicants for trades listed as potentially hazardous, receive a special examination, including X-ray examination of chest, where necessary, prior to their employment or assignment to the hazardous occupation. In addition to the entrance examination, periodical examinations are given during continuance of occupation in such work. This increases the work of the Yard dispensary and involves considerable additional cost to the government by reason of materials expended, but it is believed that the results obtained will prevent any serious industrial injury to the man occupied in hazardous industrial trades and prevent unjust compensation claims to be filed against the Government. As a means of protection to fellow employees and to prevent unjust claims to compensation for injuries alleged to have been received by reason of industrial employment, it is recommended that as a condition of employment all Civil Service applicants be required to have a serological test, with the provision that applicants who show a positive serological reaction but no active lesions, shall be required to have continuous medical treatment until negative serological tests are obtained or the disease is pronounced non-infectious by the Yard medical officer. It is also recommended that where infection occurs subsequent to employment that serological tests be made compulsory. As condition of employment, large private industrial corporations require serological tests prior to employment and at periodic intervals thereafter. If it is found that employees have active syphilitic disease, medical treatment is compulsory unless they are pronounced non-infectious by the company physician. Medical treatment for Civil Service employees could be obtained from private physicians or public clinics, and such treatment could be evidenced by certificates signed by licensed practitioners, but serological examinations should be performed at the Yard dispensary in order that a uniform procedure may be followed.

Puget Sound Navy Yard, Bremerton, Wash.--The average employee of this Navy Yard is safety-minded, and a general spirit of cooperation with regard to accident prevention continues. The safety program has been carried forward with excellent results during the past year, emphasis being placed on education of men through indoctrination of the supervisors. Analysis of representative periods have shown that approximately 90 percent of all accidents are directly attributable to carelessness of the men. The record of 18 lost-time accidents among 5,985 employees as compared with 22 lost-time accidents among 4,022 employees in 1938 is considered very satisfactory.

During the past year the following additional safety measures have been undertaken: (a) a new type of face shield has been obtained for buffing and polishing work which is a great improvement over goggles; (b) new double lenses for helmets have been obtained which are found to be much more satisfactory than the old; (c) salt tablet dispensers have been installed in all shops in which "hot work" is carried on; (d) ventilation of shops and offices has been materially improved, and is continuing to improve as funds become available for projected work; (e) an investigation has shown that men on machine tool work wearing corrective spectacles have only one-eighth the number of imbedded particle eye injuries as compared to men wearing no spectacles. Ordinary cup goggles are unsuitable for most types of machine tool work due to restricted vision. It has been proposed to the Navy Department Safety Engineer that a suitable type of spectacle goggle without side pieces be approved for use on these types of machine tool work; and (f) the present Navy specification welding glove has been found to be unsatisfactory, particularly for overhead electric welding. A number of men have been burned due to failure of exposed stitching in this glove. It has been proposed that a more suitable type of glove be approved.

The number of eye injuries among the regular Yard employees was more than double for the calendar year 1938 - 223 for 1938 and 457 for 1939. The increased number of employees can account for some of the increase but the eye injuries have increased out of proportion. Outstanding causes of injuries to the eyes have been poor fitting goggles and failure to use goggles in spite of educational activities on the part of the medical department, injury officer, and supervisors. It is gratifying to note that there were no lost-time eye injuries among the regular Yard force and only one case among the relief workers.

Statistics show a definite increase in all types of injuries among classes of employees except the Emergency Relief, Navy. This increase is out of proportion to the increased personnel and it is believed to be due to the fact that the shop superintendents insist that employees receiving injuries, no matter how slight or insignificant they may seem in extent or severity, report to the Dispensary for treatment. This opinion is supported by the reduction in the actual number of "Injuries resulting in Loss of Time" from 22 during 1938 to 18 during 1939.

Navy Yard, New York, N. Y.--Welding: There are approximately 450 electric welders and 112 gas welders carried on the rolls.

It is well recognized that in the absence of protective measures or with inadequate measures welding incurs certain health hazards, such as toxic gases from the arc of the flame, fumes or dust of metallic oxides of an injurious nature from the coating of certain welding rods, damage to the eyes from ultraviolet rays, etc. The question arises whether or not control protective methods now provided are entirely adequate to prevent occupational diseases in welders under all circumstances.

It was recommended to the Commandant in December 1939, at the suggestion of the Director of the Division of Industrial Hygiene, New York State Department of Labor, that a joint health study of the 930 electric, gas, and tack welders, be conducted by the latter agency and the medical officer of the Yard. The proposed research contemplated medical and occupational histories, physical examinations, and X-ray studies, the funds and bulk of the research staff to be supplied by the New York State Division of Industrial Hygiene.

It was believed that such a study would yield results of great benefit to the workers and that the findings would be significant as a check upon the present methods of control and of value to the U. S. Employees Compensation Commission in relation to certain possible future compensation claims. Other outstanding authorities in industrial hygiene were consulted and all concurred in the view that a large-scale health study of welders was required to settle definitely certain questions relative to hazards of the occupation.

Lead and Lead Compounds: There is little hazard incident to brush painting in this Yard. Lead paint is used chiefly for the red lead priming coat for the hulls of ships. Zinc, titanium or aluminum paints are largely used for other applications. The enamel paints consist of a zinc base in varnish and turpentine. No cases of lead poisoning have come to the attention of the Medical Department during the period un-

der consideration. Metallic lead is handled in the molten state as a component of Babbitt metal in the Inside Machine Shop (No. 31). This metal contains lead, antimony, and copper. The lead volatilizes at a relatively low temperature. The melting kettles are equipped with a hood connected to an air exhaust system with suitable suction fan pipe and conduit to remove fumes which form on the surface of the molten metal. In addition, a respirator is provided for protection against the inhalation of fumes.

Lacquer painting with spray technique is conducted with lacquers made up of a celluloid base with certain volatile solvents, some fast and some slow drying, which may lead to toxic symptoms if inhaled beyond threshold concentrations.

The Ordnance Machine Shop, Electrical Shop, and Sheet Metal Shop are equipped with hoods connected to adequate exhaust systems. In the Ordnance Machine and Sheet Metal Shops a water spray curtain is also provided for more effective removal of fumes. The spray room of the paint shop is not equipped with a hood, dependence being placed upon an exhaust blower for removal of fumes. This lack of localized exhaust results in a much slower rate of removal of contaminated air. No cases of volatile solvent poisoning were reported during the calendar year.

It is recommended that all spray painters be given an annual examination for evidence of toxic effects of volatile solvents.

Industrial Protection Against X-ray and Radium: (a) X-ray protection.--The Pipefitter Shop is equipped with one portable X-ray machine of 220 kilovolts and 25 milliamperes capacity which was installed approximately two years ago. This is employed chiefly for the detection of flaws in pipe-welded joints for high steam pressure installation. The maximum number of exposures approximates a total of 51 minutes a day. (1) Engineering Control: The X-ray tube is encased in lead of 2mm. thickness. The machine is contained in an enclosure 20 feet by 20 feet bounded by a shield 6-1/2 feet high, 10 feet from the tube in all directions and lined with sheet lead 2mm. thickness on three sides. (2) Medical Control: Four men are assigned as operators of the X-ray and radium installations. One of the earliest effects of radiation exposure is a destructive action on the white and red cells of the blood, more marked on the white cells in the early stages. A procedure has been established for a quarterly blood examination of operating personnel and an examination for possible general radiation injury.

(b) Radium Protection.--The use of radium was initiated 4 to 5 years ago for the detection of flaws in castings constructed for high pressure steam installations, both steel and non-ferrous. A capsule containing 278 mgms. of radium is the source of the radiation, the tests being conducted in the Inside Machine Shop. This is in use for an average of 150 to 200 hours a month. The chief metallurgist reports that high speed films exposed at a distance of 12 feet from the capsule for one hour showed no fogging. It is therefore concluded that employees are not subject to harmful radiation at that distance. Protective measures appear adequate.

It is emphasized that a thorough physical examination of a radium or X-ray worker shall be made before he is employed and at any time that the blood count shows suggestive changes or the worker complains of an obscure ailment. The question arises whether the foregoing measures of protection against X-ray radiation are entirely adequate. The situation was recently discussed with the Chairman of the Advisory Committee on X-ray Protection of the Bureau of Standards. He suggested that personnel within the distance of 40 feet external of the lead barrier would be subject to secondary radiation. While the casual

workers would probably not receive a damaging exposure, the question of such a possibility demands consideration. The absolute necessity for further protection can be definitely determined by actual measurements of scattered radiation by means of the portable ionization chamber. It is recommended that the advisability of such tests be considered.

Precautions Relative to Pickling of Metals: (a) Building Ways, No. 1.--There are two sets of pickling tanks in this area one for flat steel and one for piping. The acid employed is dilute sulphuric. The question at issue is whether at any stage of operation personnel are subjected to the inhalation of arsine gas or arsenic dust originating as a result of contact with arsenic, present as an impurity of the metal, with nascent hydrogen in the bath. Such a possibility appears extremely remote in view of the fact that the operations are conducted in the open air thus excluding the possibility of rising accumulation of arsenical compounds which might result in an enclosed space. However, it is advisable that the operating personnel be examined semi-annually for possible evidence of arsenic absorption instead of the quarterly examination now prescribed.

(b) Coppersmith Shop.--Both sulphuric and muriatic acids are used in the vats of this enclosed space connected with the coppersmith shop. The possibility of arsenical exposure discussed above also obtains for this space. Forced exhaust ventilation is provided and appears adequate. A semi-annual medical examination of operating personnel is advisable.

Occupational Dust Hazards: (a) The Steel and Brass Foundries.--The chief hazard to be considered is silicosis due to the inhalation of silica dust, the extent of the hazard being dependent upon the concentration, size of the particles, percentage of free silica, and the duration of exposure. Whether or not a silicosis hazard exists in these foundries can only be determined by actual counts of dust particles concentration under the various working conditions and the estimation of free silica in the sand used. It has recently been reported by the New York State Department of Labor that silicosis can be prevented if the average plant concentration does not exceed 15 million parts per cubic foot.

(b) Casting Cleaning Shop.--The conditions in this shop appear to be particularly unfavorable. The iron and brass foundry buildings are equipped with forced exhaust ventilation although its efficiency in controlling dust concentrations is undetermined. The casting cleaning shop, however, is not provided with any mechanical ventilation, dependence being placed mainly on roof cowls, which, it is believed, are inadequate.

Certain of the grinding and chipping operations should be conducted under hoods with localized suction ventilation. Two high-speed emery wheels and two carborundum grinding wheels are not equipped with suction ventilation. It is recommended that consideration be given to a systematic engineering survey of both foundries and the casting cleaning shop to include dust counts and the measures necessary to reduce silicosis hazards.

There are 33 employees in the iron foundry, 64 in the brass foundry, and 22 in the casting cleaning shop. It would be desirable to carry out a medical survey, including X-ray of the lungs, of all personnel in order to determine the incidence of silicosis. For the present, however, it is suggested that such a study be limited to employees in the casting cleaning shop where the worst conditions prevail.

All candidates for employment for foundry operations should be given an X-ray examination of the lungs in order to screen out cases in

any state of silicosis.

(c) Sandblasters.--The present practice of an annual X-ray examination of the chest, or oftener if so indicated, will be continued.

(d) Hazard of Buffing and Polishing.--The possible hazard incident to dust from artificial abrasives such as carborundum, alundum, and emery should be considered. The dust from these materials does not contain free silica and therefore will not produce silicosis. However, if breathed for protracted periods, these dusts induce an X-ray appearance similar to that of early silicosis. This picture changes very slightly as length of exposure increases. There is clinical evidence, however, that workers exposed to heavy concentrations of abrasive dust are more susceptible to diseases of the chest than those not so exposed. Authorities in this field advise that an effort should be made to keep the dust count below 20 million particles per cubic foot. The dust is approximately 50 percent abrasive and 50 percent metallic. Although respirators are provided for individual use, it is impracticable to wear such a device constantly.

The buffing and polishing wheels in the Sheet Metal Shop are not equipped with localized exhaust. This is recommended as a safety precaution.

The grinding wheels in the tool room of the Shipfitter Shop are provided with either individual exhaust or are kept constantly wet which reduces to a marked degree the quantity of escaping dust.

Hazard of Asbestosis: Asbestosis is an industrial disease of the lungs incident to the inhalation of asbestos dust for prolonged periods, and is distinct from silicosis. The development of the disease depends upon the concentration of the dust, the size of the dust particles, and the length of exposure. The workers in the Pipe Covering and Insulating Shop are exposed to the inhalation of asbestos dust incident to the cutting of asbestos insulating felt in the fabrication of covers for flanges, valve bonnets, and high temperature steam turbines. The material falls under the trade name of "Amosite."

A medical survey of the 11 employees in this Shop was conducted recently with the object of ascertaining whether asbestosis in any stage could be detected. The history of exposure varied from 1.7 to 17 years, 6 men reporting 10 years or over. Present and past disability attributable to asbestosis was denied by all the men and X-rays of the chest were essentially negative in all cases. However, it was not considered that the negative findings precluded the future development of asbestosis by continued exposure to present occupational conditions. The following recommendation made jointly by the medical officer of the Yard and the safety engineer was approved: Install an exhaust blower over work table in the Pipe Covering and Insulating Shop to remove asbestos dust at the source as a protective measure against the hazard of asbestosis.

Norfolk Navy Yard, Portsmouth, Va.--Considerable work has been accomplished in industrial medicine. The medical officer, safety engineer, and W. P. A. Safety Supervisor work in close consultation. In this manner the medical and technical aspects of each industrial problem is properly coordinated. The Bureau of Medicine and Surgery and the Navy Department Safety Engineer have been consulted on several occasions and have given valuable suggestions.

A special effort has been made to collect literature and data with regard to industrial medicine to be used for reference purposes. Special attention is given to the working conditions in hazardous occupations such as sand-blasting, asbestos pipe-covering, amosite and fiberglass insulation. Ventilation, clothing, masks, etc., are [illegible]

blasting are of various types. A special study is being attempted with regard to types of masks, helmets, and respirators with the idea of recommending standard items of as near one type as possible.

An extensive study of a new insulating material, fiber-glass, now employed by the Navy, has recently been carried out by this department. Representatives of the manufacturers of this product have been interviewed, and numerous reports of clinical and laboratory investigations have been reviewed. The representatives claim that no harmful effects from the material have been noted among their employees over a period of 6 years, and the only precautions used are loose clothing and a good cleansing shower at the end of each working day. The evidence submitted is not entirely convincing, and the period of time since the introduction of the product is too short to warrant any definite conclusions at present. Until further information is available the following precautions are in effect: The employee must wear hood, respirator, and gloves at all times; the clothing must be loose and cover the arms and neck; goggles must be worn if there is excessive circulation in the compartment; and showers are required before lunch and at the close of the day.

At present the Norfolk Navy Yard has no instruments for making dust counts. The acquisition of at least one of the new and recently improved instruments would be a great advancement in the field of industrial medicine at this Navy Yard and would afford an opportunity for considerable research.

The hazards to civil employees consequent to industrial activity is a problem and requires continued, intense, effort and research with regard to personnel, new materials, new machinery, and new processes. Safety devices and rules should maintain a high standard. This aspect should be studied, developed, and mastered. It requires cooperation in safety engineering and intensive study of industrial health problems.

Naval Torpedo Station, Newport, R. I.--The number of infections following injuries remains low among civil employees at this station. This is due no doubt to the cooperation of all concerned in routing injuries, no matter how trivial, to the dispensary, where they are promptly treated. A follow-up system is also used whereby cases must report for daily observation and redressings until discharged. Many cases of colds, grippe, and bronchitis have developed among the civilian employees during the fall and winter months. By treating these cases three times daily with antiseptic sprays, cough mixtures, and cold capsules, and the prompt checking out of cases with elevated temperatures, an appreciable decline in lost-time incidence has been noted. It is encouraging to note that accidents are on the decline in spite of the increase in employees. By comparative classification we find that in 1935 there were about 4,962 injuries among 2,493 employees and in 1939 about 3,500 injuries among 3,852 employees.

A general physical examination of all workers in explosive materials, including a complete blood analysis and urinalysis, has been done monthly since October, 1939. An effort is being made to prevent occupational poisonings, with particular reference to tetryl and fulminate of mercury. To date no statistical data have been completed. Sand-blasters are examined routinely each month, and routine chest X-rays are done every three months, oftener if thought necessary.

VI B

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C35-es

March 11, 1941.

MEMORANDUM FOR ADMIRAL McINTIRE:

Subject: Notes for consideration when you call on Assistant Secretary Bard.

1. We make specifically what the policy is concerning invitation of such people as Mr. Zimmer of the Bureau of Labor Standards, Labor Department into the Navy Yards to make a survey of the welding and other hazards. I told him that we had never done that sort of work and recommended against it, as I know who Mr. Zimmer intends to send in if it should be done.

2. My meeting with Mr. Bard was specifically due to the fact that Captain Fisher had written a letter to Dr. Selby inviting him to make a survey of Navy Yards, with particular reference to health hazards, and make recommendations to the Shore Establishments Division.

I gave Mr. Bard and the two officers present a complete story of the beginning of this controversy from the Federal Administrator's letter; that is, that the United States Public Health Service had four teams of traveling scientists alleged to be able to make surveys of all of the Navy Yards and make recommendations for the correction of such hazards as were discovered. I told Mr. Bard that this was not considered the best policy, due to the fact that we had medical officers in the Yards and that in practically all instances recommendations of sound character had been made by medical officers. We saw no need of inviting the United States Public Health Service on its own invitation to do this job.

3. Likewise, I told him that I had spoken to you and that you had indicated that President Roosevelt thought that this might not be the best policy, due to the fact that they might cause disturbance in the labor element.

4. Points of great interest:

(a) Such health hazards as silicosis in our foundries. None of our foundries would pass the necessary inspection to obtain workmen's compensation insurance from any of the insurance organizations. I doubt if any of our foundries would be tolerated if the State industrial health people were to make surveys of them. Repeated recommendations have been made by the medical officers attached to these Yards that studies be made on dust concentrations and steps be taken to remedy this condition.

E. Industrial Medicine - Notes for Conversation with Asst. Secretary Bard 3 March 1941

(b) Sand blasting. Several recommendations have been made with reference to sand blasting and the danger from this hazard with particular reference to the production of silicosis. Since these recommendations have come in, we now are using steel shot rather than sand in sand blasting, but this is still a hazardous trade and might be restudied.

(c) Welding. Welding is a hazard under certain circumstances: that is, if nitrous fumes are encountered and these can be completely obviated by reasonable exhaust ventilation. However, several people have complained that we are doing welding under dangerous conditions. I frankly admitted that we had no data on which to make a considered opinion, but we would immediately start out with a view of determining the concentration of fumes of toxic metals or substances that might be in the welding rod.

(d) Solvents. Too little is known on the question of solvents and since there is a controversy between the toxicologists and industrial hygienists on this point, it will be necessary to do a very careful survey to determine whether we are in trouble.

(e) Hydrogenated hydrocarbons. This is a matter of considerable concern in industry and we may be getting damage from some of these, but no surveys have been made to tell us the concentration of these compounds.

(f) Eye flashes from unprotected electric arcs, such as welding and pouring. This can be completely obviated by using screens for the workmen.

(g) Cadmium dust, smoke and fumes. If we are doing as much cadmium welding as is indicated by unofficial information from the field, we may be in a position to be seriously criticized about this. This also needs research to determine the concentration.

(h) Chromium trioxide. Chromium plating is one of the dangerous occupations in that people frequently have perforated septum from irritation from chromium trioxide. Such plants as I have seen doing plating in the Navy appear to be fairly well ventilated, but there is evidence that a considerable number of people have been damaged from this hazard.

(i) Asbestosis. We are having a considerable amount of work done in asbestos and from my observations I am certain that we are not protecting the men as we should. This is a matter of official report from several of our Navy Yards.

We are not doing a very bad job of safety as we have won awards, but there will be a tremendous increase in the number of non-

fatal accidents, some of which will be lost time and some of which will be non-lost time, with the increase in personnel. This is already apparent from the reports from the Yards. If this is not enough to hold them down, I will give you all the additional information you need.

C. S. Stephanson,
Commander (MC), U. S. Navy,
In Charge, Div. of Preventive Medicine.

U.S. Navy - U.S. Maritime Commission - War Shipping Administration

Safety and Industrial Health Program

VI C

Report on Investigation

of

Asbestosis from Amosite Pipe Covering at Bath Iron Works

Bath, Maine

December 19, 1944

References: (a) Report of Industrial Health Survey of Sept. 24, 1942.
(b) " " " " Re-survey of April 9, 10, 1943.
(c) " " " " " " Sept. 20-23, 1944.
(d) "Minimum Requirements for Safety and Industrial Health in Contract Shipyards" approved by U.S. Navy, U.S. Maritime Commission and War Shipping Administration.

This document contains information affecting the national defense of the United States within the meaning of the Espionage Act 50 U.S.C., 31 and 32. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

BY

W. C. Dreessen, Surgeon, U.S. Public Health Service, Bethesda, Maryland

W. B. Fleischer, Lt. Comdr. MC, USNR, Health Consultant
Office of the Regional Director of Construction
U. S. Maritime Commission, East Coast

Personnel interviewed:

Dr. E. W. Fuller, Jr.....In charge of pre-employment and periodic check-up physical examinations

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This investigation was made at the direction of the Chief Health Consultant of the U. S. Maritime Commission, inasmuch as we had heard that there was concern among the pipe covering crews who feared that the amosite was causing some respiratory troubles.

Medical

There are about 120 workers engaged in handling asbestos in the Pipe Coverer's Shop and on board ships under construction. Chest X-rays are being taken first on those with the longest exposure, i.e. over two years, of which it is estimated that there are about 50 workers. In the near future all of the 120 will have a chest plate taken.

Of the 50 workers 38 have already been X-rayed and all of this group have been handling asbestos pipe covering from 2 to 9 years. It was interesting to note that the two individuals with the longest exposures of 5 and 9 years were in the older age group, being 59 and 65 years of age respectively. All of the 38 films were reviewed and 12 of these patients showed significant X-ray changes consistent with exposure to a dusty environment. History and physical examination by Dr. Fuller indicated that in all of the 38 patients respiratory symptoms and physical signs were minimal.

On X-ray interpretation these 38 patients could be divided into four groups:

1. The two older workers referred to above, the appearance of whose chest X-rays was consistent with the diagnosis of well established asbestosis. These plates also showed signs typical of advanced age, such as cardiovascular changes, etc.

2. A group of four workers whose exposure was from two and a half to four years whose chest X-ray appearances were consistent with a diagnosis of asbestosis.

3. A group of six workers whose exposure was from two to two and a half years and whose chest films showed minimal changes but not sufficient for a definite diagnosis of asbestosis.

4. A group of 26 workers whose exposure was from two to two and a half years and whose chest films were considered negative.

It was considered significant that those workers with the most marked X-ray changes were those who presumably were exposed to the heavier concentrations of dust, such as operators of the band saw and small rotary power driven saws.

In those workers whose X-rays were consistent with a diagnosis of asbestosis, the changes consisted of bilaterally symmetrical increased reticulation of the lung fields resembling a ground glass appearance. Such lung field markings are indistinguishable from those induced by chrysotile asbestos. No evidence of active tuberculosis was noted on any of the films.

Description of Pipe Coverer's Shop

This shop occupies about half of a loft and is partially segregated from sheet metal workers at the other end of the loft. The more dusty phases of the work such as band saw cutting and the mixing troughs are located at the far end of the loft. Local exhaust ventilation was installed on the band saw several months ago and removed some of the dust arising during the cutting of pipe insulation. Respirators were being worn by several workers using the small rotary saws. It is anticipated in the near future, that the insurance carrier, American Mutual Liability Insurance Co., of Boston, Mass., will take dust samples throughout the shop. We know the personnel of the insurance carrier, have discussed the problem with them and would have complete confidence in their appraisal of this job.

Recommendations:

1. It is recommended that all of the remaining asbestos workers be given a chest X-ray in the near future.

2. Unless the dust exposure is controlled as outlined below, the workers in groups 1 and 2 above, should be transferred to a non-dusty occupation.

3. Groups 1, 2 and 3 should have a chest X-ray at yearly intervals.

4. If the dust exposure is not controlled all asbestos workers should have a chest X-ray at yearly intervals.

5. While the local exhaust on the band saw removes a considerable proportion of the dust, it is not considered adequate. This ventilation should be corrected so that the dust is removed.

6. Unless properly ventilated the band saw and mixing trough operations should be isolated from each other and from the rest of the shop. All workers on these operations should wear either approved air line respirators or respirators approved for pneumoconiosis-producing dusts.

7. If the dust counts taken by the insurance show, that after isolation of the above operations, the amount of asbestos dust in the general shop is sufficiently high to produce an asbestosis hazard, then the general ventilation of the shop should be improved.

Note: Reference (a) recommended as follows:

"The conditions in this shop present a very real asbestosis hazard and immediate steps should be taken to segregate the most dusty processes into a well ventilated area. Local exhaust systems of proper design should be installed; however, if conditions cannot be completely controlled in this manner, then suitable dust respirators should be worn by the workers. Periodic physical examinations of the chests of all workers should be made."

VI D

Talk before M.C. on October 23, 1942.
Philip Drinker, Consultant to the M.C. and
Professor of Industrial Hygiene
Harvard School of Public Health
Boston, Mass.

It was decided by the M.C. and the Navy that an industrial health survey of selected yards should be made. In order that the plan should be carried out as expeditiously as possible the Navy loaned the MC. two MD's with industrial experience (from Norfold and Philadelphia yards) and four ensigns, graduate engineers and chemists, who had been specialized also in industrial hygiene and ventilation.

In addition, Mr. John Roche of the National Safety Council was asked to inspect the safety engineering set-ups in many of the yards but there were several we covered which Mr. Roche has not seen.

Our schedule included visits varying from one to three days to six yards under Navy operation, eleven under M.C., and three doing work for both M.C. and Navy.

Gulf Shipbuilding Corp.	Mobile, Ala.	Navy
Houston Shipbuilding Corp.	Houston, Tex.	M.
California Shipbldg. Corp.	Terminal Island, L.A.	"
Los Angeles Shipbldg. Corp.	San Pedro, L.A.	
Western Pipe & Steel Corp.	So. San Francisco	
Moore [illegible]	Oakland	
Kaiser [illegible]	Richmond	
Kaiser [illegible]	Portland, Oregon	
Seattle-Tacoma Shipbldg. Corp.	Tacoma	
Gra[illegible] Engineering Co.	Pierce Power, Mich. & [illegible]	
	Bellingham, Ohio	
Latham D. Smith Shipbldg. Co.	Sturgeon Bay, Wis.	M.C.
American Shipbldg. Corp.	Lorain, Ohio	M.C.
South Portland Shipbldg. Corp.	South Portland, Me.	M.C.
Todd-[illegible] N.Y. Shipbldg. Corp.	South Portland, Me.	M.C.
Bath-[illegible] Works	Bath, Maine	
Electric Boat Co.	Groton, Conn.	
Rheem Manufacturing Co.	Providence, Rhode Is.	
Bethle[illegible]-Fairfield Shipbldg. Co.	Baltimore, Maryland	
North Carolina Shipbldg. Corp.	[illegible]ington, N. C.	M.C.
Tampa Shipbldg. Corp.	Tampa, Florida	Navy

In general, medical set-ups in the M.C. yards were better than in the Navy operated yards although several experienced firms on Navy contracts had good medical protection. The MD's steffs in at least two of the Navy operated yards were way below the caliber of those one sees today in Navy yards like Boston, Philadelphia, and Norfolk where they have anything from twelve to twenty-five MD's for 15,000 to 40,000 employees.

The M.C. yards generally had good medical personnel and often had them in sufficient numbers, but a few yards are short of MD's and it would be to the M.C.'s interest to see that this situation is corrected quickly. Similarly, we believe the Navy should help out in some of the Navy operated ya yards by drawing the necessary personnel from elsewhere.

We believe that these yards whether M.C. or Navy operated should have at least three doctors for a yard of six thousand men and one doctor for each additional five thousand.

Inspectors and Visits: In many of the yards -- but by no means all -- both management and medical personnel felt that the doctor's job was to remain in the yard dispensary and to treat the patients brought to him. Few of the doctors had the remotest idea what work in double bottoms was like. They could give no firsthand advice on preventing flash burns, had no idea what men ought to wear safety shoes, and in one very well run yard had not the slightest idea what solvents were used in paints or how one of the men could possibly have been made ill by carbon tetrachloride. That point of view in industrial medicine is entirely out-of-date. We can show you manufacturing plants in all parts of the United States where the industrial physician is a competent physician yet inspects the entire plant

several times a week. He thereby learns what the men are doing and the men see him and know he is looking after their health and welfare. The effect of morale is excellent.

We have seen only two yards in which the medical staffs had the slightest idea how medical problems were met in other yards. The Navy has, in my opinion, been particularly remiss in not requiring its medical officers to visit other yards and especially to visit civilian operated yards. For instance, Bethlehem Steel Corporation for some years has had large yards in various parts of the United States. So far as I can find by asking the doctors at the yards belonging to Bethlehem they have never been visited by Navy doctors, yet the Navy suddenly has been forced to become one of the largest industrial employers in the country.

In short, we think M.C. and the Navy should require occasional inter-yard visits by the medical personnel and these visits should include men from the Navy yards such as Boston and Norfolk. They should see each other's set-ups, records, methods of handling patients and they should see something of the yards.

Provision for Women: Very few yards have made medical provisions for employing women although most of them realize fully that women are certain to be employed extensively in the very near future. It is, of course, obvious that dispensaries must be enlarged in order to take care of this new class of employees.

Air Raid Precautions: Very few yards have provided emergency first aid depots against air raids. We believe a national plan should be made so that no yard will be caught with all its medical supplies in one building.

Co-operative Hospital Plan: In the Kaiser yards at Richmond, Portland and Vancouver, Dr. Sidney Garfield has organized a medical insurance scheme which goes a good deal further than the Blue Cross plan which is in such wide use now throughout the country. These yards, for fifty to sixty cents weekly, will give shipyard employees complete medical and hospital care. If the man is too ill to come to the hospital himself they send a doctor to him and bring him to the hospital if necessary. Garfield expects to expand this service to include care of the workers' families. The effect on stabilizing the laboring population is very good. We have seen nothing in the yards in other parts of the country in any way comparable and recommend the scheme for serious consideration.

Turnover and Overtime Work: We do not believe either M.C. or the Navy is strict enough about requiring a day off regularly every week, including executives, for all employees. Men in all salaried groups are ready enough to work seven days a week and foremen are particularly eager to do it because of the extra pay. The arguments against continuous work leave no ground on which the practice can be supported and we urge in the strongest terms that a day off in every six or seven be required of all persons. A day off scheduled in advance is one of the best preventatives against migration and turnover.

Accident Records: I do not consider the present M.C. accident report adequate. We think it should be made a little more complete so that one can tell from time to time how many flash burns of the eye occur, how many broken toes, and the like. You can get such information from the forms used in the Navy yards like Boston's but you can't get it from M.C. yards.

You now can find out easily the number of accidents causing absences of seven days or more but can't tell how many accidents causing a few hours lost time or a few days occur. MC should know the score from anything which makes men go to the dispensary -- such trips cause lost time. The M.C. can get such information easily with very little change over the record system now in use.

Safety Departments and Accident Insurance: In most of the yards visited the Safety Department is short on personnel and has not enough authority. In some of the M.C. yards the safety engineer from the insurance carrier has an office adjoining that of the yard and they work together. In other M.C. yards the insurance man was looked upon as an unmitigated nuisance and had little or no authority.

We are far from satisfied with the present insurance set-up in M.C. yards. Unlike other items which ought to enter into the cost estimates on ship construction, insurance against accidents and health in M.C. yards comes in under cost plus. The private manufacturer or mining company on the other hand, properly charges accidents and industrial disease against costs of production. The result is, in the M.C. work, it is not worth cash to anyone to reduce accidents and lost time. The private manufacturer, on the other hand, has to keep down accidents whether he is insured or not because adverse results appear very promptly in his production costs. At the present time the inducement to keep down industrial accidents and ill health is entirely that of plain decency and common sense. We believe very strongly that conditions can be improved greatly if it is made financially attractive both to men and management to do so. We suggest

a bonus and penalty arrangement for lost time for all causes and suggest that the arguments pro and con be put before appropriate labor-management committees and handled through them. We do not imply any criticism of the insurance carriers because of the present situation. Definitely it is not their fault and has come about largely because of the great haste necessary to get our national shipbuilding program under way.

Physical Exams: On the west coast the labor contract includes a very unfortunate stipulation that no physical exams of any kind are to be given men either pre-employment or check-up. From the health standpoint it would be hard to devise an item which will do more harm to labor. Admitting the misuse of such exams in the past by a few thoroughly stupid employers and insurance carriers it does not follow that all employers and all insurance carriers are bad. We saw in one very well run yard on the west coast men exposed to dangerous amounts of asbestos dust used in pipe coverings and on breechings. These men should be examined every six months but now cannot be because of the labor contract. In all yards locomotive operators, painters, and certain others should be examined periodically. A failure to do so is dangerous to the man himself and often to his fellow workers.

Respirators: On the east coast but not on the west red lead paint is sprayed. We approve of this and, if properly done, do not consider it a health risk, but greater care should be exercised in the east coast yards than now is in effect or lead poisoning will certainly occur. Most of the yards on all coasts are either careless or ignorant or both in the use of respiratory protective equipment. This situation should be corrected and

corrected promptly by having occasional shipyard safety meetings (which are held frequently) devoted to the use of respiratory protective equipment.

Ventilation: The ventilation of ships under construction is handled differently in every yard. Few of them appear to have any appreciation of the fact that the same problems occur in all yards. In general, it seems to us that the best results are attained when the ventilation department comes under "safety" although we have heard very convincing arguments that ventiation belongs properly to the electrical department or to the welding department. We saw but one yard with a man who really knew any ventilation engineering and was applying his knowledge to make conditions comfortable for the men. In most yards, fans and duct work were handled about as our office stenographers would handle common desk fans.

Practically no yards have taken any trouble to educate the men, especially welders and painters in the use of local exhausts. On many occasions we saw welders in double bottoms failing entirely to use good equipment intelligently. Men doing spray painting and sandblasting generally have no conception of what respiratory protection they should have, and often we found that the foremen and leadermen understood the risks of the job no better. The correction of such ignorance can only be brought about gradually by safety meetings with appropriate short talks. We feel confident that the personnel we suggest for a permanent M.C. medical organization will be entirely competent to give such talks in each of the yards as they visit them.

Several of the yards had devised various ways of improving ventilation of fore and after peaks during prefabrication. Certain plates are left off.

In one Navy operated yard, permission had been given to leave out a plate while installing a prefabricated forepeak. The result was excellent ventilation. In our opinion, a uniform policy in regard to such matters should be formulated in which it should be possible to state what ventilation in c.f.m. is required for specific jobs and what plates are to be left off during construction. As M.C. knows, there are frequent complaints about the lack of ventilation in various welding jobs, especially on G.I. and in many cases, the complaints are justifiable. In one of the labor contracts, it is stated that workers are to get pay and a half on jobs in which the conditions are unsatisfactory. In our opinion, it is no longer excusable to have such conditions.

Goggles: The use of anti-flash goggles (shade 2 or $2\frac{1}{2}$) beneath welding shields of 10 shade is practiced in some yards, but most of them have no clear cut policy. Both M.C. and Navy are very lax in preventing eye flashes, the commonest trouble encountered in ship yards. The use of portable welding screens around welding jobs, especially in prefabrication work, is very sketchy in both M.C. and Navy yards. This is the safety departments' job, but the results will remain at their present unsatisfactory level unless the safety departments are given more authority and unless much more is expected of them.

Unknown Chemicals: There is no systematic labeling of solvents used for paint spraying, brush cleaning and the like in any yard, and no one now is held respinsible for seeing that proper precautions are taken in using toxic solvents. Industry - and M.C. belongs - no longer can order and get just what it wants. It uses what is available. But the medical and safety departments in all yards should be held accountable for the

toxicity of anything used in the yard. In private manufacturing plants, this responsibility is thus assigned, and the purchasing department notifies the medical and safety departments when any new substance is to be used. Makers of solvents must state the chemical names of these ingredients, but there is no reason why they should not use their special trade names which usually are a lot simpler than the chemical names.

Safety Stores: The dispensing of special equipment like safety shoes, goggles and gloves, is handled differently in each yard. While we approve of such autonomy, we insist that safety equipment ought to be made available with the minimum of inconvenience to the men. You cannot expect the average workman to go to the trouble of going downtown to a shoe store to get a pair of safety shoes. He simply won't do it, human nature being what it is. The stores should be in the yard. We don't blame M.C. or the Navy for keeping out of the shoe business, but if toe accidents reach the levels in certain Navy yards where they now are, the Navy and no one else is accountable. (I am aware of the Federal law which prevents a yard granting an exclusive sales right to one shoe manufacturer.) In some yards the management sells the shoes at cost, but I know of one private manufacturer who subsidizes each pair of shoes to the tune of one dollar, and then fires any workman who fails to wear safety shoes when required. So far as our opinion goes, it makes no difference how the problem is handled, but I think we have every right to insist that safety shoes, hard hats, and goggles be worn on special jobs. A great many yards now are very backward in these safety measures and attempt to pass the buck to safety equipments manufacturers who cannot keep up with the demand. We inspected safety supplies in every yard we visited, and in

many cases saw abundant supplies when the men in the yards were not using them.

G.I.: Metal fume fever is a temporary illness which results from breathing zinc oxide evolved when G.I. is welded by either gas or electricity. It is known to any man who works in G.I. The effects are not cumulative, like lead poisoning, but they are undeniably unpleasant. In our opinion, both the Navy and the M.C. would build ships faster and have less trouble all around if they reduced to the absolute minimum the amount of G.I. now being used, especially on destroyers.

now being used, especially on deck yards.

Welding Painted Surfaces: In every MC yard visited and in some Navy operated yards, we noted apparent lack of coordination between the inspection and the paint departments. It is the usual practice to paint all surfaces, including seams and edges, as soon as possible after erection is complete, and even before erection. Then the inspector chalks off a place which has to be re-welded. The welder picks up the mark and does the job, always without cleaning off the lead paint. He simply boils it off with his electric arc. We would call attenti n to the fact that one of the worst epidemics of lead poisoning our country experienced was from following out the provisions of the ship dismantling treaty when we cut up some of our old ships with acetylene torches. Lead poisoning resulted from volatilizing lead paint on pipes, deck plates, girders, and the like. We have not seen a single yard taking proper precautions to prevent lead poisoning from welding painted surfaces, although some of the East Coast yards now are doing routine examinations of the men to detect early lead absorption. What we urge then, is that MC require painting after welding jobs are done and not before.

Open Air Sandblasting: In the Portsmouth and Norfolk Navy yards, and in two Gulf coast yards, we have seen sandblasting doen out doors in order to clean surfaces for galvanizing and one West Coast and two Great Lakes yards, we have seen ship bottoms sandblasted prior to painting. It is easy enough to protect the sand blaster so that he runs no danger of getting silicosis from breathing excessive amounts of silica (sand), but it is difficult to protect the helper and the men who must see to the sand supply. When the wind is favorable, there probably isn't much danger to others but as we have seen the operation carried out, it is unquestionably a silicosis risk to several men.

as well as an eye hazard. If the Navy eliminates or reduces greatly, galvanizing, there probably will be much less sandblasting and our criticisms then will not apply, but as things were being done at the time of our visits, silicosis is well nigh certain. If sandblasting is to be continued, it should be enclosed in a modern sandblasting chamber. The argument that such chambers are not large enough to take destroyer hull plates is refuted by the fact that the Pullman Company today sand blasts an entire railroad car indoors, while sandblasting freight cars is practiced by several of the railroads in their repair shops.

Salvage: With two exceptions - and these were privately operated yards on Navy contracts - the salvage programs in all yards visited left much to be desired. It is our opinion that failure to salvage and re-use paint cans, nuts, bolts, rivets, and the like is more the fault of MC and the Navy than of the contractors. With metal shortage now playing such a vital part in our national program, it is hard to excuse present wasteful methods.

Housekeeping and Sanitation: The new yards which are not cramped for space generally are neat and ship-shape, especially those to which Navy Engineers are detailed. We found no yard that had a cafeteria or canteens which compared at all with those one can see in many large plants throughout the country. Some MC contractors stated flatly that either they were going to run a shipyard or a series of cafeterias, but not both.

We sympathize with the yard managers, but we doubt if the answer to the difficulty consists in getting rid of the cafeterias. Good food,

decently served, is one of the best labor stabilizers known.

We suggest that both the M.C. and the Navy should consider this problem fully and take action together. There are several possible courses: (1) Hire experienced caterers in each district to run the cafeterias, (2) Have local caterers each day stock canteens placed around the yards and sell milk, hot coffee, and possibly soup, (3) Have a local caterer outside the gates sell wrapped sandwiches to men who now have no way of getting their own lunches, (4) Do nothing whatever except to see that local health authorities exert reasonable control over lunch wagons and small restaurants which spring up outside the yard.

We would point out that firms like General Electric, General Motors, and American Viscose now operate cafeterias on a very large scale. The food is so good that the men are very apt to take their principal meal at the plant, and many of the plants have such cafeterias open 24 hours daily and serve the meals to men and women who have only 20-30 minutes available.

General clean-ups of lunch scraps were good in most yards but very sloppy in others. In a few yards, especially in the warm climates along the gulf, rats became more than just a nuisance and the board of health was asked to clean them out, but this was unusual.

Most yards are near large cities which often dump their untreated sewage into the harbor near the yards. Naturally, the yards dispose of their sewage similarly. In one yard, we suggested that the plant doctor's program of typhoid innoculations of men working near the water be carried out, but we rather doubt if sewage, water supply, or mosquitoes will prove a health menace in shipyards. In general, these items have received proper consideration.

Permanent Industrial Medical Set-up for MC and Navy Operated Yards:

In our opinion a permanent industrial medical and industrial hygiene set-up for MC is desirable. From talks with AFL and CIO officials it was clear that both unions would welcome such MC action. It would, in our opinion, be a serious mistake to create a large office or to centralize and coordinate medical control through a single bureau. But many of these yards need help and some of them soon are going to get lead poisoning and other industrial disease cases in fair number.

We suggest the following:

A full time medical director taken from industry.
An assistant medical director taken from the Navy Medical Corps with the rank of lieutenant or Lt. Commander.
At least six engineers trained in industrial hygiene taken either from the Navy, the Army, or from industry.

We need at least two laboratories to handle the chemical and medical work which will result. One available lab is at the Harvard School of Public Health while we are confident suitable arrangements for another can be made with the California State Industrial Hygiene Bureau at Berkely, California. It will be necessary to hire one chemist, preferably a woman, for each of these labs for analyses just as such samples are now handled by many of the state hygiene bureaus and by several of the insurance companies.

Prod. Div.

Box 534

Portland Shipyds

VI E

TO THE MARITIME COMMISSION

WASHINGTON, D. C.

INDUSTRIAL HEALTH SURVEY

of the

SOUTH PORTLAND SHIPBUILDING CORPORATION

and the

TODD - BATH IRONWORKS

SOUTH PORTLAND, MAINE

September 18, 19, 22, 1942.

Philip Drinker, Harvard School of Public Health
H. K. Sessions, Lt. Cmdr., (MC) U.S.N.
T. P. Connelly, Lt., (MC) U.S.N.
Kenneth W. Nelson, Ensign H-V(S) U.S.N.R.
Morwick Ross, Ensign H-V(S) U.S.N.R.
L. H. Woodman, Ensign H-V(S) U.S.N.R.

Water Supply: The water supply of the city of Portland is furnished to both of these yards. An elevated tank containing city water is provided for fire protection. No health hazards are involved.

Sewerage: All sewage from the yards is disposed of by discharge directly into the ocean. The city of Portland disposes of its wastes in this manner, and the yards merely follow suit. Adequate toilet facilities, conveniently located, are provided for both yards.

Cafeteria: The major defect in both of the cafeterias was the entire lack of control of flies. They were extremely numerous in all parts of the cafeterias. A detailed inspection of the South Portland Yard's cafeteria has been made by the Maine State Health Department officials, and the report shown to us. It is planned to have the cafeteria at the Todd-Bath yard inspected also.

Housing: There is a housing shortage, but apparently it is gradually being solved without involving any health hazards.

Mosquito Control: No mosquito control program for health reasons is necessary.

Housekeeping: The general housekeeping in these two yards was poor. The ships were especially dirty with chippings, shavings, nuts, bolts, etc. all over the decks. The appearance of the yard grounds was also messy.

Pipe Covering Shop: Both yards had shops where asbestos coverings were made for the pipes in the ships. The work involved was the cutting and pounding of the asbestos matting into the desired shapes. The process

created a very real asbestos hazard, as the dust and fibers were found all over the shops on rafters, machines, benches, and on the workmen's clothing. The most dusty processes should be segregated into a well ventilated room and periodic examinations of the worker's chests should be made.

Rubbish and Garbage Disposal: The yards incinerate all rubbish while the garbage is collected and hauled away by an outside contractor. Perhaps an inadequate number of rubbish containers contribute to the poor housekeeping in the yards.

RG 19 Entry 41266

VI F

UNITED STATES MARITIME COMMISSION
WASHINGTON

55 Shattuck St.
Boston 15, Mass.

January 8, 1944

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Bureau of Ships
Navy Department
Washington, D. C.

Gentlemen:

Attn: Captain Ingram, Room 2074, Building T5

Yesterday I received a long distance call from Mr. W. G. Hazard, Industrial Hygiene Division of New Jersey, Trenton, New Jersey, in which Mr. Hazard stated that the union men at New York Shipbuilding Co. had asked their help regarding the use of Amosite for pipe insulation on Navy vessels they are constructing.

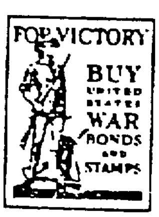
I happen to know the union official, McCloskey, who is not easily put off and who is distinctly on the reasonable side. They ask: (1) how generally is Amosite used, (2) will the Navy allow the use of anything else, and (3) what protection, if any, is needed.

It seems to me these are reasonable questions and should be answered. I know Hazard very well - he is a U. S. Public Health Service officer assigned to New Jersey for the duration. His only desire is to help the company get on with its job and do it without damaging anyone's health.

Hazard stated that Dr. Goldman of the Bethesda Labs (U.S.P.H.S.) found the Amosite to be mostly asbestos. Dust counts in the room where the men were working were very much higher than anyone would recommend - they ran up to 25 million. A figure of 5 million for asbestos is recommended.

If this material must be used, I suggest the men be required to wear Bureau of Mines dust respirators approved for the nuisance dusts, or else that the material be applied wet. If the latter expedient is impracticable the job ought to be ventilated.

We would point out that we had some bad spots in baby aircraft carrier construction at our Kaiser Vancouver yard. After a little bit of work with the Labor-Management group we got the men to wear air line respirators and they now use them without making any objection. The use of dust respirators in both Navy and Maritime yards is sketchy. Both organizations could save a lot of trouble by having them used more - just as the mining industry has done.



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UNITED STATES MARITIME COMMISSION
WASHINGTON

Please write or telephone as soon as possible as the matter is urgent. We can easily have a labor disturbance, especially if we ignore the complaint. It may be better to handle it verbally - hence the request that you telephone me (LONgwood 2380). I will then phone Hazard at once or you can.

Sincerely yours,

Philip Drinker
Chief Health Consultant

Cc: Comdr. H. K. Sessions
U. S. Maritime Commission
Philadelphia, Penna.

U.S. Navy - U.S. Maritime Commission - War Shipping Administration

VI G

Safety and Industrial Health Program

Report on Investigation

of

Asbestosis from Amosite Pipe Covering at Bath Iron Works

Bath, Maine

December 19, 1944

References: (a) Report of Industrial Health Survey of Sept. 24, 1942.
(b) " " " " Re-survey of April 9, 10, 1943.
(c) " " " " " " Sept. 20-23, 1944.
(d) "Minimum Requirements for Safety and Industrial Health in Contract Shipyards" approved by U.S. Navy, U.S. Maritime Commission and War Shipping Administration.

This document contains information affecting the national defense of the United States within the meaning of the Espionage Act 50 U.S.C., 31 and 32. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

BY

W. C. Dreessen, Surgeon, U.S. Public Health Service, Bethesda, Maryland

W. B. Fleischer, Lt. Comdr. MC, USNR, Health Consultant
Office of the Regional Director of Construction
U. S. Maritime Commission, East Coast

Personnel interviewed:

Dr. E. M. Fuller, Jr.....In charge of pre-employment and periodic check-up physical examinations

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This investigation was made at the direction of the Chief Health Consultant of the U. S. Maritime Commission, inasmuch as we had heard that there was concern among the pipe covering crews who feared that the amosite was causing some respiratory troubles.

Medical

There are about 120 workers engaged in handling asbestos in the Pipe Coverer's Shop and on board ships under construction. Chest X-rays are being taken first on those with the longest exposure, i.e. over two years, of which it is estimated that there are about 50 workers. In the near future all of the 120 will have a chest plate taken.

Of the 50 workers 38 have already been X-rayed and all of this group have been handling asbestos pipe covering from 2 to 9 years. It was interesting to note that the two individuals with the longest exposures of 5 and 9 years were in the older age group, being 59 and 65 years of age respectively. All of the 38 films were reviewed and 12 of these patients showed significant X-ray changes consistent with exposure to a dusty environment. History and physical examination by Dr. Fuller indicated that in all of the 38 patients respiratory symptoms and physical signs were minimal.

On X-ray interpretation these 38 patients could be divided into four groups:

1. The two older workers referred to above, the appearance of whose chest X-rays was consistent with the diagnosis of well established asbestosis. These plates also showed signs typical of advanced age, such as cardiovascular changes, etc.

2. A group of four workers whose exposure was from two and a half to four years whose chest X-ray appearances were consistent with a diagnosis of asbestosis.

3. A group of six workers whose exposure was from two to two and a half years and whose chest films showed minimal changes but not sufficient for a definite diagnosis of asbestosis.

4. A group of 26 workers whose exposure was from two to two and a half years and whose chest films were considered negative.

It was considered significant that those workers with the most marked X-ray changes were those who presumably were exposed to the heavier concentrations of dust, such as operators of the band saw and small rotary power driven saws.

In those workers whose X-rays were consistent with a diagnosis of asbestosis, the changes consisted of bilaterally symmetrical increased reticulation of the lung fields resembling a ground glass appearance. Such lung field markings are indistinguishable from those induced by chrysotile asbestos. No evidence of active tuberculosis was noted on any of the films.

Description of Pipe Coverer's Shop

This shop occupies about half of a loft and is partially segregated from sheet metal workers at the other end of the loft. The more dusty phases of the work such as band saw cutting and the mixing troughs are located at the far end of the loft. Local exhaust ventilation was installed on the band saw several months ago and removes some of the dust arising during the cutting of pipe insulation. Respirators were being worn by several workers using the small rotary saws. It is anticipated in the near future, that the insurance carrier, American Mutual Liability Insurance Co., of Boston, Mass., will take dust samples throughout the shop. We know the personnel of the insurance carrier, have discussed the problem with them and would have complete confidence in their appraisal of this job.

Recommendations:

1. It is recommended that all of the remaining asbestos workers be given a chest X-ray in the near future.

2. Unless the dust exposure is controlled as outlined below, the workers in groups 1 and 2 above, should be transferred to a non-dusty occupation.

3. Groups 1, 2 and 3 should have a chest X-ray at yearly intervals.

4. If the dust exposure is not controlled all asbestos workers should have a chest X-ray at yearly intervals.

5. While the local exhaust on the band saw removes a considerable proportion of the dust, it is not considered adequate. This ventilation should be corrected so that the dust is removed.

6. Unless properly ventilated the band saw and mixing trough operations should be isolated from each other and from the rest of the shop. All workers on these operations should wear either approved air line respirators or respirators approved for pneumoconiosis-producing dusts.

7. If the dust counts taken by the insurance show, that after isolation of the above operations, the amount of asbestos dust in the general shop is sufficiently high to produce an asbestosis hazard, then the general ventilation of the shop should be improved.

Note: Reference (a) recommended as follows:

"The conditions in this shop present a very real asbestosis hazard and immediate steps should be taken to segregate the most dusty processes into a well ventilated area. Local exhaust systems of proper design should be installed; however, if conditions cannot be completely controlled in this manner, then suitable dust respirators should be worn by the workers. Periodic physical examinations of the chests of all workers should be made."

RG178 Entry 90 Box 456 Todd-Paci

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VI H
VI E I

U. S. NAVY - U. S. MARITIME COMMISSION - WAR SHIPPING ADMINISTRATION
INDUSTRIAL HEALTH AND SAFETY PROGRAM

INDUSTRIAL HEALTH AND SAFETY RE-SURVEY of the TODD PACIFIC SHIPYARDS INC. SEATTLE DIVISION formerly the SEATTLE TACOMA SHIPBUILDING CORPORATION

JULY 12 - 20, 1945

References: (a) "Minimum Requirements for Safety and Industrial Health in Contract Shipyards" Approved by the U. S. Maritime Commission and U. S. Navy, February 9, 1943

(b) Industrial Health and Safety Survey of the Seattle-Tacoma Shipbuilding Corp. Plant "A" and "B", Seattle Division Seattle, Washington dated July 2 - 7, 1943, conducted by F. W. Johnson, Regional Safety Consultant Robert S. Poos, Lt. Comdr. (MC) USN James F. Morgan, Lt. (j.g.) H-V (S) USNR

(c) Industrial Health and Safety Survey of the Seattle-Tacoma Shipbuilding Corp. Plant "A" and "B", Seattle, Washington dated January 11 - 13, 1944, conducted by Harry G. Beck, Comdr., (MC) USNR Ass't Chief Health Consultant John F. Ege, Jr., Lt. (j.g.) H-V(S) USNR Morwick Ross, Lt. (j.g.) H-V(S) USNR Regional Health Consultants

Comdr. Harry G. Beck, (MC), USNR
Ass't Chief Health Consultant
Lee O. Hughes
Regional Safety Consultant
Lt. Lowell G. Wayne H(S), USNR
Regional Health Consultant

VENTILATION (cont'd)

"3. In shop installations seek to replace flexible metal hose that is in use as permanent duct work with sheet metal."

Comment: No substantial progress has been made toward the realization of these recommendations. In general, provisions for the air supply on the hulls are quite effective, but local exhaust arrangements are poor. This is a serious handicap to the ventilation program as much of the welding in this yard is done on galvanized material. A great deal of flexible metal tubing of 2-1/2" diameter is in use, most of it strung together in lengths long enough to be practically ineffective. No flanges or hoods are in use, and metal fume respirators of proper shape to fit under welders' helmets are not available. The recommendations of references (b) and (c) on this subject are still applicable.

ASBESTOS AND FIBERGLAS INSULATION

"1. Institute regular clean-up of Asbestos Shop.

"2. Provide satisfactory dust collection hood over the saws.

"3. Make use of water spray to keep down the dust when cutting amosite on the tables.

"4. Arrange to have respirators sterilized, cleaned and repaired and provide clean place for their storage."

Comment: There has been no satisfactory compliance with any of these recommendations.