

ABSTRACT

Government agencies use program evaluations as a means for improving and justifying the existence of programs. This evaluation will be used to improve the Coast Guard waterfront facility inspection program. This evaluation was deemed necessary by the program manager upon recognition that program guidance was too limited and failed to reflect the current program roles and missions stated in the Port Safety and Security Operating Program Plan. The outputs desired from this evaluation were recommendations which could be used in developing program policies, guidance and standards and a recommendation on the feasibility of using this evaluation methodology for future Coast Guard program evaluations.

In conducting this evaluation, past program evaluations were examined; current program policies, guidance and standards were reviewed; and selected program field participants were interviewed and observed. These findings conclude that: the waterfront facility program is a low priority Coast Guard program; there are no outside agencies able or willing to assist the Coast Guard in implementing the waterfront facility inspection program; lack of specificity makes 33 CFR 126 difficult to

enforce at liquid bulk chemical and intermodal container facilities; and there are no output measures for the waterfront facility program.

The methodology used in this evaluation was adequate but it should be slightly modified before using it to evaluate other Coast Guard programs. Based on the research findings, recommendations were made to change some federal regulations and portions of the waterfront facility program. The most important program recommendation of this evaluation was to establish program output measures. Without output measures, it is impossible to measure the effectiveness of a program, thus, it is difficult to justify its existence.

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I. INTRODUCTION

Two of the U.S. Coast Guard's (USCG) mission areas are port safety and marine environmental protection. The USCG's waterfront facility inspection program deals with both issues and is the focus of this evaluation. The primary goal of this program is to reduce the incidence and magnitude of fires, explosions or other serious casualties on designated waterfront facilities.

It is common for government agencies and non-profit service organizations to conduct program evaluations. This paper proposes an evaluation methodology for the Coast Guard's waterfront facility inspection program and presents the findings of the evaluation. The evaluation will address the following:

1. Are the objectives of the program being accomplished?
2. Will the current regulations and inspection program effectively deal with the issues of the future?
3. Are USCG resources being used efficiently?
4. Are other agencies available and willing to assist in administering the program?
5. Are the policy guidelines for the program adequate?

6. Are the program's effectiveness measures adequate?
7. Should the program be continued?

In the Coast Guard's no growth environment, all programs are competing for scarce resources. Program evaluations are important to policy makers and program managers because they assess the effectiveness of an on-going program, identify the effects of a program, and aid in program improvement. They also provide justification when budget priorities are made.

Problems with the waterfront facility program have been recognized for at least a decade. Several proposed revisions to the waterfront facility regulations were introduced between 1977 and 1982 but none of these were implemented. Another working group has been started and this evaluation will be considered when the applicable regulations and policies are updated.

The overall objective of this report is to evaluate the waterfront facility inspection program, identify problem areas, and make recommendations to improve the quality of the program. In reaching the final objective, several evaluation methodologies were examined and one was selected. The effectiveness of this methodology will be assessed for its possible use in future evaluations of Coast Guard programs.

II. LITERATURE REVIEW

Evaluation Methodology

Program evaluation combines an evaluation method and experience with a program to determine the effectiveness of a program's activities. The primary purpose of evaluation is to provide objective information on the costs and effects of a program so program managers and policy makers can effectively manage and allocate scarce resources. Evaluation findings are also used to provide feedback on the results of past decisions, reshape similar programs and upgrade programs (Wholey et al., 1970).

Profit-oriented companies can easily measure success, but non-profit service organizations and government agencies have difficulty measuring their "product's" success. This difficulty does not lessen the importance of determining the quality of their programs. Program evaluations have become a common tool used by non-profit organization and government agencies to determine if the target population is benefiting from their programs and to improve their programs (Posavac et al., 1980).

Evaluations have two basic points of view, the purpose of the evaluation and the questions asked of the program. With respect to the purpose of evaluations, program

evaluations are either formative or summative. Formative evaluations seek to improve services, raise outcomes and increase efficiency. Summative evaluations determine whether or not a program should be started or continued. Questions asked of a program during an evaluation are (1) does the program meet the needs of the community (need)?; (2) is the program operating as designed and serving the target population (process)?; (3) are there positive effects from the program that are measurable (outcome)?; and (4) is the objective of the program being achieved at a reasonable cost (efficiency)? (Posavac et al., 1980).

Wholey identifies four types of evaluations. Program impact evaluations assess the overall effectiveness of a national program in meeting its objectives. They are designed to assist in decisions on funding levels or redirection of a program. These evaluations depend on the availability of appropriate output variables. They are feasible for all programs but are probably best suited for comparing two programs. Program strategy evaluations assess the relative effectiveness of different techniques used in a national program. These are the most difficult and costly type of evaluation for on-going programs. Program strategy evaluations depend on measurement of the appropriate environmental, input, process, and output variables. These are more feasible for evaluating manpower, family planning and tightly controlled education programs. Project evaluations assess the effectiveness of

individual projects in obtaining their objectives. These evaluations require the measurement of output variables and use comparison groups. The last type of evaluation identified by Wholey is a project rating evaluation. This evaluation assesses the relative effectiveness of different local projects within a national program in achieving program objectives.

Posavac and Beigel (Beigel et al., 1975) offer another approach, simple and inexpensive program evaluation. In-depth evaluation of any program cannot be done until management adequately defines the program, the population to be served, and the programmatic effects desired; and establishes a useful database for data collection and statistical analysis (Beigel et al., 1975). These goals can be met effectively by a simple evaluation that carefully selects the information to be gathered (Beigel et al., 1975). Two examples of simple evaluations are a post-test design and a pretest-post-test design. A post-test design is the simplest form of program evaluation and it reports on how well the participants function at the end of a program and how close they came to meeting the minimum output standards. A pretest-post-test design will do everything in a post-test design plus indicate the change between the start and the end of a program. A positive change cannot automatically be attributed to the program until a causal relationship can be shown between

the program and the effect (Posavac et al., 1980).

Three activities closely related to evaluations are monitoring, reporting systems and cost analysis. These activities differ from evaluations because they focus only on program inputs. Monitoring is the documentation of the effort being put into a program. The usual objectives of monitoring are to give program managers a broad view of a program and indicate whether staff personnel are competent and acting within program guidelines. Reporting systems which generate routine reports provide program managers with important data on services provided, populations served and costs of providing services. Comparative cost analysis of similar projects or programs is a way of obtaining information when measurement of benefits is difficult. These activities are not evaluations but provide program managers with valuable management tools (Wholey et al., 1970).

Wholey introduces two alternatives to evaluations of on-going programs, comparable evaluations of two groups and experimental demonstrations. In comparable evaluations, the treatment and control groups are randomly selected, the input and process variables are controlled, and then the input, process and output variables are carefully measured. Experimental demonstrations use projects capable of being compared instead of randomly selected groups but are similar to comparable evaluations

in that input and process variables are controlled and input, process and output variables are carefully measured. These evaluation designs are ideally conducted prior to implementing the operating program.

The evaluator plays an important role in the evaluation process and will usually come from within the organization (in-house) or from a private firm (consultant). The advantages for using one will usually be disadvantages for using the other. In-house evaluators will normally know more about the organization and may find it easier to ask pertinent questions. They are more likely to be sensitive to the program's needs and treated as part of the team. This may help in getting more candid answers and information. In-house evaluators will probably have a greater desire to improve the organization, thus, are better suited for formative evaluations (Posavac et al., 1980).

Unlike in-house evaluators, consultants do not work alone and will have an opportunity for helpful feedback from their colleagues. Consultants are likely to have greater technical skills than in-house evaluators and will probably be more objective. Objectivity is important for an evaluation's credibility. Although consultants can do either formative or summative evaluations, they should be the choice for summative evaluations because of their objectivity (Posavac et al., 1980).

Posavac maintains there are definite steps in planning an evaluation. The relevant people must be identified and then assembled for a preliminary meeting. Several questions must be asked and answered at this meeting. Why is an evaluation desired? What type of an evaluation is needed? When is the evaluation desired? What resources are available to conduct the evaluation? After answering these questions, a decision must be made on whether or not the evaluation will be done. After the decision to go forward with an evaluation, the evaluator must review previous evaluations of the program. These evaluations should be examined to determine the methods used, the statistical data used, the findings, and the issues not addressed. The next step is to determine the methodology of the current evaluation. The methodology will include a strategy and design, the target population and sampling procedures, methods for data collection, applicable statistical analysis, and selection of measures. The final step in planning the evaluation is for the evaluator to present an evaluation proposal to the relevant people.

Successful evaluation of a program will only occur if what happened as a result of the program can be isolated from what would have happened anyway. This isolation of program effect can be achieved only if there are clear measures of program accomplishment (Wholey et al., 1970). Posavac offers four types of measurement instruments. Written surveys, completed by program participants,

provide the most information per evaluation hour. Survey questions should be simple, clear and focused on one issue. The more objective the information requested, the higher the probability that responses will be valid estimates of the issue. A rating system can be used as a measurement instrument by comparing similar programs or projects within a program and ranking them. An interview is the third type of measurement instrument, but it is not routinely used by evaluators because it is expensive (in terms of information per evaluation hour). An effective interview starts by making the respondent comfortable and relaxed and is followed by clear, simple and direct interrogatories. A letter or telephone call preceding the evaluator's visit may improve the respondent's receptivity and minimize the time lost in preliminary discussion. The fourth measurement instrument is behavioral observation. Posavac feels this approach may have the greatest potential for providing valid information. The evaluator is actually observing the behavior expected to be changed and this produces an evaluation with high credibility. When assessing the validity of a measurement instrument, the evaluator must consider if something important is being measured; if the measure is sensitive to changes; if the measure is reliable and cost-effective; and if reactivity to the measure is a problem (Posavac et al., 1980).

Multiple sources of information is a characteristic of a valid and useful evaluation. Considering only one criterion may distort the findings and give an inaccurate indication of a program's success (Posavac et al., 1980). Wholey offers the following five categories of criteria for measuring a program's success:

- (1) effort - It assesses input only by measuring the quantity of work.
- (2) effectiveness - It measures the results of effort. The program must have a clear statement of objectives to use this criterion.
- (3) impact - It measures how close the effective performance of a program comes to meeting the needs of the target population.
- (4) cost effectiveness - This criterion represents a ratio between effort and impact and can be used in evaluating alternative methods in terms of costs.
- (5) process - It analyzes why a program produces its results. It is qualitative in nature and searches for negative and positive side-effects of the program.

Program impact and strategy evaluations should produce long-term and short-term measures of effectiveness. Long-term measures, such as effectiveness, efficiency and cost-effectiveness, are the true test for a program's success. A program should be continually evaluated to ensure the short-term measures are good indicators of the long-term output measures (Wholey et al., 1970). Examples of short-term measures in the Coast Guard's waterfront facility

inspection program are: recording the number of facility inspections conducted; recording the number of facility surveys completed; and recording the number of facility violations processed (Appendix I).

Wholey maintains that most federal programs fail because there was no research and development prior to the implementation of the program. To help overcome the lack of research and development, Wholey recommends that program management ask two questions. Has the program manager specified the objectives of the program? Does the program have activities that can be measured to indicate whether or not the stated objectives are being met?

Legislative Background

The USCG is the federal agency with jurisdiction over the navigable waters of the U.S., the coastal zone and the Great Lakes. Authority for the USCG to regulate different aspects pertaining to structures in the coastal zone originates from the Espionage Act (1917), the Magnuson Act (1950), Executive Order 10173 (1950), and the Ports and Waterways Safety Act (1972). Other legislation pertaining to marine environmental protection and giving the USCG authority to act include the Port and Tanker Safety Act (1978), the Clean Water Act (original version was FWPCA of 1972), the Outer Continental Shelf Lands Act (1978), the Deepwater Port Act (1974), and the Comprehensive Environmental Response, Compensation and Liability Act

1980, as amended (CERCLA). These laws encompass the prevention and detection of accidental or intentional discharges of oil, hazardous substances, pollutants and contaminants into the environment. Under these laws, the USCG is the federal agency which assures that discharges into the coastal zone are cleaned up and that the discharges are investigated and penalties are assessed where appropriate.

The Magnuson Act (1950) authorized the President to require the protection of U.S. harbors, ports, and waters including all vessels and waterfront facilities, whenever he finds the security of the U.S. to be endangered by subversive activity. Executive Order 10173 (1950) was issued pursuant to the Magnuson Act and declared the security of the U.S. to be at risk and authorized the Commandant (USCG) to enforce 33 CFR 6 and to designate waterfront facilities for the handling, storage, and loading and discharging of explosives, flammable or combustible liquids in bulk, and other dangerous articles. It also authorized the Commandant to prescribe conditions or restrictions for safety on waterfront facilities and vessels in port, as deemed necessary.

Waterfront facilities are regulated by 33 CFR 126, 33 CFR 154 and 33 CFR 156. 33 CFR 126 implements 33 CFR 6 and applies to all designated waterfront facilities and facilities of particular hazard. Authorization to promulgate 33 CFR 126 came from the Magnuson Act and they

have remained basically unchanged since the 1950's and 1960's. These regulations apply to three broad categories of hazardous materials: dangerous cargoes, designated dangerous cargoes, and cargoes of particular hazard (definitions can be found in the appendix). Part 126 describes the conditions which must be met in order for a waterfront facility to be deemed a "designated waterfront facility" and a "facility of particular hazard." Only designated waterfront facilities may handle designated dangerous cargoes and dangerous cargoes, and only facilities of particular hazard may handle cargoes of particular hazard. The regulations of 33 CFR 126 deal with subjects such as security, fire prevention, fire fighting, cargo permit requirements, liquid cargo transfer, and cargo arrangement.

In addition to 33 CFR 126, waterfront oil transfer facilities must also comply with the more specific 33 CFR 154 and 156. Parts 154 and 156 were promulgated after the passage of the Ports and Waterways Safety Act of 1972 and the Federal Water Pollution Control Act of 1972, and they apply to all onshore and offshore facilities engaged in the transfer of oil in bulk to or from any vessel with a capacity of 250 or more barrels. Parts 154 and 156 cover basically the same areas as Part 126 but in more detail. Additional items found only in Parts 154 and 156 include provisions for preparing an operations manual, transfer

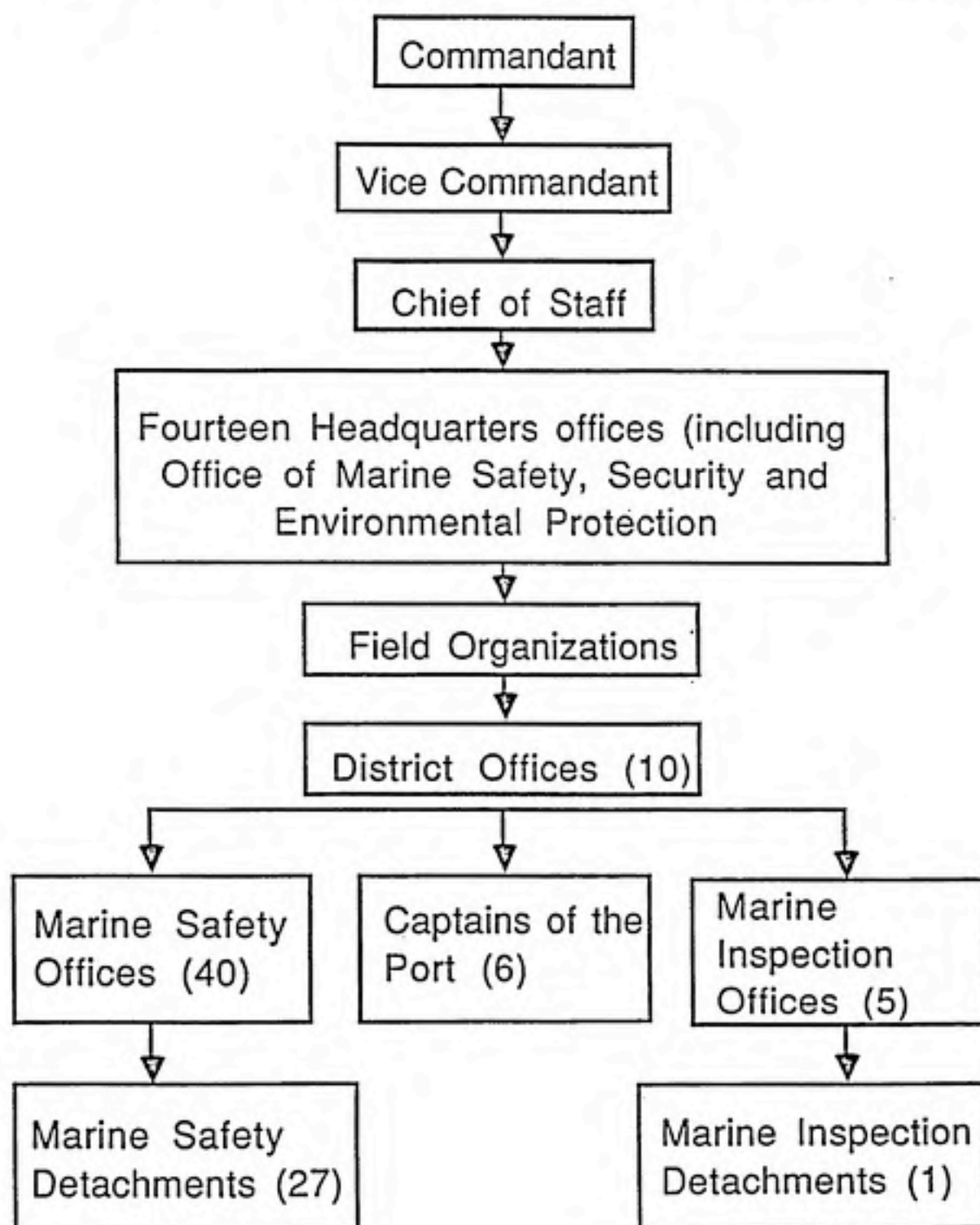
equipment specifications, guidelines for facility operations, and pollution prevention.

49 CFR 170-179 (promulgated under the Hazardous Materials Transportation Act) were promulgated by the Materials Transportation Bureau (MTB) and regulate the handling, storing, stowing, loading, discharging, or transporting of dangerous cargo in bulk, portable tanks, containers or packages at designated waterfront facilities. USCG inspectors use 49 CFR 170-179 to ensure cargo located on a designated waterfront facility, a facility of particular hazard, or a vessel moored alongside one of these facilities is being handled in a safe manner.

USCG Organization

The basic organization of the USCG is depicted in Figure 1. The headquarters, area, and district offices are primarily policy makers and advisers for the field units. The field units are the primary enforcers, responders and implementers. This is the basic organization for all USCG mission areas; thus, this is the basic organization for the marine environmental protection mission area.

The waterfront facility inspection program is implemented by Marine Safety Offices (MSO) and Captain of the Ports (COTP). This program is a branch of the Port Operations or Port Safety Department and is usually

Figure 1. Coast Guard Organization

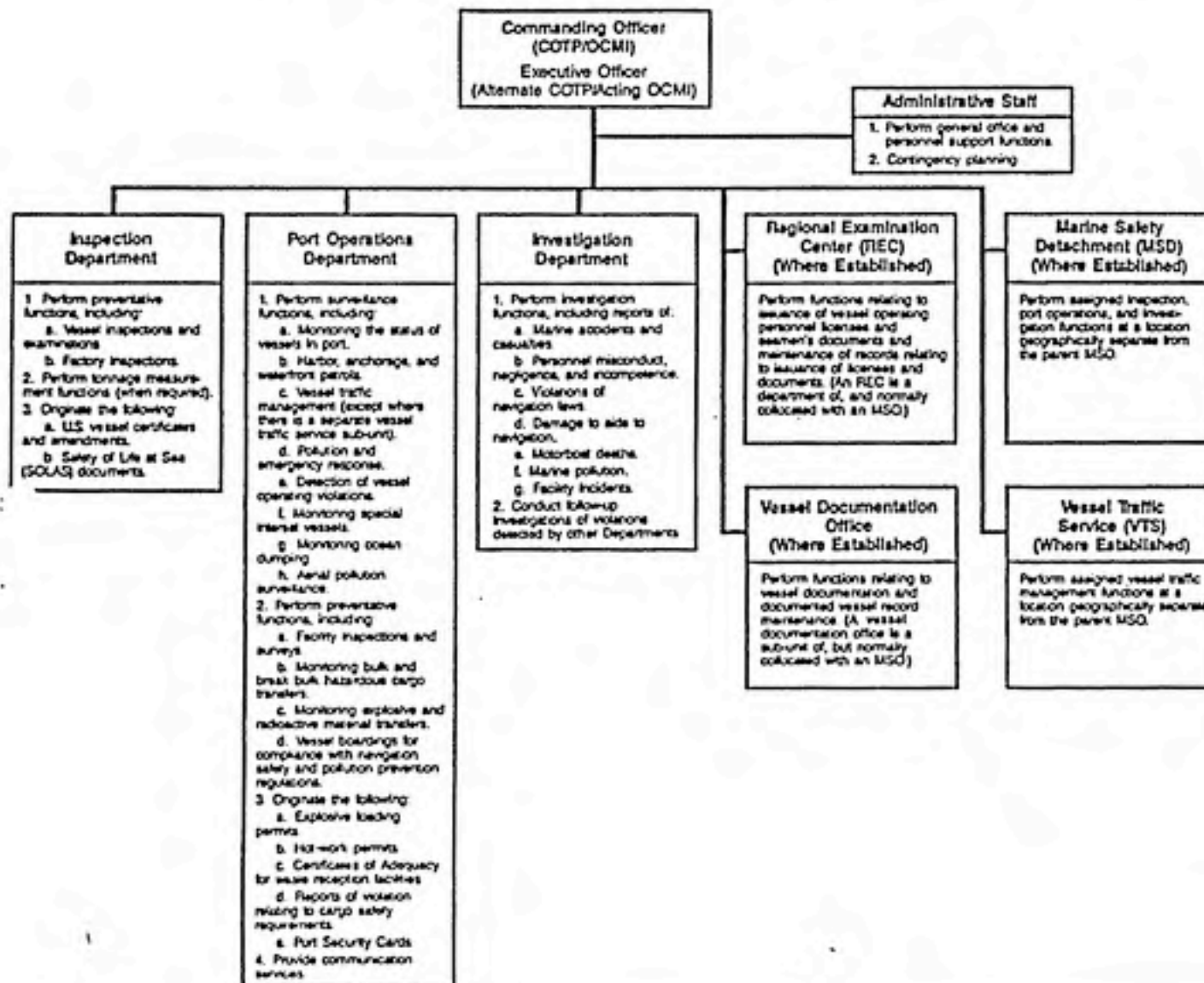
supervised by a junior officer or a Chief Petty Officer (Figure 2). The actual inspections and field work are conducted by petty officers.

Training for the program is carried out at the unit level, at USCG Reserve Training Center (RTC), Yorktown, VA, and at industry and EPA schools. RTC has introductory courses in marine environmental protection for officers and petty officers. It also has advanced schools in hazardous materials and explosive loadings. Students learn jurisdictional authority, inspection techniques, investigation techniques, USCG policy, and the location of related reference material. Unit training basically reemphasizes material taught at RTC. Additional training is obtained from various industry schools and from EPA courses.

USCG policy for the marine safety field is communicated primarily in two ways: the Marine Safety Manual (MSM) and Commandant Instructions. MSM Volume I, chapter four, (Marine Safety Law Enforcement) describes enforcement activities, policies and objectives for the marine safety program. It lists actions available to the Captain of the Port (COTP) in response to deficiencies and/or violations at a waterfront facility and they are:

- a. Verbally point out any deficiency, enabling on-the-spot correction or preparation of a worklist.

Figure 2
Typical Marine Safety Office Organization



- b. Issue a COTP Letter of Warning (a discretionary tool to expedite the processing of minor violations).
- c. Request U.S. Customs clearance be withheld from a vessel.
- d. Issue a COTP Order (directed only to a specific vessel, facility or individual in order to: restrict or stop vessel/facility operations; require specific actions to be taken; deny a vessel further entry to port until a deficiency is corrected; or detain a vessel in port).
- e. Seek an injunction in federal court to halt operations.
- f. Direct a U.S. vessel subject to inspection to cease operations.
- g. Commence civil penalty proceedings by submitting an MVRP for vessels or a Report of Violation for parties other than vessels.
- h. Terminate or suspend the waterfront facility general permit.
- i. Suspend or revoke the Certificate of Adequacy for waste reception facilities.
- j. Establish safety zone, security zone, or regulated navigation area as per 33 CFR 165.

Specific policy and guidance sections are included in chapter four and many of them relate to the waterfront

facility inspection program; however, the Waterfront Facility Enforcement Policy section has not been developed at this time. The Port Safety and Security Division at USCG Headquarters is nearing the end of a major revision to the federal regulations pertaining to waterfront facilities, 33 CFR 126, 154, 155 and 156. They will develop the enforcement policy section after the regulation revision is approved.

MSM Volume II, Chapter 22 is titled Marine Facilities and Structures. It covers the legislative and regulatory authority related to the waterfront facility inspection program as well as addressing general concerns and procedures of waterfront facility inspections for facilities falling under 33 CFR 126 only, and for those falling under 126, 154 and 156. This chapter provides excellent inspection guidelines, examples, and references.

The MSM also provides guidance on the minimum number of activities which should be done to maintain an adequate program. These guidelines are called Mission Performance Standards and are documented in the Port and Environmental Safety (PES)/Marine Environmental Response (MER) Quarterly Activities Report (QAR) (Appendix I). For the waterfront facility program, the standards that went into effect 5 May 1986 are:

a. Issuance of Certificate of Adequacy for Oil.

Process 100 percent of COA applications within 1 year of completed application.

- b. Inspect Waste Reception for Oil. Annually inspect 100 percent of fixed waste reception facilities at designated waterfront facilities.
- c. Issuance of COA for Noxious Liquid Substances. Process 100 percent of COA applications for NLS within 1 year of receipt of completed application.
- d. Inspect Waste Reception Facilities for NLS. Annually inspect 100% of fixed waste reception facilities at designated waterfront facilities.
- e. Liquid Bulk Facility Inspections. Annually inspect 100% of the designated waterfront facilities.
- f. Dry Cargo Facility Inspections. Annually inspect 100% of the designated waterfront facilities.
- g. Liquid Bulk Facility Surveys. Survey 100% of the designated waterfront facilities every 2 years.
- h. Dry Cargo Facility Surveys. Survey 100% of the designated waterfront facilities every 2 years.
- i. Facility Operations Manual Review. Review 100% of facility operations manuals in conjunction with facility surveys or in response to a pollution incident or accident.
- j. Hot-work Permits. Conduct inspection prior to issuing each hot-work permit.

An inspection of a waterfront facility is a prearranged examination which verifies compliance with all applicable regulations (33 CFR 126, 154 and 156; 49 CFR 149). A survey is a detailed review of a facility's physical plant to keep the file updated. Accurate files are important because inspectors review them prior to inspections and emergency response personnel review them prior to responding to accidents.

One category no longer a part of the performance standards is facility spot check inspections. Prior to the new standards, inspections were required biannually, surveys were required biennially (no change), and spot checks were required monthly. Due to budget constraints, these standards were modified on 21 December 1981 and called for inspections annually, spot checks bimonthly, and no survey requirement. These "standards" were in effect until the 5 May 1986 revision to the MSM. Although spot checks are no longer a documented entity, the MSM still states that anytime USCG personnel are on a facility, they should be alert for obvious violations of laws and regulations.

Federal, State and Industry Roles

The broad and diverse authority of the federal government over the prevention and enforcement aspects of transporting hazardous materials is distributed among twelve agencies. The activities of the Department of

Transportation (DOT) and the Nuclear Regulatory Commission (NRC) are of primary interest.

Within DOT, the Office of Hazardous Materials Transportation (OHMT; formerly called Materials Transportation Bureau) has general authority over regulating all shipments of hazardous materials. OHMT promulgated the packaging, labelling, marking, placarding, stowing, segregating, and paperwork regulations contained in 49 CFR 171-177. The specific enforcement of hazardous materials transported by highway, rail, air, and water is conducted by the Federal Highway Administration (FHWA), the Federal Railroad Administration (FRA), the Federal Aviation Administration (FAA), and the USCG, respectively.

Regulatory authority over radioactive materials is divided between DOT and NRC. NRC sets the standards for carriage of fissile and radioactive materials that exceed Type A limits, and DOT sets the standards for carriage of nonfissile radioactive materials and quantities of fissile materials that do not exceed Type A limits.

In the early 1970's, state governments began their involvement in hazardous material transportation safety. An impetus for their involvement was the relatively low number of DOT enforcement actions compared to the large number of shippers, carriers, and container manufacturers throughout the country. A 1973 surveillance program organized by DOT and the Atomic Energy Commission also

recognized the need for a stronger prevention and enforcement program at the state level.

The federal government's response to the recognized need for more state involvement was to give OHMT the responsibility of organizing Federal-State cooperative programs. In 1981 OHMT initiated the State Hazardous Materials Enforcement Development Program (SHMED) with two objectives:

- a) strengthen State enforcement capabilities
- b) promote uniformity in state hazardous materials safety regulations and enforcement procedures.

SHMED was primarily directed at highway transportation of hazardous materials and offered states \$120,000 to develop and implement inspection programs and enforcement procedures. Only twenty-five states participated in SHMED (New Jersey established an enforcement program without SHMED support.)

Building an effective inspection and enforcement program at the state level has been slow. It has even been slower for waterborne hazardous materials because of SHMED's bias toward highway transportation. Local agencies such as fire departments and police departments have been more help to the USCG on waterfront facilities than any of the state agencies; however, this assistance

is usually in the fire protection area only. More funds and resources would be needed for local agencies to be of significant benefit to the USCG (Office of Technology Assessment, 1986).

Regardless of the regulatory involvement of state and local governments, all waterfront facilities are subject to all applicable Federal regulations. The USCG, OHMT, and the Occupational Safety and Health Administration (OSHA) have all promulgated regulations which apply. Ports may adopt standards more stringent than the Federal regulations but none less stringent. Some ports have adopted the Federal regulations and some have issued their own. Other ports have adopted the voluntary industry standards published by the National Fire Protection Association (NFPA) (Table 1).

The Occupational Safety and Health Act of 1970 gave OSHA the authority to promulgate regulations to provide a safe work environment at commercial shoreside cargo handling operations at marine terminals. The results of this act were codified in 29 CFR 1917 and 1918, but the act prevents OSHA from issuing regulations in areas already regulated by another federal agency. Therefore, OSHA's regulations are general and directed toward worker health and safety at marine terminals. They do not cover facilities used solely for the bulk stowage, handling, and transfer of flammable, non-flammable and combustible liquids and gases. These facilities are regulated by the

Table 1
Summary of Local Regulations at Waterfront Facilities

<u>Port</u>	<u>Notice/ Permits</u>	<u>NFPA</u>	<u>Time Limits</u>	<u>Separation</u>	<u>Threshold Amounts</u>	<u>Transfer Operations</u>	<u>Inspection</u>
Baltimore	X	X	X		X		
Buffalo	X			X	X	X	
Cincinnati	X			X	X	X	
Cleveland		X					
Detroit		X					
Houston	X	X		X	X		
Huntington							
Los Angeles	X	X	X	X	X	X	(1)
New Orleans		X					
New York	X	X	X	X	X	X	
Oakland	X	X	X		X		
Port Arthur							
Seattle	X	X	X	X	X	X	(2)

(1) Vessel and terminal inspection

(2) Container inspections

SOURCE: Telephone interviews with fire officials; State and local regulations (see References for complete list).

USCG under the authority of the Ports and Waterways Safety Act. The USCG's regulations focus on the dangers related to fires, explosions and pollution; and do not specifically address workers' health. Recent OSHA hazard communication rules codified in 29 CFR 1910 should help bridge the gap between the previously existing regulations. 29 CFR 1910 requires employers to educate employees on the risks of hazardous substances stored, manufactured or handled at the facility.

The National Fire Protection Association (NFPA) is an industrial organization which has issued several standards applicable to waterfront facilities. Although NFPA has no power or authority to enforce their standards, many ports have adopted some or all of NFPA's standards. The two applicable standards are:

No. 30 Flammable and Combustible Liquids Code
(1981)

No. 307 Construction and Fire Protection of Marine
Terminals, Piers, and Wharves (1985)

NFPA 30 includes a section on wharves with guidelines for bulk liquid transfer operations and stowage. NFPA 307 includes sections on water supply for fire protection, general terminal operations, and hazardous materials stowage (containerized cargo is addressed). In addition

to the two NFPA codes mentioned, NFPA has other publications which include electrical codes, guidelines for welding, specifications for fire extinguishers, and classification schemes for flammable and combustible liquids.

The organization which has provided the USCG with the most assistance in monitoring compliance of the shipment of hazardous materials by water has been the National Cargo Bureau (NCB). NCB describes itself as a "not-for-profit membership organization dedicated to the safe stowage, securing and unloading of cargo, and to the safety of shipboard cargo handling." NCB personnel are qualified to perform over twenty different types of inspections and surveys, including the following examples:

- a) Stowage of explosives, bulk and packaged hazardous materials in accordance with federal regulations.
- b) Preloading inspection of holds and reefers for refrigerated cargoes, taking and recording temperatures.
- c) Loading, stowage and securing of general cargo, on or under deck, including special surveys of large, heavy lift units.
- d) Stowage of bulk grain cargoes, related arrangements and vessel suitability.
- e) Condition of cargo and packaging at point of origin and/or prior to being loaded and stowed.

Carriers place special significance on certificates issued by NCB because the USCG accepts these certificates as prima facie evidence that the cargo is stowed in accordance with 49 CFR. Carriers are also utilizing the services of NCB more often because not every shipper/exporter has the trained people to properly pack, block and brace the wide variety of regulated commodities. This is becoming more important to ocean carriers because of potential responsibility for cleanup costs and liability associated with a hazardous substance discharge under CERCLA, as amended (Bohn, 1985).

Trends and Databases

The safety regulations at waterfront facilities have changed very little over the last thirty years; however, two changes occurred in the waterborne shipment of dangerous commodities in the 1970's and 1980's. The first change was the tonnage decline of petroleum and petroleum products and the tonnage increase of chemicals. The second change was the increased use of intermodal containers (containers that can be transported by rail, land or water) in all areas of the marine industry, including shipment of chemicals in intermodal containers.

Table 2 shows the relationship of the tonnage shipped for petroleum and petroleum products and for chemicals. In 1981, petroleum and petroleum products accounted for 90% of the tonnage shipped in dangerous commodities. The

Table 2

Trade in Petroleum and Chemicals by Service Type, 1977-81
(million short tons)

<u>Commodity Group and Service Type</u>	<u>1977</u>	<u>1979</u>	<u>1981</u>
Petroleum			
Dry Cargo/Liner	11.2	10.5	25.3
Tanker	<u>900.3</u>	<u>914.9</u>	<u>804.5</u>
TOTAL	911.5	925.4	829.8
Chemicals			
Dry Cargo/Liner	28.2	32.3	32.8
Tanker	<u>46.6</u>	<u>55.0</u>	<u>51.5</u>
TOTAL	74.8	87.3	84.3
Combined			
Dry Cargo/Liner	39.4	42.8	58.1
Tanker	<u>946.9</u>	<u>969.9</u>	<u>856.0</u>
TOTAL	986.3	1012.7	914.1

SOURCE: U.S. Waterborne General Import and Export
Statistics (SA 305/705), U.S. Bureau of the
Census; Waterborne Commerce of the United States,
U.S. Army Corps of Engineers.

trend in the world oil market is reflected in Table 2. The market peaked in 1978-1979 and then went into a decline. In spite of the overall trends, the tonnage in chemicals increased 13% from 1977 to 1981. Total tonnage of chemicals is small when compared to petroleum and petroleum products so their overall effect is small; however, the significant increase in the shipment of chemicals during an overall decline in total shipments indicates that the volume of chemicals passing through our ports will probably continue to increase.

It is not surprising that as oil traffic declined, so did the volume of hazardous commodities being carried in tankers. As shown in Table 2, the entire decline in tanker tonnage came from the decrease in the volume of petroleum and petroleum products transported. Table 2 also shows that tankers carry approximately 60% of the chemical traffic; however, petroleum so dominates the industry that chemicals only accounted for 6% of the tanker tonnage in 1981. Transportation of petroleum and chemicals by dry cargo vessels has shown significant increases from 1977 to 1981, but dangerous cargo permits (Table 3) have declined. This suggests that there are fewer shipments, but that the volume of dangerous cargoes per shipment is increasing. These data indicate that there are no significant changes in chemical carriage by tankers, but there have been changes for dry cargo vessels. Fewer shipments means there are fewer chances

Table 3
Transfers, Permits, and Operations
Involving Dangerous Commodities at U.S. Ports
1978-81

<u>Commodity Group</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Oil	196,470	190,128	153,133	140,554
Bulk liquid (1)	21,321	24,290	24,634	22,642
Cargo of particular hazard (2)	6,205	7,953	4,653	3,787
Dangerous cargo (3)	<u>169,327</u>	<u>178,433</u>	<u>158,010</u>	<u>137,827</u>
TOTAL	393,323	400,804	340,430	304,810

NOTES:

- (1) Bulk liquid cargoes other than oil.
- (2) Cargo of particular hazard, Class A explosives, and radioactive material.
- (3) Packaged and dry bulk dangerous cargo.

SOURCE: U.S. Coast Guard, Office of Marine Environment and Systems, Port and Environmental Safety Division.

for unintentional discharges, but larger volumes of dangerous cargoes increases the risk of a serious incident if there is an unintentional discharge.

In order to fully appreciate the data on increases in dry cargo tonnage, recent changes in the U.S. fleet and the relative importance of containerships and tankers should be examined. Between 1971 and 1983, many of the small, multi-purpose general cargo ships were scrapped and replaced by large special-purpose containerships. The tonnage of this segment of the U.S. commercial liner fleet grew from 1.5 million to 4.3 million deadweight tons (dwt) during this period. As seen in Table 4, this segment represents 21% of the U.S. fleet capacity and 44% of the total number of ships. Tankers continue to dominate the fleet capacity with 14.2 dwt while accounting for 49% of the vessels (includes LNG carriers).

Between 1972 and 1981, the total containerized commercial tonnage in U.S. ports tripled (Table 5). In 1981, container traffic accounted for 61% of the commercial U.S. liner trade. The number of containers has grown from 1.0 million to 1.5 million standardized twenty-foot units. Even with its dramatic growth, container traffic remains concentrated in only a few areas, with 78% of the container traffic trading in only twelve ports (Tables 6-7).. On average, container traffic constitutes 21% of the total tonnage handled by these twelve ports, whereas the national average is about 6%. However, as

Table 4

U.S.-Flag Privately Owned Merchant Fleet, 1983

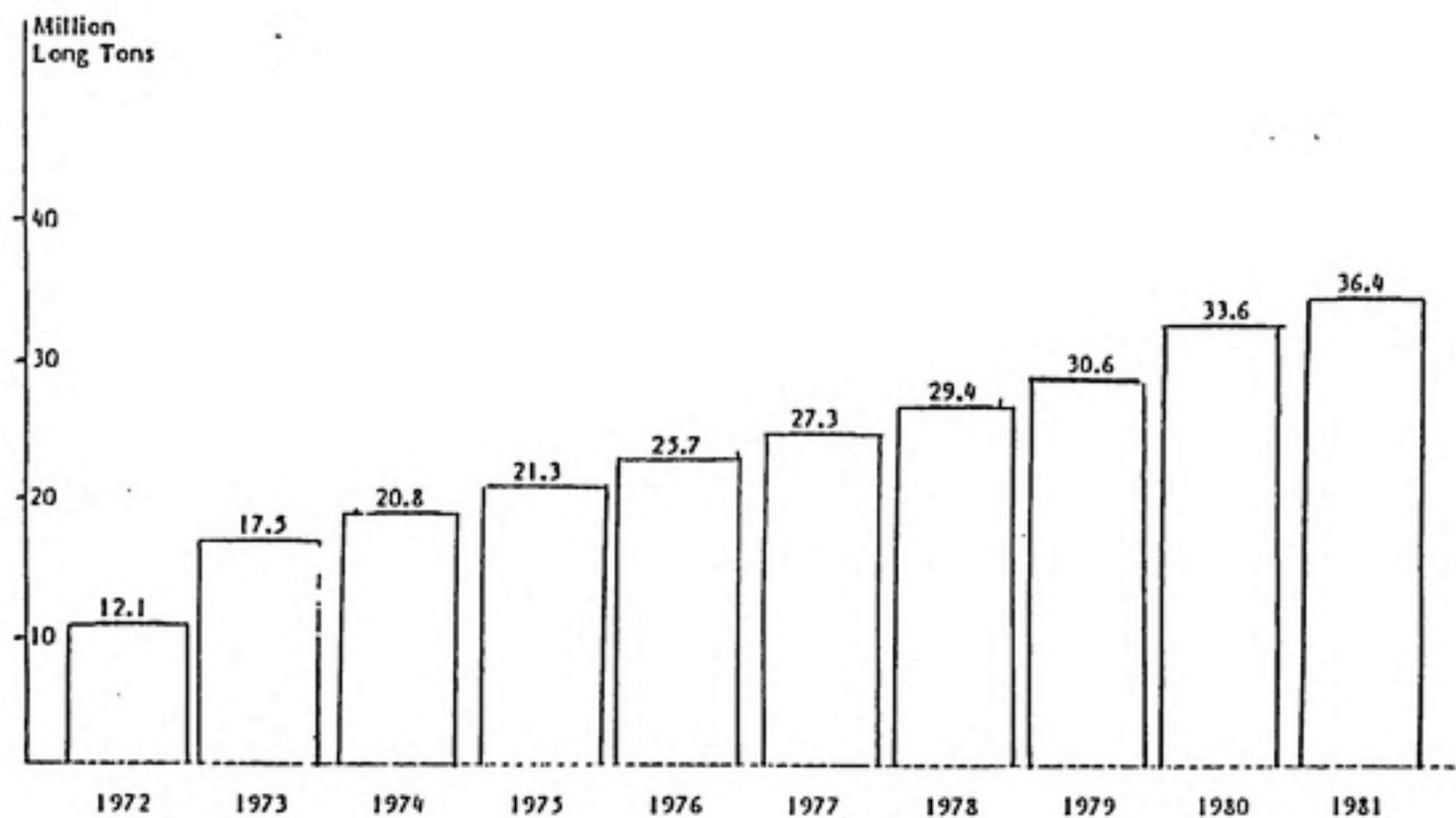
<u>Vessel Type*</u>	<u>Number</u>	<u>Deadweight Tons</u>
General Cargo		
Breakbulk/partial container	104	1,404,688
Containership	97	1,868,274
RO/RO--vehicle carriers	18	274,043
Barge carriers	<u>21</u>	<u>765,148</u>
 TOTAL	 240	 4,312,153
 Bulk cargo	 18	 618,018
Tankers	233	14,220,469
Special products/liquified		
natural gas (LNG)	33	1,601,551
Other (coastal, passenger)	<u>17</u>	<u>110,396</u>
 TOTAL	 541	 20,862,587

NOTES:

* Oceangoing ships, 1000 grosstons and over, on January 1, 1983.

SOURCE: "Ship Register," Military Sealift Command, Department of the Navy. Washington, D.C. January, 1983. Reprinted in "An Assessment of Maritime Trade and Technology," Office of Technology Assessment.

Table 5
Containerized Commercial Cargo in U.S. Foreign Trade, 1972-81



SOURCE: "Containerized Cargo Statistics," 1979 and 1981, Maritime Administration.

Table 6

Foreign Commercial Trade in All Commodities and Chemicals on Containerships*
and All Ship Types at Major Containerports, 1980
(thousand long tons)

<u>Port</u>	<u>Containerships</u>	<u>All Ship Types</u>	<u>Chemicals on Containerships</u>	<u>Chemicals on All Ship Types</u>
New York	8,063.2	43,875.4	612.8	926.7
New Orleans	3,573.2	36,943.5	301.0	2,091.1
Los Angeles	3,357.6	10,917.8	204.8	422.5
Seattle	3,305.4	6,754.2	41.8	70.4
Oakland	3,294.5	4,100.3	172.4	185.8
Long Beach	3,082.3	15,256.8	137.0	542.8
Baltimore	2,832.8	31,227.6	194.9	496.8
Houston	2,679.1	45,862.4	257.3	4,796.1
Norfolk	1,884.5	35,052.0	101.9	490.4
Savannah	1,487.7	7,793.0	55.7	595.6
Charleston	1,302.1	4,157.0	121.6	246.2
Philadelphia	1,049.1	28,042.8	61.1	147.7
TOTAL	35,911.5	269,982.8	2,262.3	11,012.1
NATIONAL TOTAL	46,184.6	739,253.5	3,326.3	49,115.8

* Containership includes containership, partial containership, container/ro-ro, container/car carrier, container/rail carrier, container/barge carrier, bulk/containership.

SOURCE: The Maritime Administration, U.S. Department of Transportation.

Table 7

Foreign Commercial Trade in All Commodities and Chemicals on Containerships*
and All Ship Types at Major Containerports, 1980 (percent)

<u>Port</u>	<u>Container Tonnage as Percent of All Tonnage</u>	<u>Containerized Chemical Tonnage as Percent of All Chemical Tonnage</u>	<u>Containerized Chemical Tonnage as Percent of Containerized Tonnage</u>	<u>Chemical Tonnage as Percent of All Tonnage</u>
New York	18.4	66.1	7.6	1.4
New Orleans	9.7	14.4	8.4	0.8
Los Angeles	30.8	48.5	6.1	1.9
Seattle	48.9	59.4	1.3	0.6
Oakland	80.3	92.8	5.2	4.2
Long Beach	20.2	25.2	4.4	0.9
Baltimore	9.1	39.2	6.9	0.6
Houston	5.8	5.4	9.6	0.6
Norfolk	5.4	20.8	5.4	0.3
Savannah	19.1	9.4	3.7	0.7
Charleston	31.3	49.4	9.3	2.9
Philadelphia	3.7	41.4	5.8	0.2
AVERAGE	13.3	20.5	6.3	0.8
NATIONAL AVERAGE		6.2	6.8	7.2

* Containership includes containership, partial containership, container/ro-ro, container/car carrier, container/rail carrier, container/barge carrier, bulk/containership.

SOURCE: Derived from Table 6.

Table 7 shows, some ports handle much higher proportions of containerized commodities.

Chemicals on containerships accounted for only 6.8% of the total chemicals shipped. An examination of the twelve major containerports reveals that chemicals on containerships made up less than 10% of total containership tonnage and less than 5% of total tonnage handled in 1980. Even though the percentage of containerships carrying chemicals varies widely from port to port, chemicals on containerships constitutes only small proportions of the total tonnage handled at ports involved in commercial foreign trade. Data in this area are still being gathered by the Maritime Administration, thus, no trends can be identified at this time. However, even if the proportion of chemicals on containerships remains stable, the fact that the container industry and chemical traffic have been growing indicates ports will be handling a larger volume of containers containing chemicals in the future (Department of Transportation, 1984).

The USCG's Pollution Information Reporting System (PIRS) records the commodity, location, amount, vessel type, and cause of all the reported oil and hazardous substance spills (Tables 8-9). These data on unintentional discharges can be related specifically to the number of transfer operations. The number of transfer operations in each MSO/COTP zone is being reported on the

Table 8

Estimated Incident Rates by Commodity, 1982-83
(Spills or incidents per 1000 transfers, operations, or permits issued)

<u>Commodity</u>	<u>Incidents</u>	<u>Scenario A (1)</u>		<u>Scenario B (2)</u>	
		<u>Transfers</u>	<u>Rate</u>	<u>Transfers</u>	<u>Rate</u>
1982 Estimate					
Oil	106	133,526	.79	147,581	.72
Bulk liquid	64	21,510	2.98	23,774	2.69
Cargo of particular hazard	4	3,598	1.11	3,976	1.01
Packaged dangerous cargo	8	130,936	.06	144,718	.06
1983 Estimate					
Oil	160	126,850	1.26	154,960	1.03
Bulk liquid	55	20,435	2.69	24,963	2.20
Cargo of particular hazard	7	3,418	2.05	4,175	1.68
Packaged dangerous cargo	9	124,389	.07	151,954	.06

- (1) Scenario A assumes 5 percent decrease per year from FY 1981 base number of USCG-recorded transfers and permits.
(2) Scenario B assumes 5 percent growth per year from FY 1981 base number of USCG-recorded transfers and permits.

SOURCE: National Response Center; Hazardous Materials Incident Reporting System; USCG Port and Environmental Safety Division.

Table 9

The following table presents NFPA data, covering the period from 1973-1981, on the causes and results of waterfront facility fires. Damage costs are in 1985 dollars. With this data the effectiveness of the waterfront facility regulations can be examined.

<u>Cause</u>	<u># of Incidents</u>	<u># of Injuries</u>	<u># of Deaths</u>	<u>FY1985 Dollars Damage</u>	<u>% of Damage</u>
Electrical failure	7	9	1	6,499,000	.12
Equipment malfunction	7	29	2	10,279,000	.19
Fueling Ops	6	8	6	2,373,600	.04
Intentional	5	6	2	4,030,300	.07
Improper handling and storage	5	3	1	14,389,000	.26
Welding	4	40	5	717,032	.01
Smoking	2	1	0	428,183	.007
Cooking	2	0	1	1,169,900	.02
Other & Unknown	<u>5</u>	<u>5</u>	<u>1</u>	<u>15,975,000</u>	<u>.29</u>
TOTAL	43	101	19	55,879,015	1.00

SOURCE: NFPA Fire Reporting System

USCG QAR; however, the validity of these data is questionable. There are no specific requirements for oil transfers to be reported to the USCG, but there are specific permits and notifications for designated dangerous cargoes and cargoes of particular hazard. In light of the fact that petroleum and petroleum products dominate the market, it is safe to assume that they also will make up the vast majority of the transfer operations. Thus, reported figures for total transfer operations are "guesstimates" at best.

The USCG actually has two databases regarding unintentional discharges, PIRS and the National Response Center (NRC). USCG regulations require that discharges be reported to either the cognizant MSO/COTP or NRC. NRC will notify the cognizant MSO/COTP after it receives a report of a discharge. The PIRS database is a consolidation of reports from each MSO/COTP and it reveals that human error and mechanical failure each accounted for approximately half of the unintentional discharges reported from 1973 to 1981. The break down of the discharges by commodity is: 68% for oil; 13% for gasoline, 17% for other dangerous cargoes, and 2% for Cargoes of Particular Hazard (COPH). This break down is not surprising, but due to the increasing trend of chemical shipments, an increasing number of COPH and designated dangerous cargo discharges can be expected.

III. RESEARCH METHODS

Nature of Evaluation

The Coast Guard recognized the value of advanced training for personnel long ago. Most Coast Guard programs fund the annual costs of postgraduate school for 1-5 commissioned officers. The primary purpose of the Coast Guard's postgraduate school program is to provide education and training for selected individuals, who in turn, will use this knowledge to make more informed decisions and judgements in future jobs in the Coast Guard. A coincidental benefit for the Coast Guard is that the officers in school can be utilized as a resource for specific projects. Most Master's reports completed by Coast Guard officers are chosen from a list of real Coast Guard projects or problems compiled at USCG Headquarters.

The Port Safety and Security Division at USCG Headquarters (Program Manager for the waterfront facility inspection program) determined that the waterfront facility inspection program should be evaluated to comply with the Coast Guard Port Safety and Security Operating Program Plan which states "all Port Safety and Security activities will continue to be evaluated to ensure there is a need to perform them." This project was listed as a

potential Master's report and was chosen as the topic of this report (Figure 3).

During consultation with the Program Manager of the waterfront facility inspection program, it was revealed that this evaluation would be used as input in the revision of program policy and guidance documents, and in the revision of 33 CFR 126 scheduled for fiscal year 1988. He also requested specific recommendations for establishing program policies and mission performance standards, and an assessment of the potential for "third parties" performing Coast Guard facility enforcement activities.

In determining the methodology for this project, evaluation techniques were considered, past evaluations of the program were reviewed, current measurement instruments for the program were examined, and available statistical data bases were evaluated.

The 1984 assessment of the waterfront facility inspection program by RSPA focused on the safety regulations for waterfront facilities (33 CFR 126, 33 CFR 154 and 33 CFR 156) and industry trends. RSPA found that chemicals are accounting for a growing segment of the dangerous commodity trade; the use of intermodal containers in water shipments have increased significantly; and human error and mechanical failure are the most frequent causes of waterfront facility accidents. After considering safety statistics and state and local

Figure 3
Schedule of Events

Dec 85	Requested list of thesis topics
Jan 86	Topic chosen
Feb 86	Discussion of evaluation objectives with Program Manager; requested USCG program literature
Feb-Apr 86	Reviewed the literature; discussions with Program Manager; discussions with evaluator of a related study
Apr 86	Submitted proposed evaluation design
May 86	Proposal approved
Schedule of visits	
1 July 86	USCG HQ
2-3 July 86	MSO Baltimore
7-8 July 86	MSO Hampton Roads
9-10 July 86	RTC Yorktown
13-14 July 86	MSO Tampa
16-17 July 86	MSO Mobile
20-21 July 86	COTP New Orleans
22 July 86	MSO Port ARthur
23-24 July 86	COTP Houston
Aug-Dec 86	Reviewed findings and wrote rough draft
Dec 86	Submitted rough draft
Dec 87	Submitted corrected draft

regulations, RSPA concluded that there was no consistent indication of safety problems requiring more detail than Coast Guard regulations currently provide. A 1986 study by University of Michigan postgraduate students focused on the carriage and regulation of cargoes of particular hazard (COPH). This study revealed that the thirty-three bulk liquid chemicals listed as COPHs were not necessarily the most dangerous bulk liquid chemicals being carried by water; the regulations for carriage and transfer of bulk liquid chemicals were confusing; worker safety on waterfront facility has been neglected by OSHA and the Coast Guard; and lack of funds, training and statutory authority usually prohibited other agencies from assisting the Coast Guard in enforcing the waterfront facility regulations.

The Port and Environmental Safety/Marine Environmental Response Activities Report (QAR) is the Coast Guard's source of data for activities under the waterfront facility inspection program. Several QAR categories pertain to the program but they measure effort not results. There are no measures for output criteria.

Evaluation Design and Strategy

The intent of this Report is to evaluate the Coast Guard's waterfront facility inspection program using practical evaluation techniques; report the findings and conclusions of the evaluation; and report on how well the evaluation techniques work.

The task was to conduct a formative evaluation. The objectives of the evaluation were carefully selected, otherwise, the task could have become overwhelming. After a review of the available information and consultation with the Program Manager, the following issues needed further investigation:

- (1) measurement of program effectiveness;
- (2) outside agency enforcement of 33 CFR 126;
- (3) effect of industry trends on the program;
- (4) enforcement problems at the unit level;
- (5) program implementation problems;
- (6) training;
- (7) worker safety at waterfront facilities; and
- (8) regulations for carriage and transfer of bulk liquid chemicals.

The scope of this evaluation was reduced because of limited resources and lack of existing program output measures. The evaluation would address the first six of the eight listed issues. The objectives of the evaluation design were to provide input for future program evaluations, program policy and guidance revisions, and waterfront facility regulation revisions. The evaluation measures consisted of interviews of program participants, behavioral observations and statistical analysis.

In an evaluation conducted by a single person, the depth of the study depends on the number of issues being considered. In the absence of adequate program output measures, the evaluation design chosen consisted primarily of program participant input with statistical augmentation. Program participant input came from visits to selected field offices on the east and gulf coasts. Each visit was preceded by a telephone call to the office's Chief of Port Operations to explain the purpose and objectives of the evaluation. The offices visited were:

Port Safety and Security Division, USCG Headquarters
Marine Safety Office, Baltimore, MD
Marine Safety Office, Hampton Roads, VA
Marine Safety Office, Tampa, FL
Marine Safety Office, Mobile, AL
Captain of the Port, New Orleans, LA
Marine Safety Office, Port Arthur, TX
Port Safety Station, Houston, TX
Reserve Training Center, Yorktown, VA

Each visit was conducted using the same format. The office's program supervisor and field inspectors were interviewed using the following questions:

- (1) Describe the unit's waterfront facility training program;
- (2) How many waterfront facility field inspectors are at the unit?;
- (3) How are inspections scheduled?;
- (4) Does your unit meet waterfront facility inspection mission performance standards?;
- (5) Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations;
- (6) What problems do intermodal container facilities present to the USCB waterfront facility inspection program?; and
- (7) What problems are there in enforcing 33 CFR 126, 33 CFR 154 and 33 CFR 156?

In addition to interviews, field inspections were observed at most of the units. These observations were used to document inspection procedures and discuss any problems enforcing the waterfront facility regulations. Observed inspections procedures were compared to the USCG procedures contained in the Marine Safety Manual. At four of the ports, an industry representative was interviewed to provide an additional perspective on the Coast Guard's program. Finally, Coast Guard personnel assigned to the marine safety training staff in Yorktown, VA were interviewed to gain a perspective on the national

training goals for the waterfront facility inspection program.

Direct measures of program effectiveness were not available; however, statistics on program effort were available and evaluated. Data on related activities such as oil and chemical transfers, spills, monitors, and spill rates were available and presented. No direct correlation between the waterfront facility inspection program and these related activities can be made, but these data are valuable to gain a perspective of the effectiveness of other Coast Guard marine safety activities.

Strengths and Weaknesses of the Design

An in-house evaluator knows the organization and can easily ask pertinent questions. He will be sensitive to the program's needs and have a desire to improve the program. He will be treated as part of the team which will be an asset during interviews and discussions. Interviews may not be a preferred measure but a telephone call preceding each visit increases the receptivity of the respondents. The credibility of this evaluation is enhanced by the inclusion of behavioral observations at the field units.

A weakness of a one person evaluation is the limited opportunity of helpful feedback. An in-house evaluator has the advantage of knowing the organization, but if the evaluator has "too much" experience in the program being

evaluated, it may be difficult to remain objective. The selection process for determining which field offices to visit may be a weakness in this evaluation. Ideally field offices should be selected to ensure all problems in the national program will be addressed. Lack of program funds limited this evaluation to a small geographic area. Another weakness in this design is the lack of program effectiveness, impact and cost effectiveness measures. Looking at these types of measures over the long-term will indicate if objectives are being met and can be used to justify additional resources for the program.

While the offices visited comprise only 15 percent of the Coast Guard's field offices, they are responsible for 34 percent of the waterfront facilities inspected by the Coast Guard and 37 percent of the hours spent on waterfront facility activities (information provided by the Port Safety and Security Division at USCG Headquarters). This indicates a potential weakness in the evaluation, limited field office visits, was partially overcome by carefully selecting the field offices to visit.

IV. RESEARCH FINDINGS AND DISCUSSION

Data for this evaluation came from interviews, observations, Coast Guard policy documents, and Coast Guard data bases (Appendices B through I. These data were collected by following the previously described evaluation methodology. Each question used in the program participant interviews will be presented individually while the remaining sections of this chapter will present specific topics researched.

Methodology

Much of the information gathered in the visits to the field offices could have been obtained in a mail survey. However, observation of field personnel during these visits placed the statistics and answers to the interview questions into proper perspective. The field personnel were cooperative and usually candid in their remarks. This was vital because time was a constraint in this evaluation. The telephone calls prior to arrival enabled the office to prepare for the visit and have someone available from the waterfront facility program. The purpose of the visit and the information desired were explained enabling some information to be gathered before the interview.

Very few surprises were encountered after visiting the first two offices. Visiting MSO Baltimore first was beneficial because it, along with COTP New Orleans, has a strong waterfront facility program and was able to provide substantial program data. However, as the visits continued, the answers could be anticipated before the interviews were conducted. Even though program data became predictable, visiting different offices remained valuable because of the opportunity to observe and compare different "programs." There was nothing predictable about how each office's waterfront facility program would be perceived after it was observed. These findings alleviated the concern that the selection process for field office participation would bias the evaluation results.

Field Office Interviews

The following data are synopses of the information received during the interviews conducted at the seven field offices.

- (1) Describe the unit's waterfront facility training program.

Every unit has a training program and waterfront facility topics are presented according to the training schedule. The overall unit training program has many training topics, thus, waterfront facility training is not

frequently presented in this forum. However, training time for those in the waterfront facility program appears to be sufficient. Formal training within the program is held between two and four times monthly. If a unique situation or problem arises, impromptu training sessions are scheduled. On-the-job training (OJT) by teaming an experienced inspector with an inexperienced one was standard at every office. The Coast Guard began documenting OJT in the marine safety field in 1985. The OJT training guide for facility inspectors is documented in Appendix F. This training guide includes all aspects of the waterfront facility program except for container facilities.

The following conclusions were drawn from the interviews of facility inspectors:

- a) There is a lack of confidence in enforcing the electrical requirements of the National Electric Code. The inspectors are generally not electricians and do not feel comfortable enforcing requirements they are not familiar with. Training in this area needs improvement.
- b) There is a common feeling that the USCG's expertise in the proper handling of radioactive materials is weak. Training in this area is weak.

- c) There is a lack of knowledge concerning the jurisdiction and expertise of other agencies. More training is needed.
- d) There is a lack of knowledge concerning container facility inspections and the proper blocking and bracing methods for containers. More training is needed.
- e) Training is usually conducted by the senior or most experienced facility inspector. They do an adequate job of training others in CG inspection procedures and policies. They have other jobs (examples - boat coxswain, pollution investigator, vessel boarding team) and do not have the time to research all aspects of the facility inspection task for training.

(2) How many waterfront facility inspectors are at the unit?

The responses ranged from one part-time inspector to ten "full-time" inspectors. Full-time could more appropriately be described as primary duty because everyone at a field office has collateral duties. The port operation division of an MSO/COTP is responsible for pollution investigations, vessel boardings and pollution prevention. Inspection of a waterfront facility is a pollution prevention activity. General duty personnel in the port operations division are required to become proficient in all three areas of responsibility.

(3) How are inspection scheduled?

Five of the offices were using the Coast Guard's Marine Safety Information System to record their waterfront facility data. All of the offices divided their facilities equally by month and scheduled all monthly inspections at the beginning of each month. Scheduling inspections presented no problems to the participants.

(4) Does your unit meet waterfront facility inspection mission performance standards?

Four offices (Baltimore, Hampton Roads, New Orleans, and Port Arthur) were meeting the facility inspection mission performance standards. With the exception of MSO Baltimore and COTP New Orleans, the waterfront facility program is at the bottom of every office's priority list. Even with a strong program, MSO Baltimore's supervisor of the waterfront facility program complained that field activities were the first to suffer if additional resources were required in other MSO areas of responsibility.

MSO Baltimore has a strong and organized program but the office does not necessarily meet mission performance standards. Inspections are scheduled to meet missions performance standards; however, quotas are not always met because facilities with a history of problems take inspection priority over facilities with a history of

compliance. MSO Tampa had met mission performance standards prior to fiscal year 1987, but during that year, Tampa's only waterfront facility inspector was directed to devote much of his time towards administering a new marine safety program. At MSO Mobile the program receives very little attention because it has a very low priority. PSSTA Houston does not meet mission performance standards because the program's low priority places the facility inspectors last on the waiting list for the office's limited number of vehicles.

MSO Mobile and COTP New Orleans recommended waterfront facilities be divided into two categories, major and minor. Major facilities should continue to be inspected annually, but minor facilities should be inspected less frequently. The rationale involves targeting those facilities which are more active and potentially more dangerous. Presently, small, and often remote, facilities which transfer infrequently are given equal treatment in existing Coast Guard policy documents. These two offices contend that small, remote facilities require less frequent inspections because the risks are less and that targeting inspections would be more cost effective. They felt an inspection every two years would suffice.

- (5) Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

The Coast Guard receives very little outside assistance in administering the waterfront facility

regulatory program. There are several examples of active involvement with other agencies, but they deal primarily with communicating across jurisdictional lines rather than a mutual effort toward on goal. There were several examples where state and local agencies have a goal of waterfront facility enforcement.

Maryland and Florida have regulations similar to 33 CFR 126 but do very little enforcement due to budget constraints. Houston fire department personnel conduct inspections similar to 33 CFR 126 and 49 CFR but are unfamiliar with 33 CFR 154 and 156.

Of the agencies which work on the waterfront, the National Cargo Bureau (NCB) comes closest to being able to assist the Coast Guard in regulating waterfront facilities. The Coast Guard accepts NCB survey certificates as prima facie evidence that a vessel or container is loaded in compliance with 49 CFR. NCB routinely reads and interprets federal regulations and they are experts in the handling of hazardous material. NCB does not enforce 33 CFR 126 and 154 but their expertise coupled with appropriate training would make it an easy transition. The major obstacle to using NCB to assist the Coast Guard is that they charge for their services.

The Coast Guard does not currently employ NCB for services but the field offices do benefit from NCB's expertise. MSO Baltimore uses NCB as a sounding board for

unique hazardous materials questions. COTP New Orleans has sent facility inspectors with NCB personnel on container inspections for training purposes. It was standard procedure at the offices with container traffic for NCB to inform the Coast Guard whenever a container was to be inspected and of all NCB activities and discrepancies noted.

Coast Guard facility inspectors rarely deal with EPA, OHMT, FHA, or OSHA while implementing the waterfront facility inspection program.

- (6) What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

Coast Guard policy on the waterfront facility program does not specifically address container facilities. Containerization presents a unique problem for enforcement agencies because the contents cannot be determined unless the shipping papers are examined or the container is internally inspected. While in transit, the person in charge of the transportation (highway, rail or water) has the shipping papers, but at a container facility, the papers are located at the facility office.

There are two types of container facilities: single tenant, single yard; multiple tenants, common yard. Multiple tenant facilities present a problem because the people responsible may not be readily available. Often the only people available may be the personnel in the

facility office and they do not have a specific tenant affiliation, they only process the shipping papers. Large container yards present a problem because the vast number of containers is overwhelming to the limited number of facility inspectors.

MSO Baltimore has an active and organized container facility inspection program. MSO Baltimore facility inspectors drive through container yards looking for obvious or potential problems such as damaged containers which have hazardous material placards, containers with two or more placards or placarded containers or carriers with a history of violations. If a problem is suspected, Baltimore inspectors do not hesitate to have a container opened. Improper blocking and bracing of hazardous materials is a commonly cited discrepancy. The other offices do not routinely inspect yards and having a container opened rarely occurs because they are unsure of Coast Guard policy. Even if the coast Guard had more resources and a container facility policy, not placing placards on a container or not putting the hazardous materials on the shipping papers would prevent enforcement unless containers were routinely opened and their contents examined. Other problems included:

- (1) There is no guidance defining the Coast Guard's jurisdictional limit. Containers awaiting water transport may not be near the waterfront even though they are on the tenant's property.

- (2) The containers at a facility constantly come and go. Annually inspecting a container yard would have minimal regulatory impact because of the constant turnover of containers at the facility.
- (3) The Port and Environmental Safety/Marine Environmental Response Activities Report (QAR) is designed to monitor activities on bulk and break-bulk facilities. Container terminals do not fit into these two categories.
- (4) Citing the carrier for discrepancies may not be the answer. Many problems result from the company that stuffed (loaded) the container, so it may be more effective to cite the stuffer or cite both the carrier and the stuffer (the regulations allow this).
- (7) What problems are there in enforcing 33 CFR 126, 154 and 156?

There were no complaints regarding the enforcement of 33 CFR 154 and 156. 33 CFR 154 and 156 regulate bulk oil facilities and vessels transferring oil. They are specific and require little interpretation by the facility inspector. A question concerning the definition of designated waterfront facility did arise. Are unmanned wellheads a designated waterfront facility?

With a few exceptions which are listed later, 33 CFR 126 adequately deals with facilities handling break-bulk and packaged cargo. 33 CFR 126 inadequately deals with liquid bulk chemical facilities and container facilities. In many instances, the chemicals transferred at bulk liquid chemical facilities are equally or more hazardous to human health and the environment than oil, yet they are only subject to 33 CFR 126, less stringent prevention regulations than 33 CFR 154. The most frequent complaint was chemical facilities that do not handle oil are not required to have an Operations Manual which explains their cargo transfer procedures. Other problems with 33 CFR 126 and Coast Guard policy for enforcing 33 CFR 126 include:

- (1) 33 CFR 126 regulates by referring to other codes such as the National Electric Code and NFPA codes. These codes were not readily available at several offices.
- (2) The 12 foot stacking requirement in 126.15 is outdated. A more appropriate standard is to stack cargo to a height which is at least 3 feet below the sprinkling system.
- (3) What is the definition of hydraulic shock (126.15 (o) (7) (V)?

- (4) Coast Guard policy is needed for alternate test methods and mediums for pipelines, loading arms and hoses (126.15 (o) (7) (IV)).
- (5) 33 CFR 126 does not specify how far into a facility that cargo piping should be tested.

A final comment involves biennial survey data. The number of surveys completed by an office is reported in the QAR. However, most offices no longer do biennial surveys. These offices have selected portions of the survey data and included it in the information requested during annual inspections.

Industry Interviews

Representatives from four marine industry organizations were interviewed to acquire a different perspective of the Coast Guard waterfront facility inspection program. These representatives indicated that the program is good because it is another activity which identifies safety discrepancies. One representative termed it "the more eyes the better." The program also helped these representatives do their jobs. The two representatives in business management use the program as leverage against clients whenever it is convenient. For example, additional costs or time delays may be justified by citing Coast Guard requirements. The other three

representatives are safety managers and they use facility inspections as a means to accomplish tasks they may have difficulty justifying.

Program strengths identified by the representatives were the inspectors' knowledge of the regulations, the loading procedure for explosives, and the prevention of accidents on the waterfront. Weaknesses of the program included inspectors' lack of knowledge of the National Electric Code and NFPA codes, no formal loading procedure for radioactive shipments, the MSO facility inspection policy changes with each new Commanding Officer, inspections are conducted too infrequently, and the regulations do not address container facilities.

Program Training

The primary training courses for Coast Guard personnel involved with port safety and environmental protection are offered at the Coast Guard's Reserve Training Center (RTC) in Yorktown, VA. Waterfront facility regulations and inspections are taught as part of the six-week Marine Environmental Protection Petty Officer Course (MESPOC) (Appendix E). MESPOC covers the following topics: cargo compliance, facility compliance, vessel compliance, harbor and zone compliance, port security overview, laws and authority, pollution investigations, hazardous environment assessment and evaluation, hazardous chemical response, pollution containment, agency coordination, funding, and

documentation (Appendix F). An appropriate follow-up to MESPOC is a two week course on the requirements and procedures for loading explosives onto ships.

MESPOC cannot teach students everything they will need to know in the field, but it does introduce the student to most of the issues and provide him with the necessary references. However, the following topics were not addressed in the lesson plan for facilities regulated by 33 CFR 126: container facility inspection and internal container examinations. MESPOC instructors interviewed were not aware of any problems in the field concerning container facility inspections or enforcing the National Electric Code or NFPA codes. These instructors indicated one problem in keeping the course current with the students' needs was that they were not given the opportunity to visit field offices and learn what problems the facility inspectors were encountering.

Statistical Analysis

The document used to report waterfront facility activities is the Port and Environmental Safety/Marine Environmental Response Activities Report (QAR) (Appendix I). The waterfront facility activities reported are:

- (1) liquid bulk facility inspections
- (2) dry bulk facility inspections
- (3) liquid bulk facility surveys

- (4) dry bulk facility surveys
- (5) facility Operations Manual review
- (6) hot work permits
- (7) number of facility violations
- (8) facility incident investigations

All of these activities are measures of effort (i.e. input). There are not output measures for the waterfront facility program, thus, determining the effectiveness and efficiency of the program using Coast Guard generated data bases is impossible without the development of output measures (Table 10). The Coast Guard Port Safety and Security Operating Program Plan FY 90-94 (OPP) attempts to evaluate the effectiveness of the waterfront facility program by using QAR data from the period 1974-1983. Until 1983, the QAR had a reporting requirement for facility accidents and injuries. There is no requirement for facilities to provide this information and the methods MSOs/COTPs used to gather the data is suspect. Regardless of these facts, the OPP uses this data and a 1984 study of the effectiveness of waterfront facility inspections in New Orleans to support an assumption that an inverse relationship exists between the frequency of waterfront facility inspections and facility casualty rates. FEMA's National Fire Incident Reporting System is the only current data base for incidents relating to the waterfront but it cannot be compared to the QAR data because the data

Table 10

USCG Waterfront Facility Statistics FY 74-86

	Spotchecks		Inspections		Surveys	
	<u>Dry</u>	<u>Liquid</u>	<u>Dry</u>	<u>Liquid</u>	<u>Dry</u>	<u>Liquid</u>
1974	79,722	47,991	3295	6952	854	1255
1975	79,492	47,491	2579	7375	433	761
1976	34,448	41,376	1967	5806	640	1263
1977	13,831	41,095	1736	5606	868	1473
1978	11,537	43,254	1491	6135	388	1635
1979	13,017	40,494	1389	5152	388	1655
1980	18,707	27,092	1330	4331	262	1329
1981	27,404	34,440	862	3730	426	913
1982	10,101	27,993	745	2844	175	671
1983	10,354	27,544	557	2594	99	345
1984			828	3881	266	518
1985			960	4415	182	393
1986			729	3247	91	234

NOTE: Spotchecks were not required or recorded after 1983.

bases are dissimilar. The OPP states that FEMA's data base has been examined and the waterfront facility regulations are directed at the major causes of waterfront fires.

Another Coast Guard environmental protection program monitors oil and chemical spill prevention (Appendix G). As the Coast Guard has made program cuts due to budget constraints, the level of monitoring oil and chemical transfers between vessels and waterfront facilities has declined. Statistics from 1974-1986 indicate that the total oil and chemical spills mirror the number of monitors done, except for the dramatic difference in 1986. If a program was effective, this trend should be inversely related. An explanation for the direct relationship is that more monitoring results in better detection. A better way of evaluating this program would be by examining the volume of oil spilled. Statistics comparing monitoring and volume of oil spill indicate an inverse relationship, the expected relationship (Fell et al., 1986).

V. CONCLUSIONS AND RECOMMENDATIONS

General Conclusions

1. The methodology used for this evaluation was satisfactory but could have been more efficient and effective. Slightly modifying the methodology would improve its use for future Coast Guard program evaluations. To get the most from a field office visit, a letter of introduction should precede the evaluator's arrival. This letter should fully explain the intent and desired outputs of the visit. Any information that can be gathered before the evaluator's arrival should be clearly requested in a written survey which accompanies letter of introduction. Prior to the evaluator's arrival, a telephone call to the office should be made to remind them of the visit and ask if there are problems gathering the requested data. Upon arrival, the evaluator will not have to explain the purpose of his visit and can proceed with the planned activities.
2. The waterfront facility inspection program is very low on the overall Coast Guard priority list. It will remain at this level at least until appropriate

effectiveness measures are developed to justify increased levels of effort. Until the impact of the program is known, there is no reason to elevate this program's priority. A way to use existing resources more efficiently would be to target the existing facilities by categorizing them as primary and secondary facilities. Criteria for classifying facilities could be frequency of transfers, spill history, violation history, commodities transferred, and location of the facility.

3. 33 CFR 154 is adequate and requires no changes. 33 CFR 126 does not adequately address container terminals and liquid bulk chemical facilities. Regulations for liquid bulk chemical facilities should be formatted similar to the way 33 CFR 154 regulates oil transfer facilities. A separate section should be included in 33 CFR 126 which pertains to container facilities. In addition these major changes to the regulations, 33 CFR 126 has outdated and confusing requirements which should be carefully reviewed by the program manager.
4. Improvement in the training program for the waterfront facility program would increase the expertise of the field inspectors and make the overall USCG program more consistent. Areas needing further instruction

obstacle is that they do not have the resources to allocate to the program. Field offices commonly use the expertise of some agencies (examples - National Cargo Bureau and fire departments) and should continue this.

Recommendations

1. Regulations should be promulgated to require facilities to report facility accidents and injuries and their causes. This would create an output measure to provide feedback in determining whether or not the present regulations are targeting the appropriate safety factors. Criteria for reports should closely resemble those required for vessel casualties and injuries.
2. Until there is a requirement for facilities to report facility accidents and injuries, Coast Guard policy should require MSOs/COTPs to obtain annual accident and injury statistics during annual inspections. Facilities document accidents and injuries for insurance purposes. Facility inspectors should request this information in a telephone call prior to the annual inspection.
3. Separate regulations should be promulgated for bulk liquid chemical facilities and container facilities.

4. Training tapes and lesson plans for indepth coverage of the waterfront facility program should be developed for incorporation into MSO/COTP training plans.
5. The QAR should be modified to request facility inspection data in these four categories: liquid bulk oil, liquid bulk chemical, container, and break-bulk. Surveys should no longer be a separate entity because most units do these in conjunction with annual inspections. The USCG waterfront facility inspection form should be modified to reflect this change.
6. Facilities should be divided into two categories, primary and secondary. Primary facilities should be inspected annually and secondary facilities should be inspected biennially. In order for facilities to qualify for biennial inspections, they should be required to submit written correspondence annually indicating the number of transfers, the commodities transferred, and the volume transferred.

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Appendix A

Definitions

Waterfront facility - all piers, wharves, docks, and similar structures to which a vessel may be secured; areas of land, water, or land and water in immediate proximity to them; buildings on such structures or contiguous to them and equipment and materials on such structures or in such buildings. Department of Defense facilities are excluded.

Designated waterfront facility - a waterfront facility designated by 33 CFR 126.13 for the handling and storage of, and for vessel loading and discharging of: any flammable or combustible liquid in bulk (46 CFR Parts 30-38); any hazardous material subject to the Dangerous Cargoes Regulations in 46 CFR Parts 146 and 148; and any hazardous material subject to the Hazardous Materials Regulations (49 CFR Parts 170-179), except for those materials preceded by an "A" in the Hazardous Materials Table, 49 CFR Part 172.101.

Facility of particular hazard - a designated waterfront facility that is authorized to handle a cargo of particular hazard, as defined in 33 CFR 126.10.

Dangerous cargo - all explosives and other hazardous materials or cargo covered by:

- (a) Dangerous Cargoes, 46 CFR Parts 146 and 148;
- (b) Tank Vessels, 46 CFR Parts 30-38; or,
- (c) Hazardous Materials, 49 CFR Parts 170-179, except for those materials preceded by an "A" in the Hazardous Materials Table, 49 CFR 172.101.

Designated dangerous cargo - Class "A" explosives as classified in 46 CFR Part 146 and 49 CFR Part 172.

Cargo of particular hazard - any of the following:

- (a) Class A explosives as defined in 46 CFR 146.10-7 and 49 CFR 173.53
- (b) Oxidizing material or blasting agent for which a permit is required under 49 CFR 176.415
- (c) Large quantity radioactive material, as defined in 49 CFR 173.389(b), or Fissile Class III shipments of fissile radioactive material, as defined in 49 CFR 173.389(2) (3).

(d) The following cargoes when carried in bulk:

Acetaldehyde	Methane
Acetone Cyanohydrin	Methyl Acetylene, Propadiene,
Acrylonitrile	Mixture, Stabilized
Allyl Chloride	Methyl Bromide
Ammonia, anhydrous	Methyl Chloride
Butadiene	Motor Fuel Antiknock
Butane	Compounds Containing Lead
Butene	Alkylis
Butylene Oxide	Oleum
Carbon Disulfide	Phosphorus, Elemental
Chlorine	Propane
Chlorosulfonic Acid	Propylene
Dimethylamine	Propylene Oxide
Epichlorohydrin	Sulphur Oxide
Ethane	Toluene Diisocyanate
Ethylene	Vinyl Chloride
Ethylene Oxide	Vinyl Ethyl Ether
Ethyl Ether	

Confined space - a space or compartment with the following characteristics: (a) small size, (b) severely limited natural ventilation, (c) capillary to accumulate or contain a hazardous atmosphere, (d) exits that are not readily accessible, and (e) a design not meant for continuous human occupancy.

APPENDIX B

INTERVIEWS OF PROGRAM PARTICIPANTS

This Appendix contains questions posed to selected program participants, their responses and observations of the evaluator. The program participants selected were:

- (1) Marine Safety Office, Baltimore, MD
- (2) Marine Safety Office, Hampton Roads, VA
- (3) Marine Safety office, Tampa, FL
- (4) Marine Safety Office, Mobile, AL
- (5) Captain of the Port, New Orleans, LA
- (6) Marine Safety Office, Port Arthur, TX
- (7) Port Safety Station, Houston, TX

APPENDIX B-1

MARINE SAFETY OFFICE, BALTIMORE, MD

MSO personnel interviewed: CWO2 Hutchinson, BM2 McGinnis, MST2 Blackwell.

1. Describe the unit's waterfront facility training program.

Weekly training is scheduled for the Port Operations Department and Waterfront Facility Division. Department training could encompass any USCG related topic. Division training deals primarily with waterfront facilities. Training actually occurs 60-65% of the time. Petty officers McGinnis and Blackwell suggested that MESPOC should go into more depth on the National Electric Code (i.e. Electrical wiring should be installed in accordance with accepted safety practices. What are accepted safety practices?) and proper blocking, bracing and stowage procedures for containers.

2. How many waterfront facility field inspectors are at the unit?

The waterfront facility program is supervised by BW02 Hutchinson and he has three "full-time" field inspectors. Field inspector is their primary duty but unit activities (i.e. standing watch, Military Defense Zone drills, personnel inspections, the Regional Exam Center, etc.) have priority over routine duties. The unit's most qualified petty officers work in the Waterfront Facility Division by design. For example, if a facility inspector notices an oil spill while at a facility, he can conduct the investigation which is cost efficient.

3. How are inspections scheduled?

Scheduling of inspections is assisted by computerized lists. Facilities are equally divide into four lists. Computer listings of the facilities due for inspection are printed at the beginning of each quarter.

4. Does your unit meet waterfront facility inspection mission performance standards?

The unit could meet the annual inspection requirements but chooses to target those facilities with known problems. Quality of inspections is more important than generating numbers that look good. There are some facilities in the Baltimore zone they refer to as "problem children." USCG personnel do not hesitate to cite uncooperative facilities for violations; however, formal enforcement action is usually not taken when facilities cooperate.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

- (a) City, county and state fire inspectors - These people work for Fire Department Administration offices at the different government levels, not fire departments. They are familiar with electrical and NFPA standards. Politics would probably prevent assistance from them. Baltimore has three inspectors but a very limited budget.
- (b) Maryland Department of Natural Resources - The state requires permits for storing flammable and combustible liquids ashore. The state has some requirements in addition to 33 CFR 154. Their primary expertise is regulating oil facilities but budget constraints would probably minimize, if not eliminate, any assistance.
- (c) EPA - 40 CFR 112 requires facilities to maintain a Spill Prevention Control and Countermeasures plans. EPA also requires dikes around shore cargo tanks. lack of personnel would rule out assistance from them.
- (d) National Cargo Bureau - They are experts in 49 CFR. Federal regulations state that NCB certificates for cargo loading is prima facie evidence of loading and storage in accordance with federal regulations. Other than scheduling joint inspections for unit training on proper cargo loading procedures, MSO Baltimore personnel do not inspect vessels that NCB has certified. NCB are experts on package and break-bulk hazardous material regulations and may be the agency coming closest to providing assistance. They would require training in 33 CFR 126, 154 and 156. The fact that their services must be paid for will probably preclude any enforcement assistance. MSO Baltimore has

consulted them over the telephone for extremely difficult stowage problems.

- (e) Materials - Transport Bureau - MTB promulgated 49 CFR and has expertise in the shipment of radioactive materials but they have no field inspection personnel available to assist.
- (f) Federal Railroad Administration - MSO Baltimore and FRA has an active joint inspection program. There is some overlapping authority and jurisdiction. FRA are experts in 49 CFR. Resource constraints would preclude assistance from them. MSO Baltimore and FRA warn each other if known problems exist.
- (g) Federal Highway Administration - States have primacy for enforcing 49 CFR on the highways. Maryland delegates this authority to the State police and State health department. Warnings are exchanged for known problems, but these state officials have no marine expertise and would be unable to assist.
- (h) OSHA - MSO Baltimore has no interaction with OSHA.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

The volume of containers passing through Baltimore is a problem. A container facility (there are three major container facilities in MSO Baltimore's jurisdiction) may have hundreds, or even thousands, of containers on the facility but only 10-25% may be placarded to indicate the carriage of dangerous cargoes. Facility inspectors look for conflicting placards on containers and internally inspect the ones with problems. A container carrying dangerous cargo but not placarded would never be suspected. Once a problem is found, 49 CFR is adequate to cover cargo requirements. MSO personnel routinely conduct internal container inspections without a facility or company representative present. A major problem with container terminals is determining the boundary of the waterfront facility portion. In some situations, the terminal is very large and may extend well beyond the normal bounds of a waterfront facility. An administrative problem with container facilities is that meeting mission performance standards of annual inspections would accomplish little. The major portion of a container terminal is nothing more than a temporary "parking lot" for intermodal containers. Enforcement of a rapidly changing environment requires constant attention.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

Liquid bulk chemical facilities having to comply with only 33 CFR 126 is insufficient. Substances, often more hazardous than oil, are regulated by much less than oil. 33 CFR 126 allows waivers for the cargo hose testing requirements but does not allow the COTP to accept alternatives. This needs clarification through a regulation change or policy guidance. Facility surveys are not being done. "Pertinent" information from the survey for has been included on the facility inspection form. CWO2 Hutchinson recommends separating dry bulk and container facilities for accountability purposes on the QAR. Several terminals (warehouses) may use one common container yard, thus, a distinction is necessary for warehouse inspections and container yard inspections.

8. Evaluator Observations.

The waterfront facility program at MSO Baltimore is outstanding. The Waterfront Facility Branch Chief has sold his superiors on the importance of the program, thus, the program has a relatively high priority at the unit. Dedication towards an outstanding program starts with the Branch Chief and does not waiver when moving to the field inspectors. The field inspectors feel their job is important and do not hesitate to do extensive research to solve problems or answers questions. The overall program is very organized. One warehouse inspection and one container yard inspection was observed. Proper procedures were followed in both instances. The local policy of breaking container seals, conducting internal container inspections, and resealing containers without company or facility representatives present carries potential liabilities. The facility inspectors are dedicated and the container facilities rarely have people available to accompany them, however, in this instances they may be overzealous. This unit uses the expertise of other agencies and organizations in the performance of its duties. This is an excellent way to accomplish more without increasing field personnel. The only agency that could actually take over some of the Coast Guard's facility inspection was NCB, and this would only occur if we provided additional training and paid them for their services. Targeting facilities for inspection appears to work for MSO Baltimore. It is possible that annual inspection of each facility is not necessary. Quality is the importance in this program.

APPENDIX B-2

MARINE SAFETY OFFICE HAMPTON ROADS, VA

MSO personnel interviewed: Lt. Gould, EM1 Snyder

1. Describe the unit's waterfront facility training program.

Unit training is conducted every payday. Any USCG topic could be the training topic for that day. Specific problems occur occasionally, thus identifying a training topic for unit training sessions. Waterfront facility inspection teams consist of one experienced and one inexperienced member which results in daily on-the-job training.

2. How many waterfront facility field inspectors are at the unit?

The unit does not assign personnel to specific tasks. The "bull pen" concept is used. Ideally the unit prefers to have five trained people to conduct inspections. The unit had only four trained inspectors at the time. A lieutenant supervises the program.

3. How are inspections scheduled?

A "3 x 5" card for each facility is kept in a file. The file is arranged by months and the cards are divided equally. Inspections for each month are scheduled at the beginning of the month.

4. Does your unit meet waterfront facility inspection mission performance standards?

Yes. The waterfront facility inspection program is not high on the unit priority list and even though mission performance standards are being met, the quality of inspections could improve.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

The Chesapeake Fire Department had been participating in joint inspections. Unit personnel had allowed this joint inspection program to become inactive. The fire department was willing, they just needed a telephone call.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

Guidance is needed for inspection of containers (i.e. proper blocking and bracing methods). A policy statement is needed for random inspection of sealed containers. It is uncertain if they have the authority to do these inspections. Internal inspection of containers is done if they find one being loaded. Sealed containers in a container "yard" are not opened and inspected. It would be uncomfortable to open a container without a facility or company representative present because of the responsibility for the contents of the container while it was open.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

Oil facility and warehouse inspection are straightforward. It is not clear where "gas freeing" facilities (facilities that clean the tanks of oil and chemical vessels) fit into the regulations. Guidance is requested in this area. There is disparity in the enforcement of bulk oil facilities and bulk liquid chemical facilities. Oil facilities must comply with 33 CFR 126 and 154. Bulk liquid chemical facilities comply only with 33 CFR 126. Chemical facilities transfer very dangerous substances, often more dangerous than oil, yet are regulated to a lesser degree. An operations manual should be required for chemical facilities. The last problem area is radioactive material shipments. Inspection guidance in this area is lacking. The unit is trying to find training in this area that might be available locally.

8. Evaluator Observations.

The waterfront facility inspection program is relatively low on the unit's priority list. The personnel have satisfactory knowledge of the regulation and USCG policy. A field inspection was observed and proper procedures were followed. Enforcement tends toward known quantities. Vague regulations, policy or guidance

are not taken by personnel to mean implicit authority. If supervisors had to choose between meeting mission performance standards for inspections and not meeting mission performance standards but improving the quality of inspections, the unit would probably choose to meet mission performance standards. Outside agency assistance in the enforcement of facility regulations may be possible in a limited way. Outside agency assistance in the enforcement of facility regulations may be possible in a limited way.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

The Chesapeake Fire Department had been participating in joint inspections. Unit personnel had allowed this joint inspection program to become inactive. The fire department was willing, they just needed a telephone call.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

Guidance is needed for inspection of containers (i.e. proper blocking and bracing methods). A policy statement is needed for random inspection of sealed containers. It is uncertain if they have the authority to do these inspections. Internal inspection of containers is done if they find one being loaded. Sealed containers in a container "yard" are not opened and inspected. It would be uncomfortable to open a container without a facility or company representative present because of the responsibility for the contents of the container while it was open.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

Oil facility and warehouse inspection are straightforward. It is not clear where "gas freeing" facilities (facilities that clean the tanks of oil and chemical vessels) fit into the regulations. Guidance is requested in this area. There is disparity in the enforcement of bulk oil facilities and bulk liquid chemical facilities. Oil facilities must comply with 33 CFR 126 and 154. Bulk liquid chemical facilities comply only with 33 CFR 126. Chemical facilities transfer very dangerous substances, often more dangerous than oil, yet are regulated to a lesser degree. An operations manual should be required for chemical facilities. The last problem area is radioactive material shipments. Inspection guidance in this area is lacking. The unit is trying to find training in this area that might be available locally.

8. Evaluator Observations.

The waterfront facility inspection program is relatively low on the unit's priority list. The personnel have satisfactory knowledge of the regulation and USCG policy. A field inspection was observed and proper procedures were followed. Enforcement tends toward known quantities. Vague regulations, policy or guidance

APPENDIX B-3

MARINE SAFETY OFFICE, TAMPA, FL

MSO personnel interviewed: BM2 Mueller

1. Describe the unit's waterfront facility training program.

As part of the unit's training program, two 30 minute training sessions on waterfront facility topics are conducted each month.

2. How many waterfront facility field inspectors are at the unit?

BM2 Mueller was the waterfront facility program supervisor and only field inspector.

3. How are inspections scheduled?

All facility data is computerized, so scheduling is easily accomplished. There are five dry bulk and 49 liquid bulk facilities.

4. Does your unit meet waterfront facility inspection mission performance standards?

No. Only one person is available and he can only allot 40% of this time to the program. His other responsibilities, boat coxswain, pollution investigator, watchstander, etc., have priority over waterfront facilities. USCG reservists conduct some of the inspections for remote facilities.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

Florida has waterfront facility regulations and water related statutes. These regulations and statutes are enforced by a branch of the state police called Florida Marine Patrol. MSO Tampa has recently began working with this branch. However, the state's waterfront facility program is weak and nothing more than a paperwork exercise.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

There are two container facilities in MSO Tampa's jurisdiction and they have not been a problem.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

The main problem is shortage of personnel to do the job. There is a problem with the requirement in 33 CFR 126.15 to hydrostatically test cargo piping systems and hoses. An anhydrous ammonia facility is an example where water is an unsatisfactory test medium. More detailed guidance on acceptance of alternative testing procedures is needed. Persons in charge of a transfer at a facility do not always appear to be well trained in their responsibilities. Better documentation of a facility's training program would be beneficial.

8. Evaluator Observations.

At a small MSO, personnel must split their time between many programs. The waterfront facility program is low on the unit's priority list. The petty officer supervising the waterfront facility program has too many responsibilities to maintain an excellent program. Conversely, Tampa does not have an overwhelming number of waterfront facilities and there have been no incidents to indicate that a stronger program is needed. One facility inspection was observed and proper inspection procedures were followed. Other waterfront facilities were visited but no inspections were conducted. In conversation with BM2 Mueller, inspection of container facilities was discussed and it was learned that previous inspections only dealt with the warehouse and never carried into the container yard. He did not inspect the yard because he did not know what should comprise a container facility inspection.

APPENDIX B-4

MARINE SAFETY OFFICE, MOBILE, AL

MSO personnel interviewed: Lt Buanacore, Ltjg Daughdrill,
MST1 Hittler

1. Describe the unit's waterfront facility training program.

Unit training is conducted weekly and a waterfront facility topic usually is presented once a month. Information training for facility inspectors is done whenever it is deemed necessary.

2. How many waterfront facility field inspectors are at the unit?

There are no specific facility inspectors at MSO Mobile. The petty officers do all of the missions, pollution investigation, pollution prevention, vessel boarding, and facility inspections. The supervisor of the program, MST1 Hittler, must use the "bull pen" concept when assigning inspections. There are 15 petty officers to choose from, however, waterfront facility inspections has the lowest priority of any program at MSO Mobile.

3. How are inspections scheduled?

Facility data are computerized and scheduling is easy.

4. Does your unit meet waterfront facility inspection mission performance standards?

No. MST1 Hittler is attempting to resurrect a stumbling program, but he is not getting much support from the command. Pollution incidents and vessel inspection are important; facility inspections have the lowest priority. A large geographic area contributes to MSO Mobile not meeting mission performance standards. Most local facilities are inspected annually but the facilities in remote areas are difficult to inspect regularly. USCG reservists are used to inspect some of the remote facilities. MST1 Hittler has set up a program to train reservists in facility inspection

procedures. MST1 Hittler does not believe it is necessary to annually inspect small facilities that transfer infrequently. An alternative to annually inspecting all facilities is to classify facilities as major and minor (or high and low priority) facilities. Maintain annual inspections for major facilities, but formally reduce the frequency of inspections for minor facilities or allow MSOs discretion in setting inspection frequencies.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

The only involvement with outside agencies occurs when a vessel is loading explosives. A representative of the local fire department is present for these evolutions.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

They are such a problem that container facilities are not being inspected. There is no one at the unit with experience inspecting container facilities and there is no USG guidance specifically for container facilities. No one is familiar with proper blocking and bracing procedures for containers. In the present situation at MSO Mobile, the container facilities will not receive much attention until all other facilities are being inspected annually.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

In addition to the lack of program support, lack of specificity in 33 CFR 126 makes enforcement of liquid chemical and container facilities difficult. 33 CFR 126b is good for break bulk and package facilities (i.e. warehouses) and 33 CFR 154 and 156 are good for oil facilities because they are specific. Facilities should be broken into four categories on the QAR, bulk oil, liquid bulk chemical, break bulk, and container.

8. Evaluator Observations.

A program has very little chance when managers do not support it. There was no opportunity to observe an inspection because resources were being utilized in other mission areas. Explicit guidance in all areas of facility inspections would help the program overcome inexperience and limited resources.

APPENDIX B-5

CAPTAIN OF THE PORT, NEW ORLEANS, LA

COTP personnel interviewed: Lt Perez, BM1 Harper, MK3

Morphew

1. Describe the unit's waterfront facility training program.

Unit training is conducted every Wednesday morning. The Waterfront Facility Branch gave presentations every third session. On-the-job training within the branch was on-going.

2. How many waterfront facility field inspectors are at the unit?

Because of a large geographic area and over 600 waterfront facilities, COTP New Orleans has a large facility inspection staff. A lieutenant is the branch chief and a warrant officer is the assistant branch chief. A first class petty officer keeps one or two inspectors in the office each day to handle the administrative portion of the program and the other inspectors are conducting inspections. USCG reservists are used to inspect concentrations of waterfront facilities located in remote areas.

3. How are inspections scheduled?

Facility data are computerized and on a large status board. A facility's inspection status can be determined quickly. The first class petty officer is responsible for scheduling inspections.

4. Does your unit meet waterfront facility inspection mission performance standards?

Yes, and then some. Oil and liquid bulk chemical facilities are inspected annually. Conditions on the wharves (break bulk warehouses) change quickly, thus, these facilities are inspected weekly. The wharves are close to the office so frequent inspection are possible.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.
- (a) Louisiana Department of Environmental Quality - DEQ enforces the state waterfront facility regulation but their inspection are infrequent and not rigorous when they do occur. If USCG and DEQ inspectors happen to be in the same area, joint inspections are done. There is no active joint inspection program. DEQ does not have the resources, personnel or financial, to offer substantial assistance.
 - (b) Local fire departments - There is no active joint inspection program.
 - (c) Louisiana State Police - COTP personnel and state police personnel often work together in response to hazardous substance releases. The State Police has no waterfront facility inspection program.
 - (d) National Cargo Bureau - An agreement has been made that NCB will call the Waterfront Facility Branch when a container will be opened. NCB reports all of their activities and results to the Branch as a courtesy. NCB personnel have given training sessions to COTP inspectors.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

Two kinds of container facilities are in the COTP New Orleans zone: single tenant, single yard; multiple tenants, common yard. There is no USCG containers facility policy which makes it difficult to have an aggressive local inspection program. A problem is where does USCG jurisdiction end on a container facility?

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

33 CFR 154 and 156 are fine for oil facilities. 33 CFR 126 is fine for break bulk facilities. Facilities should be separated into categories, primary and secondary. Primary facilities should be inspected annually and secondary facilities should be inspected biennially. By doing this, scarce resources are utilized more efficiently by targeting facilities that conduct more cargo transfer operations and have problems. Secondary facilities could always be reclassified as primary facilities if their status changes.

Problems with 33 CFR 126 are:

- (a) There is no reporting requirement for Subchapter "0" cargoes.
- (b) The 12 foot stacking requirement in 126.15 is outdated. New facilities are being built larger and a more appropriate standard would be to maintain a minimum clearance of 3 feet.
- (c) Are unmanned wellheads a designated waterfront facility?
- (d) What is hydraulic shock in 33 CFR 126.125 (0) (7) (V)?
- (e) USCG policy on alternate test methods and mediums for pipelines, loading arms and hoses is needed (126.15 (0) (7) (IV)).
- (f) Surveys should be done during the annual inspection.
- (g) Should the "maintenance, stores and supplies" in 126.15(g) be in a fenced area? A consistent policy is needed.

8. Evaluator Observations.

After being stationed at COTP New Orleans from August 1982 to July 1985, the unit's facility inspection procedures are well known and comply with USCG policy. The personnel are dedicated and competent. With the repetition that inspection of over 600 facilities provides, competence should be a given. If this unit has problems with the regulations and USCG policy, the program manager should take heed.

APPENDIX B-6

MARINE SAFETY OFFICE PORT ARTHUR, TX

MSO personnel interviewed: Ltjg Boyle, BM3 Jones

1. Describe the unit's waterfront facility training program.

Unit training is conducted every payday. Waterfront facility training is conducted when problems arise and constantly in on-the-job training.

2. How many waterfront facility field inspectors are at the unit?

Ltjg Boyle oversees the program but two third class petty officers carry it out. MSO Port Arthur is relatively small and the waterfront facility program is low on the unit's priority list, thus, the two petty officers do not devote all of their time to the program.

3. How are inspections scheduled?

Facility data are computerized and scheduling is easy.

4. Does your unit meet waterfront facility inspection mission performance standards?

Yes.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

There is no involvement with outside agencies. The local fire departments inspect the facilities' fire fighting equipment.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

MSO Port Arthur has no container facilities.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

Where do mobile facilities (i.e. tank truck) fit into the regulation? 33 CFR 154 and 156 cover mobile facilities transferring oil but some requirements do not apply. The hose testing requirement is an example. Mobile facilities transferring chemicals are not covered by any regulation.

8. Evaluator Observations.

MSO Port Arthur inspects mostly bulk liquid facilities. The inspection load is relatively light. The unit places a low priority on the program. The program has no direction. One field inspector had no knowledge of the National Electric Code and NFPA guidelines. Regulations that defer to other codes and standards risk becoming "out of sight, out of mind."

APPENDIX B-7

PORT SAFETY STATION, HOUSTON, TX

PSSTA personnel interviewed; LCDR Lutz, LTjg de Bettencourt

1. Describe the unit's waterfront facility training program.

On-the-job training is on-going. Facility inspectors attend seminars co-sponsored by Port of Houston Authority, City of Houston, and the Coast Guard.

2. How many waterfront facility field inspectors are at the unit?

A chief petty officer oversees the program but two petty officers carry it out. Only one petty officer is a full-time waterfront facility inspector.

3. How are inspections scheduled?

A card system with an equal number of facilities under each month is used. Scheduling is easy.

4. Does your unit meet waterfront facility inspection mission performance standards?

No. Lack of personnel is a problem but a bigger problem is lack of vehicles. The unit's priorities are pollution investigation, vessel boardings and waterfront facilities. Often there are no vehicles available to the facility inspector.

5. Describe local, state and federal agencies that could assist USCG personnel in enforcing the waterfront facility regulations.

- (a) City of Houston Fire Department - The fire department is very active in waterfront facility inspections. They enforce city and fire codes which are similar to 33 CFR 126 and 49 CFR. Effort to coordinate USCG and fire department inspections comes from the Port of Houston Authority.

(b) Port of Houston Authority - There are certified firefighters employed by this organization. The certified firefighters accompany USCG facility inspectors during an inspection.

(c) National Cargo Bureau - NCB calls PSSTA Houston every time they inspect a container. Facility inspectors usually do not witness the inspection because no vehicle is available.

6. What problems do intermodal container facilities present to the USCG waterfront facility inspection program?

When problems are found in a container, who should be cited for the violation? Containers often arrive at a facility already loaded. The company responsible for loading the container could be located anywhere in the nation.

7. What problems are there in enforcing 33 CFR 126, 33 CFR 154, and 33 CFR 156?

33 CFR 126 does not specify how far back to test the cargo piping. If a warehouse does not contain any regulated cargoes, do the 126 regulations apply?

8. Evaluator Observations.

An inspection was not observed because transportation was not available. The unit's waterfront facility program has no direction. The only positive influence on the program was from the marine manager of the Port of Houston Authority.

APPENDIX C

INTERVIEWS OF PEOPLE IN INDUSTRY

This Appendix contains questions posed to people in industry, their responses and observations of the evaluator.

The people interviewed were:

- (1) Donald Hawkins and James Vester (Risk Management of Virginia International Terminals, Inc.).
- (2) H. N. Meyer, Director of Operations, Tampa Port Authority.
- (3) Jerry Tew, Operations Department, Alabama City Docks.
- (4) Richard Barren, Marine Manager, Port of Houston Authority.

APPENDIX C-1

Interview of Donald Hawkins (Risk Management, Division Chief
and James Vester (Risk Management, Assistant Division Chief)
of Virginia International Terminals, Inc.

1. How do you feel about the Coast Guard's waterfront facility inspection program?

The program is great. The more eyes, the better. The inspectors are there to protect the company from itself. They wish there were more facility inspectors.

2. What are the program's strengths?

Inspectors are very knowledgeable of 33 CFR 126. USCG explosives loading procedure is great.

3. What are weaknesses in the program?

Inspectors should be more knowledgeable of the National Electric Code and NFPA guidelines. 49 CFR does not satisfactorily address radioactive materials. There should be procedures established for lading radioactive shipments which are similar to the existing procedures for loading explosives. Their facility handles explosives 6-8 times annually and radioactive materials 12-15 times annually.

4. Are there recent industry trends in the carriage of hazardous substances?

In their experiences, hazardous material shipments in break bulk are declining. Hazardous cargo is now being shipped almost totally by containers. For their facility, railroads bring in most of the containers (twice daily). There is a trend toward load centers for ships. This means fewer stops for ships and more cargo accumulating at each facility. A trend is developing where fewer containers are "stuffed" at the container terminal. Less cargo being handled at the pier is good, but no supervision of the stuffing is bad.

5. Do you have any recommendations for the program?

They recommend Coast Guard sponsored seminars on port response to hazardous substance release be provided for all concerned parties.

6. Evaluator's observations.

These men deal with safety at the terminal. They use Coast Guard inspection as a means to get their jobs done. Justification of funds for safety issues is almost guaranteed if they can produce a Coast Guard requirement.

Interview of H. N. Meyer, Director of Operations, Tampa Port Authority.

1. How do you feel about the Coast Guard's waterfront facility inspection program?

He thinks it is great. The Port Authority manages one warehouse which has three tenants. He uses the Coast Guard to keep the tenants under control.

2. What are the program's strengths?

The strengths are the loading procedures for explosives and the knowledge of and ability to enforce 33 CFR 126.

3. What are weaknesses in the program?

He saw no glaring weaknesses.

4. Are there recent industry trends in the carriage of hazardous substances?

Container traffic for Tampa is small and will remain small because there is no means (i.e. Tampa has only one railroad) to take the containers away from the port. Most containers are stuffed in port.

5. Do you have any recommendations for the program?

No

6. Evaluator's observations.

He likes the program because it does something for him.

APPENDIX C-3

Interview of Jerry Tew, Operations Department Chief, Alabama
City Docks

1. How do you feel about the Coast Guard's waterfront facility inspection program?

The program is effective. It keeps them alert for safety violations.

2. What are the program's strengths?

The enforcability of the regulations.

3. What are weaknesses in the program?

The biggest problem is the facility inspection policy changes every time the Commanding Officer of the MSO changes. Inspections should be done more frequently.

4. Are there recent industry trends in the carriage of hazardous substances?

No changes were seen for Mobile.

5. Do you have any recommendations for the program?

The bottom line should be compliance, not harassment. The individual that was violating the regulations should be cited for the violation, not Alabama City docks. The regulations in 33 CFR 126 allowing stacking no higher than 12 feet should be changed to keep up with the times.

6. Evaluator's observations.

The regulations are fine as long as they can benefit.

APPENDIX C-4

Interview of Richard Barren, Marine Manager, Port of Houston
Authority

1. How do you feel about the Coast Guard's waterfront facility inspection program?

The program is great but facility inspectors do not get out enough.

2. What are the program's strengths?

It prevents accidents on the waterfront.

3. What are weaknesses in the program?

The regulations are not specific enough for container facilities.

4. Are there recent industry trends in the carriage of hazardous substances?

The only change that may occur would be an increase in the shipment of explosives in the port. A change in the port tariff is favorable to shipment of explosives in the port.

5. Do you have any recommendations for the program?

The best thing about the program is that it can help him do his job.

APPENDIX D

WATERFRONT FACILITY INSPECTION FORMS

This Appendix contains the waterfront facility inspection forms used by the offices selected for this evaluation. D-1 is Coast Guard form 4200, Waterfront Facility Inspection Report. MSO Port Arthur and PSSSTA Houston used only this form. The other offices have made their own inspection forms. The form used by Florida's Department of Natural Resources is also included.

DEPARTMENT OF TRANSPORTATION U. S. COAST GUARD CG-4200 (Rev. 7-69)			WATERFRONT FACILITY INSPECTION REPORT			REPORT NUMBER DATE TIME						
U. S. COAST GUARD CAPTAIN OF THE PORT, _____						TELEPHONE NUMBER						
FACILITY			OWNER		OPERATOR							
NOTE: Check column "C" when immediate action is taken by Facility to correct the discrepancy.												
YES	NO	C	STATEMENTS TAKEN FROM 33 CFR 126.15, 126.16			NATURE OF NON-COMPLIANCE						
			15(a) Guards adequate (b) Smoking regulations obeyed (c) Hot work permit obtained when required (d) Vehicles parked properly (e) Automotive equipment in safe conditions (f) Rubbish and debris removed (g) Dangerous supplies properly stowed (h) Electrical equipment safe (i) Heating equipment safe (j) Fire extinguishing appliances adequate (k) Fire extinguishing appliances marked (l) Adequate illumination (m) Proper access to fire fighting equipment: (1) Two-foot clearance around cargo (2) Combustible material properly tiered (3) Four-foot clearance around extinguishers (4) Three foot aisle to extinguishers (5) Twenty foot main aisle (6) Five foot cross aisles (o) Drip pans provided 16(b) Warning devices present									
YES	NO	C						OTHER SECTIONS OF 33 CFR 126			NATURE OF VIOLATION	
								17 Class A explosives in excess of permit 21 Designated dangerous cargo remaining 27(b) Excessive dangerous cargoes 27(c) Prohibited explosives 27(d)-(g) Improper stowage or handling 27(h) Improper labels 33 Dangerous cargo present while general permit suspended				
YES	NO	C	OTHER STATUTE/REGULATION			NATURE OF DISCREPANCY						
PRINCIPAL DANGEROUS CARGO/CLASS			TONNAGE		BIN/AREA							
INSPECTED BY			COPY RECEIVED BY		POSITION							

These violations of Title 33, Code of Federal Regulations, Part 126 or other hazardous conditions as indicated above were observed in an inspection at your Facility this date. In order to avoid loss of your general permit to handle dangerous cargo or discontinuance of berthing vessels at your Facility, immediate action to correct these deficiencies is required.

PREVIOUS EDITION MAY BE USED



DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS INSPECTION FORM
U.S. COAST GUARD CAPTAIN OF THE PORT
BALTIMORE, MD

301-962-5105

NAME AND ADDRESS OF FACILITY	DATE/TIME OF INSP.	DOCK RECEIPT NO.
SHIPPER'S NAME	FORWARDER'S NAME AND TELEPHONE NO.	
ADDRESS (INCLUDING ZIP CODE)	ADDRESS (INCLUDING ZIP CODE)	

49 CFR PART 172

PART	ITEM	COMPLIANCE YES NO		REMARKS
172.201	HAZARDOUS MATERIAL LISTED IN PROPER FORMAT ON DOCK RECEIPT			
172.201(c)	IMPROPER USE OF CODE OR ABBREVIATION IN SHIPPING DESCRIPTION			
	PROPER SHIPPING NAME (IN ACCORDANCE WITH 172.201)			
172.202	PROPER CLASSIFICATION			
	HAZARDOUS MATERIAL LISTED IN PROPER SEQUENCE			
172.203	ADDITIONAL DESCRIPTION REQUIREMENTS: (1) DOT EXEMPTION NUMBER SHOWN (WHEN REQUIRED) (2) THE PHRASE "LIMITED QUANTITIES" INDICATED AFTER THE BASIC DESCRIPTION FOR A LIMITED QUANTITY SHIPMENT (3) IDENTIFICATION AND NUMBER OF THE TYPE OF PACKAGE (4) GROSS WEIGHT OF EACH TYPE OF PACKAGE (5) "NOS" ENTRY FOLLOWED BY PROPER TECHNICAL NAME IN PARENTHESIS (EXPORT SHIPMENT ONLY)			
172.204	SHIPPER'S CERTIFICATION PROPERLY INDICATED AND SIGNED			
172.300 TO 172.304	PROPER SHIPPING NAME MARKED ON OUTSIDE OF PACKAGE IN THE REQUIRED MANNER			
172.304	CONSIGNEE'S OR CONSIGNOR'S COMPLETE NAME AND ADDRESS MARKED ON THE OUTSIDE OF PACKAGE			
172.304 TO 172.328	GENERAL MARKING REQUIREMENTS FOR RADIOACTIVE MATERIALS LIQUID HAZARDOUS MATERIALS, ORN COMMODITIES PORTABLE TANKS AND CARGO TANKS			
172.400 TO 172.405	LABELING REQUIREMENTS			
172.404	PLACEMENT OF LABELS			
172.500 TO 172.554	PLACARDING REQUIREMENTS			

NAME OF HAZMAT FACILITY EMPLOYEE
INFORMED OF SAID VIOLATIONS

INSPECTING OFFICER

SIGNATURE OF EMPLOYEE

HAZARDOUS MATERIALS SHIPMENTS WHICH ARE
FOUND TO BE IN VIOLATION OF THE HAZARDOUS
CARGO REGULATIONS (49 CFR PARTS 171-178)
MAY NOT BE TRANSPORTED ONBOARD A VESSEL.
49 CFR PART 174.3

WATERFRONT FACILITY
EXAMINATION

OIL/NON OIL LIQUID/PACKAGE

U.S. COAST GUARD MARINE SAFETY OFFICE BALTIMORE, MD. DATE _____

FACILITY NAME	FACILITY ADDRESS	OPERATOR/OWNER
PHONE#		

HANDLING OF EXPLOSIVES OR OTHER DANGEROUS CARGOES WITHIN OR CONTIGUOUS
TO WATERFRONT FACILITIES; TITLE 33, PART 126

		COMPLIANCE		
		Y	N	C
GUARDS ADEQUATE	33CFR126.15(a)			
SMOKING REGULATIONS	33CFR126.15(b)			
HOT WORK PERMIT IF APPLICABLE	33CFR126.15(c)			
VEHICLES PARKED PROPERLY	33CFR126.15(d)			
AUTOMOTIVE EQUIP. IN SAFE CONDITION	33CFR126.15(e)			
RUBBISH AND DEBRIS REMOVED	33CFR126.15(f)			
DANGEROUS SUPPLIES PROPERLY STOWED	33CFR126.15(g)			
ELECTRICAL EQUIPMENT SAFE	33CFR126.15(h)			
HEATING EQUIPMENT SAFE	33CFR126.15(i)			
FIRE EXTINGUISHING APPLIANCES ADEQUATE	33CFR126.15(j)			
FIRE EXTINGUISHING APPLIANCES MARKED	33CFR126.15(k)			
ADEQUATE ILLUMINATION	33CFR126.15(l)			
PROPER ACCESS TO FIRE FIGHTING EQUIPMENT	33CFR126.15(m)			
TWO FT. CLEARANCE AROUND CARGO _____				
COMBUSTIBLE MATERIAL PROPERLY TIERED _____				
FOUR FT. CLEARANCE AROUND EXTINGUISHERS _____				

WATERFRONT FACILITY
EXAMINATION

		COMPLIANCE		
		Y	N	C
PROPER ACCESS TO FIRE FIGHTING EQUIPMENT(CONT.)	33CFR126.15(m)			
THREE FT. AISLE TO EXTINGUISHERS _____				
TWENTY FT. MAIN AISLE _____				
FIVE FT. CROSS AISLES _____				
CONTROL OF LIQUID CARGO TRANSFERS	33CFR126.15(o)			
PERSON IN CHARGE _____				
WARNING SIGNS POSTED _____				
REPAIR WORK REQUIREMENTS _____				
DRIP PANS WHERE APPLICABLE _____				
PROPER JOINTS AND CONNECTIONS _____				
CARGO INFORMATION CARD _____				
COMMUNICATIONS _____				
CARGO HOSE AND PIPING TEST CURRENT _____				
RECORD OF TESTS _____				
INCOMPATIBLE HOSES AND PIPING MARKED _____				
WARNING ALARMS (FOPH ONLY)	33CFR126.16(b)			
EXCESSIVE DANGEROUS CARGO PRESENT	33CFR126.27(b)			
PROHIBITED EXPLOSIVES ON FACILITY	33CFR126.27(c)			
IMPROPER STOWAGE OR HANDLING	33CFR126.27(d)-(g)			
IMPROPER LABELS	33CFR126.27(h)			

REMARKS/DISCREPANCY DESCRIPTION

Remarks/Discrepancy Description area			
FACILITY INSPECTOR	DATE	FACILITY OPERATOR/OWNER	DATE

FACILITY NAME					LOCATION			
ONSHORE	MOBILE	33 CFR 154.100 THRU 154.750			COMPLIANCE			
EXAM	F/U	OPS MAN REV	SPOT CK	SURVEY	YES	NO	COR	N/A
OPS MANUAL MAINTAINED CURRENT CONDITION					154.300			
OPS MANUAL, SUFFICIENT COPIES					154.300			
LETTER OF ADEQUACY					154.325			
COPY OF LETTER OF INTENT					154.740			
LIST OF PERSONS IN CHARGE					154.740			
DATE/RESULTS OF TESTS REQUIRED BY 33 CFR 156.170					154.740			
HOSE INFORMATION REQUIRED BY 33 CFR 154.500					154.740			
COTP EXAMINATION RECORDS FOR PREVIOUS 3 YEARS					154.740			
DECLARATION OF INSPECTION FOR PREVIOUS 30 DAYS					154.740			
PERSONS IN CHARGE DESIGNATED BY OWNER/OPERATOR					154.710			
PERSON IN CHARGE, EVIDENCE OF DESIGNATION					154.730			
CONTINUOUS TWO WAY VOICE COMMUNICATION					154.560			
COMMUNICATIONS USABLE IN ALL PHASES OF OPERATION					154.560			
PORTABLE RADIOS INTRINSICALLY SAFE					154.560			
HOSE ASSEMBLIES ADEQUATE					154.500			
NON-METALIC HOSES USABLE FOR OIL SERVICE					154.500			
ACCEPTABLE HOSE CONNECTIONS					154.500			
MARKINGS ON HOSES ACCEPTABLE					154.500			
LOADING ARM MARKINGS ADEQUATE					154.510			
MEANS OF CLOSING/DRAINING LOADING ARMS ACCEPTABLE					154.510			
ADEQUATE SUPPLY OF CLOSURE DEVICES					154.520			
(IF REQUIRED) MONITORING DEVICES ADEQUATE					154.520			
SMALL DISCHARGE REMOVAL MEANS ACCEPTABLE					154.540			

FACILITY: _____

DATE: _____

	YES	NO
LETTER OF INTENT: 154.110 _____		
LETTER OF ADEQUACY: 154.325 _____		
GRAPHIC LOCATION: 154.310(A)(1) _____		
PHYSICAL DESCRIPTION AND PLANS: 154.310(A)(2) _____		
HOURS OF OPERATION: 154.310(A)(3) _____		
VESSELS HANDLED (SIZE, TYPE, NUMBER): 154.310(A)(4) _____		
GENERIC OR CHEMICAL NAME OF PRODUCT: 154.310(A)(5)(i) _____		
NAME OF CARGO AS PER 46 CFR 30.25-1: 154.310(A)(5)(ii)(a) _____		
DESCRIPTION OF THE APPEARANCE OF CARGO: 154.310(A)(5)(ii)(b) _____		
DESCRIPTION OF THE ODOR OF THE CARGO: 154.310(A)(5)(ii)(c) _____		
THE HAZARDS IN HANDLING THE CARGO: 154.310(A)(5)(ii)(d) _____		
INSTRUCTIONS FOR SAFE HANDLING OF CARGO: 154.310(A)(5)(ii)(e) _____		
PROCEDURES FOR CARGO LEAKS OR EXPOSURE TO PERSONNEL: 154.310(A)(5)(ii)(f) _____		
LIST OF FIREFIGHTING PROCEDURES & EXTINGUISHING AGTS: 154.310(A)(5)(ii)(g) _____		
MINIMUM PERSONNEL ON DUTY DURING TRANSFER: 154.310(A)(6) _____		
NAMES & TELEPHONE # OF FACILITY, COAST GUARD, ETC.: 154.310(A)(7) _____		
DUTIES OF WATCHMAN: 154.310(A)(8) _____		
DESCRIPTION OF COMMUNICATIONS: 154.310(A)(9) _____		
LOCATION OF PERSONNEL SHELTER: 154.310(A)(10) _____		
DESCRIPTION & USE OF DISCHARGE COLLECTION: 154.310(A)(11) _____		
DESCRIPTION & LOCATION OF EMERGENCY SHUTDOWN: 154.310(A)(12) _____		
MONITORING DEVICES IF REQUIRED: 154.310(A)(13) _____		
QUANTITY, TYPE, LOCATION AND ACCESS TIME FOR CONTAINMENT EQUIP: 154.310(A)(14) _____		

FACILITY _____ DATE _____

	YES	NO
QUANTITY TYPE LOCATION INSTRUCTIONS FOR FIREFIGHTING EQUIP: 154.310(A)(15) _____		
MAXIMUM RELIEF VALVE SETTING: 154.310(A)(16) _____		
PROCEDURES FOR OPERATING LOADING ARMS: 154.310(A)(17)(i) _____		
PROCEDURES FOR TRANSFERRING OIL: 154.310(A)(17)(ii) _____		
PROCEDURES FOR THE COMPLETION OF PUMPING: 154.310(A)(17)(iii) _____		
PROCEDURES FOR EMERGENCIES: 154.310(A)(17)(iv) _____		
PROCEDURES FOR REPORTING AND INITIAL CONT. OF OIL DISCHARGES: 154.310(A)(18) _____		
SUMMARY OF FEDERAL, STATE, LOCAL REGULATIONS: 154.310(A)(19) _____		
PROCEDURES FOR SHIELDING PORTABLE LIGHTING: 154.310(A)(20) _____		
DESCRIPTION OF TRAINING & QUALIFICATION: 154.310(A)(21) _____		
IN PROPER ORDER OR CROSS-REFERENCED INDEX PAGE: 154.310(C) _____		

VIEWED BY _____ USCG

WATERFRONT FACILITY INSPECTION REPORT
FACILITY SPOT CHECK

U.S. COAST GUARD
CAPTAIN OF THE PORT
HAMPTON ROADS
200 GRANBY MALL, FEDERAL BLDG.
NORFOLK, VA 23510 (804) 441-3290

FACILITY: _____

DATE: _____

THIS IS A SPOT CHECK OF YOUR FACILITY. ANY DISCREPANCIES LISTED BELOW ARE TO BE CORRECTED BY THE DATE SPECIFIED. FAILURE TO DO SO MAY LEAD TO LOSS OF THE GENERAL PERMIT TO HANDLE DANGEROUS CARGO, AUTHORIZED BY 33 CFR 126.13, OR DISCONTINUANCE OF BERTHING VESSELS AT YOUR FACILITY. YOU ARE REQUIRED TO CONTACT THIS OFFICE BY CALLING 441-3290, OR BY MAILING CORRESPONDANCE TO THE ADDRESS ABOVE.

LIST DEFICIENCIES BELOW:

THE ABOVE DEFICIENCIES ARE TO BE CORRECTED BY: _____

COAST GUARD COTP REPRESENTATIVE _____ RANK _____

SIGNATURE _____ DATE _____

I HAVE BEEN MAKE AWARE OF THE ABOVE DISCREPANCIES AND THE ASSOCIATED DATE OF REQUIRED CORRECTION. I ALSO UNDERSTAND THAT I AM TO INFORM THE MARINE SAFETY OFFICE WHEN ALL THE DISCREPANCIES HAVE BEEN CORRECTED.

SIGNATURE _____ DATE _____

POSITION _____

**DESIGNATED WATERFRONT FACILITIES INSPECTION REPORT
FORMAL INSPECTION**

U.S. COAST GUARD
CAPTAIN OF THE PORT
HAMPTON ROADS
200 GRANBY MALL
FEDERAL BUILDING
NORFOLK, VA 23510
(804) 441-3290

Section A applies to break bulk facilities.
Section A and B apply to bulk liquid facilities other than OIL.
Sections A, B and C apply to bulk liquid OIL facilities.

FACILITY

DATE:

Note: Check "C" when discrepancy is corrected.

		YES	NO	C
33 CFR 126	SECTION A			
126.15(a)	GUARDS ADEQUATE			
126.15(b)	SMOKING REGULATIONS OBEYED			
126.15(c)	HOT WORK PERMIT OBTAINED WHEN REQUIRED			
126.15(d)	PIER KEPT FREE OF UNAUTHORIZED VEHICLES			
126.15(e)	PIER AUTOMOTIVE EQUIPMENT			
126.15(f)	RUBBISH AND DEBRIS REMOVED			
126.15(g)	PROPER STORAGE OF MAINTENANCE SUPPLIES			
126.15(h)	ELECTRICAL EQUIPMENT SAFE			
126.15(i)	HEATING EQUIPMENT SAFE			
126.15(j)	FIRE EXTINGUISHERS ADEQUATE/INSPECTED YEARLY			
126.15(k)	FIRE APPLIANCE AREAS CONSPICUOUSLY MARKED			
126.15(l)	ADEQUATE ILLUMINATION PROVIDED			
126.15(m)	PROPER ACCESS TO FIRE EQUIPMENT			
126.16(b)	WARNING DEVICE PRESENT			
	SECTION B			
126.15(o)(1)	PERSON IN CHARGE HAS LETTER OF DESIGNATION			
126.15(o)(1)	CONTROL OF CARGO SYSTEM			
126.15(o)(2)	WARNING SIGNS DISPLAYED, IN GOOD CONDITION			
126.15(o)(2)	DRIP PANS PROVIDED			
126.15(o)(2)	CONNECTIONS TIGHT AND LEAK FREE			
126.15(o)(2)	CARGO INFORMATION CARD AVAILABLE			
126.15(o)(3)	COMMUNICATIONS ADEQUATE			
126.15(o)(7)	HOSE AND PIPING TESTED YEARLY			
126.15(o)(7)	PUMP PRESSURE GAUGES CALIBRATED YEARLY			
	SECTION C			
154.750/300	OPERATIONS MANUAL AVAILABLE AND OBSERVED			
154.750/110	LETTER OF INTENT			
154.750/710	PERSON IN CHARGE HAS LETTER OF DESIGNATION			
154.740(e)	DATE AND RESULTS OF MOST RECENT GEAR TESTS			
154.740(e)	RECORD OF EACH COTP INSPECTION AVAILABLE			
154.300(b)	OPERATIONS MANUAL KEPT CURRENT			
154.107	COPY OF COTP WAIVERS AVAILABLE			
154.570	ADEQUATE ILLUMINATION PROVIDED			
154.500(f)	HOSE ASSEMBLIES PROPERLY MARKED			
154.510	LOADING ARMS HAVE MEANS TO DRAIN OR CLOSE			
154.520	CLOSURE DEVICES ADEQUATE (EACH HOSE BLANKETED)			
154.530	FIXED CATCHMENT INSTALLED OR WAIVED			
154.540	SAFE QUICK MEANS TO REMOVE OIL FROM CATCHMENT			
154.545	DISCHARGE AND CONTAINMENT EQUIPMENT AVAILABLE			
154.550	EMERGENCY SHUTDOWN PROVIDED FOR TANKERMAN			
154.560	TWO WAY COMMUNICATIONS ADEQUATE			
156.130(a)(2)	FOUR BOLT MINIMUM IN TEMPORARY CONNECTIONS			
156.130(a)(4)	ALL BOLT HOLES FILLED IN PERMANENT CONNECTIONS			
156.120(a)	FACILITY AND VESSEL PERSON IN CHARGE PRESENT			
156.150	DECLARATION OF INSPECTION SIGNED			

OPERATIONS MANUAL CONTENTS

33 CFR 154.310

	YES	NO
(1) The geographic location of the facility?	—	—
(2) A physical description:	—	—
(3) Hours of operation:	—	—
(4) The sizes, types, and number of vessels that can transfer simultaneously.	—	—
(5) Each product transfer		
(a) Generic or chemical name	—	—
Cargo Information Card	—	—
(6) Persons on duty	—	—
(7) Names and telephone numbers, facility, Coast Guard, and other personnel in case of an emergency	—	—
(8) Duties of watchman	—	—
(9) Description of Communication System	—	—
(10) Location and Facilities of each personnel shelter	—	—
(11) Description and instructions for the use of drip and discharge collection and vessel slop reception facilities	—	—
(12) Description and location of Emergency Shutdown System	—	—
(13) Quantity, types, location and instructions for use of monitoring devices	—	—
(14) Quantity, type, location, and instructions use and time limits for gaining access to the containment equipment	—	—
(15) Quantity, type, location and instructions for fire extinguishing equipment	—	—
(16) Max: Relief valve setting (max system pressure) when relief valve are not provided, each oil transfer system	—	—

FACILITY NAME _____

FUNCTION _____

FACILITY ADDRESS _____

CITY, STATE, ZIP _____

PERSON TO CONTACT IN AN EMERGENCY _____

PHONE # DAY _____ NIGHT _____

DOES THIS FACILITY MAINTAIN A PIER OR ANCHORAGE AREA? _____ (IF YES SEE, APPENDIX B)

DO ANY PIPELINES CROSS YOUR PROPERTY LINES OR GO FROM YOUR PLANT TO THE WATERFRONT? _____

(IF YES , SEE APPENDIX C)

ARE LARGE AMOUNTS OF CHEMICALS OR PETROLEUM PRODUCTS STORED OR USED ON OR NEAR THIS
FACILITY? _____ (IF YES, SEE APPENDIX D)

FIREFIGHTING MATERIALS AND EQUIPMENT. LIST THE AMOUNT , TYPE , SIZE AND MAKE A DIAGRAM
OF EACH LOCATION.

DIAGRAMS

3 THE PIER AREAS LIGHTED?

TYPE CARGO TRANSFERED TO

AND FROM VESSELS

AMOUNT

FREQUENCY OF TRANSFER

RECORD ALL PIPELINES THAT ENTER OR LEAVE YOUR PROPERTY AND THOSE USED FOR LOADING AND UNLOADING MATERIALS AT THE WATERFRONT(NOT INTERNAL PIPELINES). INDICATE LINES TO WATERFRONT WITH A 'W' IN THE LEFT COLUMN.

W	SUBSTANCE	SIZE OF LINE	LOCATION OF SHUT-OFF VALVE
---	-----------	--------------	----------------------------

AT TY

OWNER

OPERATOR

NOTE: Check column "C" when immediate action is taken to correct the
- discrepancy.

[illegible]

B. Operations Manual

154.300 Operations Manual is kept current and readily available for review

154.310 Contents of Operations Manual

1. Geographic Location of Facility
2. Physical Description of Facility
3. Hours of Operations
4. Type and size of vessels facility handles
5. Each product transferred
 - i. Generic or chemical name
 - ii. Cargo information
 - a. Name of cargo listed in 46 CFR 30.25-1
 - b. Description of cargo, sight of
 - c. Description of cargo, odor of
 - d. Hazards of cargo, handling of
 - e. Instructions for safe handling of cargo
 - f. Procedures for spill cleanup or exposure to cargo
 - g. List of fire fighting procedures used on cargo
6. The minimum number of persons required while transferring
7. All telephone numbers of facility personnel and Coast Guard
8. Duties of watchman in case of unmanned barges
9. Description of communications used
10. Location of dockhouse
11. Description of containment system
12. Description of emergency shutdown
13. If required, quantity, type, locations, and instructions for use of monitoring devices
14. Quantity, type location, instructions, and time limits for gaining access to containment equipment required
15. Quantity, type, location, and instructions for use of fire fighting equipment
16. Max relief valve setting for transfer system
17. Procedures for operating loadingarm, transferring oil, completion of pumping, and any emergencies
18. Procedures for reporting and initial containment of any oil spillage
19. Summary of nation, local, and state pollution laws
20. Procedures for shielding portable lighting
21. Description of training program

COTP MOBILE FACILITY INSPECTION

NAME OF FACILITY: _____

ADDRESS: _____

CITY & STATE: _____ ZIP: _____

PHONE NUMBER: _____

FACILITY MANAGER: _____

FACILITY PERSON WITH INSPECTION TEAM: _____

TITLE: _____

INSPECTION TEAM: _____ DATE _____

TIME ARRIVED: _____ TIME DEPARTED: _____

33CFR154.740 RECORDS: LETTER OF INTENT _____; PERSONS IN CHARGE _____;

TESTS UNDER 156.170 _____; HOSE INFORMATION UNDER 154.500 _____;

RECORD OF EXAMINATIONS _____; DECLARATIONS OF INSPECTION _____;

33CFR154.310 CONTENTS OF OPERATIONS MANUAL COMPLETE: _____

33CFR154.325 LETTER OF ADEQUACY: _____

NUMBER OF DEFICIENCIES FOUND: _____

NUMBER OF DEFICIENCIES CORRECTED DURING INSPECTION: _____

NOTE: INDICATE THE STATUS OF EACH ITEM BY WRITING IN YES, NO, _
OR NOT APPLICABLE (NA) NEXT TO EACH ITEM OF INSPECTION. IF AN _
ENTIRE SECTION IS NOT APPLICABLE, FOR INSTANCE, IF NO TRANSFER IS
GOING ON AT THE TIME OF THE INSPECTION, LINE THROUGH THE ENTIRE _
PAGE OR SECTION.

REMARKS: _____

COTP MOBILE FACILITY INSPECTION
INDICATE YES/NO/NOT APPLICABLE

PAGE 1

33CFR126

- _____ .15(A) GUARDS ADEQUATE
- _____ .15(B) "NO SMOKING"/"SMOKING" AREAS POSTED AND OBSERVED
- _____ .15(C) HOT WORK/"HOT WORK PERMIT" REQUIRED?/ON HAND?
- _____ .15(D) VEHICLES PROPERLY PARKED
- _____ .15(E) PIER AUTO EQUIPMENT IN SAFE CONDITION
- _____ .15(F) FREE OF RUBBISH AND WASTE
- _____ .15(G) MAINTENANCE SUPPLIES STORED PROPERLY
- _____ .15(H) ELECTRICAL INSTALLATION MADE PROPERLY
- _____ .15(I) HEATING EQUIPMENT SAFELY INSTALLED AND MAINTAINED.
- _____ .15(J) FIRE EXTINGUISHING EQUIPMENT
- _____ .15(K) FIRE APPLIANCES MARKED
- _____ .15(L) ILLUMINATION ADEQUATE
- _____ .15(M) ARRANGEMENT OF CARGO AND MATERIAL
 - _____ 1. CLEAR OF WALLS AND FIRE WALLS 2FT.
 - _____ 2. STACKED OVER 12FT.
 - _____ (A) CLEAR OF GIRDERS AND BEAMS 3FT.
 - _____ (B) CLEAR OF SPRINKLER HEADS 1FT.
 - _____ 3. CLEAR OF FIRE BOX, HOSE, VALVES, ECT. 4FT.
 - _____ 4. CLEAR PATH TO CENTER FROM FIRE BOX, HOSE, ETC
 - _____ 5. MAIN AISLE CLEAR AND FREE
 - _____ 6. CROSS AISLES CLEAR AND FREE

REMARKS: _____

33CFR126.15(o) CONTROL OF LIQUID CARGO TRANSFER SYSTEMS
WHEN PERFORMING BULK LIQUID AND LIQUIFIED GAS DANGEROUS
CARGO OPS, THE FACILITY CARGO TRANSFER SYSTEM SHALL BE
SUBJECT TO THE FOLLOWING CONDITIONS:

- (1) CONTINUOUS CONTROL/SURVEILLANCE OF FACILITY
PERSON IN CHARGE(PIC)
- (2) PRIOR TO TRANSFER FOLLOWING CONDITIONS EXIST:
 - (i) WARNING SIGNS
 - (ii) NO REPAIR WORK ON SYSTEM/TANKS
 - (iii) IF NO FIXED SUMPS, ADEQUATE DRIP PANS
 - (iv) LEAK FREE JOINTS/COUPLINGS
 - (v) SUFFICIENT BOLTS
 - (vi) PIC ON VESSEL REPORTS READY
 - (vii) FACILITY CARGO INFO CARDS
 - (viii) DECLARATION OF INSPECTION (DOI)
- (3) MEANS OF COMMUNICATION
- (4) FACILITY MAY NOT TRANSFER:
 - (i) DURING ELECTRICAL STORMS
 - (ii) IF THERE IS A FIRE IN VICINITY
 - (iii) IF A BREAK IN THE SYSTEM OCCURS
 - (iv) IF THE RECEIVER REQUESTS STOP
- (5) DUTIES OF FACILITY PIC
- (6) HOSES/ARMS DRAINED/SECURED/NO SPILLAGE

REMARKS: _____

- (1) NO LEAKAGE FROM CARGO HOSE BODY
 - (ii) CARGO PUMPS SYSTEMS TESTED
 - (iii) CARGO PUMP PRESSURE GAGES CALIBRATED
 - (iv) CARGO HOSE/PIPING HYDRO TESTED TO 1.5 TIMES MAWP. MAWP MARKED ON HOSE/PIPE
 - (v) PIPING MAWP NOT MORE THAN HOSE MAWP
 - (vi) RELIEF VALVES CHECKED AT TIME OF HYDRO
 - (vii) DATES/RESULTS OF TESTS RECORDED
 - (viii) RELIEF VALVE ESCAPE PIPING RETURN
 - (ix) HOSES/SYSTEMS MARKED IF INCOMPATIBLE.
- (8) EMERGENCIES

[illegible]

BULK OIL TRANSFER FACILITY INSPECTION LIST

33CFR154

- .500(A) OIL HOSE ASSEMBLY MINIMUM DESIGN BURST PRESSURE
- .500(B) OIL HOSE MAXIMUM ALLOWABLE WORKING PRESSURE(MAWP)
- .500(C) NONMETALLIC HOSE USABLE FOR OIL SERVICE
- .500(D) EACH HOSE ASSEMBLY MUST HAVE:
 - (1) FULL THREADED CONNECTIONS
 - (2) FLANGES
 - (3) ACCEPTABLE QUICK-CONNECT COUPLINGS
- .500(E) EACH HOSE MUST BE MARKED WITH:
 - (1) OIL SERVICE/PRODUCT NAME
 - (2) MAWP
 - (3) DATE OF MANUFACTURE
 - (4) DATE OF TEST
- .500(F) DATE OF MANUFACTURE AND TEST DATE MAY BE RECORDED ELSEWHERE ON FACILITY
- .500(G) HOSE BURST/TEST PRESSURES MUST NOT BE ON HOSE
- .500(H) BACK PRESSURE SHUTOFF NOZZLE (IF APPLICABLE)
- .510(A)(B)(C) LOADING ARMS: ANSI STANDARD/CERTIFICATION/
MEANS TO DRAIN OR CLOSE
- .520 CLOSURE DEVICES FOR HOSE OR LOADING ARMS
- .525 MONITORING DEVICES
- .530 SMALL DISCHARGE CONTAINMENT:
 - (A) FIXED
 - (B) CAPACITY
 - (C) PORTABLE IF FIXED NOT FEASIBLE(.5 BARREL)
 - (D) MOBILE FACILITY PORTABLE (5 GAL)

- .540 SMALL DISCHARGE CONTAINMENT REMOVAL
- .545 OIL DISCHARGE CONTAINMENT EQUIPMENT/MATERIAL
- .550(A) EMERGENCY SHUTDOWN OPERABLE BY PERSON IN CHARGE ON THE VESSEL, AT HIS/HER OPERATING STATION. MEANS MUST BE:
 - (1) AN ELECTRICAL, PNEUMATIC, OR MECHANICAL LINKAGE TO THE FACILITY; OR
 - (2) AN ELECTRONIC VOICE COMMUNICATIONS SYSTEM CONTINUOUSLY OPERATED BY A PERSON ON THE FACILITY WHO CAN STOP THE FLOW OF OIL IMMEDIATELY.
- .550(B) EMERGENCY SHUTDOWN MUST BE LOCATED AT OR NEAR THE DOCK MANIFOLD CONNECTION.
- .550(C) THE EMERGENCY SHUTDOWN MUST BE ABLE TO STOP THE FLOW OF OIL IN: (1) 60 SECONDS; OR (2) 30 SECONDS.
- .560(A) FACILITY MUST HAVE A MEANS TO ENABLE CONTINUOUS TWO-WAY VOICE COMMS BETWEEN VESSEL AND FACILITY PERSONS IN CHARGE.
- .560(B) MEANS TO INDICATE DESIRE TO USE COMMS.
- .560(C) MEANS IN (A) MUST BE USABLE AND EFFECTIVE IN ALL PHASES OF THE OPERATION AND IN ALL CONDITIONS OF WEATHER.
- .560(D) MEANS MAY BE THE SAME AS EMERGENCY SHUTDOWN.
- .560(E) PORTABLE RADIOS MUST BE INTRINSICALLY SAFE AND MEET CLASS I, DIVISION I, GROUP D REQUIREMENTS.
- .570(A) BETWEEN SUNSET AND SUNRISE LIGHTING MUST ADEQUATELY ILLUMINATE:
 - (1) FACILITY TRANSFER CONNECTION POINTS
 - (2) BARGE TRANSFER CONNECTION POINTS
 - (3) FACILITY OPERATIONS WORK AREAS
 - (4) BARGE OPERATIONS WORK AREAS
- .570(B) TEST FOR ADEQUACY IF IN DOUBT
- .570(C) PORTABLE/VESSEL LIGHTING IF FACILITY SMALL/REMOTE
- .570(D) LIGHTING DOES NOT INTERFERE WITH NAVIGATION.
- .710 PERSONS IN CHARGE: DESIGNATION AND QUALIFICATION
- .730 PERSONS IN CHARGE: EVIDENCE OF DESIGNATION

IF AN OIL TRANSFER TO OR FROM A VESSEL IS GOING ON,
THE FOLLOWING SECTIONS OF 33 CFR 156 APPLY:

- _____ 156.120(A) MOORINGS STRONG AND LONG ENOUGH
- _____ (B) HOSES/LOADING ARMS LONG ENOUGH
- _____ (C) HOSES ARE SUPPORTED TO PREVENT DAMAGE/STRAIN
- _____ (D) OIL TRANSFER SYSTEM ALIGNED
- _____ (E) SYSTEM PARTS NOT NECESSARY BLANKED/SHUT OFF
- _____ (F) ENDS OF HOSES/LOADING ARMS NOT CONNECTED ARE
BLANKED OFF WITH CLOSURE DEVICES
- _____ (G) TRANSFER SYSTEM ATTACHED TO A FIXED CONNECTION
ON VESSEL AND FACILITY, EXCEPT FOR AUTOMATIC
BACK PRESSURE SHUTOFF NOZZLE, IF USED
- _____ (H) OVERBOARD DISCHARGES/SEA SUCTION VALVES IN
VESSELS'S OIL TRANSFER/CARGO TANK SYSTEM
SEALED/LASHED CLOSED
- _____ (I) NO DEFECTS IN OIL TRANSFER HOSE
- _____ (J) HOSES/LOADING ARMS MEET 154.500/510
- _____ (K) EACH CONNECTION MEETS 156.130
- _____ (L) MONITORING DEVICES INSTALLED/OPERATING, IF REQ
- _____ (M) OIL DISCHARGE CONTAINMENT EQUIPMENT
- _____ (N) SMALL DISCHARGE CONTAINMENT IN PLACE/DRAINED
- _____ (O) DRAINS AND SCUPPERS CLOSED MECHANICALLY
- _____ (P) CONNECTIONS IN TRANSFER SYSTEM LEAK FREE
- _____ (Q) COMMUNICATIONS OPERABLE
- _____ (R) EMERGENCY SHUTDOWN IN PLACE/OPERABLE
- _____ (S) PERSONS IN CHARGE ARE PRESENT
- _____ (T) PERSONS IN CHARGE MUST:
 - _____ (1) BE IMMEDIATELY AVAILABLE AT SITE
 - _____ (2) HAVE COPY OF OPSMAN/OIL TRANSFER PROCEDURE
 - _____ (3) CONDUCT TRANSFER IN ACCORDANCE WITH
OPSMAN/OIL TRANSFER PROCEDURE

(U) PERSONNEL REQUIRED BY THE OPSMAN/OIL TRANSFER PROCEDURES, TO CONDUCT THE TRANSFER:

(1) ARE ON DUTY

(2) CONDUCT THE TRANSFER IN ACCORDANCE WITH THE OPSMAN/OIL TRANSFER PROCEDURES

(V) AT LEAST ONE PERSON AT SITE WHO SPEAKS
LANGUAGE(S) SPOKEN BY BOTH PERSONS IN CHARGE

(W) PERSONS IN CHARGE HAVE HELD A CONFERENCE

(X) PERSONS IN CHARGE AGREE TO START OPERATION

(Y) BETWEEN SUNSET AND SUNRISE, LIGHTING IS ADEQUATE (154.570/155.790)

(Z) FOR TRANSFERS BETWEEN TANK BARGES FROM SUNSET TO SUNRISE, LIGHTING IS PROVIDED (155.790)

REMARKS:

Waterfront Facilities
U.S. COAST GUARD
4640 URQUHART ST.
NEW ORLEANS, LA. 70117-4698

WATERFRONT FACILITY INSPECTION CHECK-OFF SHEET

(504) 589-7128

TIME _____ DATE _____ HOURS OF OPERATION _____ LOA _____ TLOA _____
FACILITY NAME _____ PH.# () _____
FACILITY LOCATION _____
OWNER _____ OPERATOR _____
ADDRESS _____ ADDRESS _____
PH.# () _____ PH.# () _____
CARGO HANDLED _____

33 CFR REGULATIONS

YES NO W C

REMARKS

*****RECORDS*****		YES	NO	W	C	REMARKS
154.300	OPERATIONS MANUAL CURRENT & READILY AVAILABLE					
154.740(a)	LETTER OF INTENT					
(b)	NAME OF CURRENT PERSONS DESIGNATED IN CHARGE					
(c)	DATE AND RESULTS OF TESTS REQUIRED BY 156.170					
(d)	HOSE INFORMATION REQUIRED BY 154.500					
(e)	RECORD OF C.G. INSPECTION, PAST THREE YEARS					
(f)	DECLARATION OF INSPECTIONS, MAINTAINED 1 MONTH					
TRANSFER IN PROGRESS/BARGE						
126.15(a)	ADEQUATE SECURITY, TYPE:					
(b)	SMOKING REGULATIONS OBEYED					
(c)	WELDING AND HOT WORK IN COMPLIANCE					
(f)	FACILITY FREE OF RUBBISH AND DEBRIS					
(h)	ELECTRICAL EQUIPMENT IN COMPLIANCE					
(i)	HEATING EQUIP. IN COMPLIANCE, (NO OPEN FIRES)					
(j)	FIRE EXTINGUISHING EQUIP. IN COMP. WITH N/F.P.A.					
(k)	FIRE APPLIANCES ACCESSABLE & PROPERLY MARKED					
(o)	(2)(1) WARNING SIGNS IN ALL DIRECTIONS OF S/L					
154.500	(HOSE ASSEMBLIES USED TO TRANSFER OIL)					
(d)	(1) FULL THREADED CONNECTIONS					
	(2) FLANGES THAT MEET ANSI					
	(3) QUICK CONNECT COUPLINGS ACCEPTABLE TO COMDT.					
(e)	(1) HOSE MARKED WITH PROD. NAME OR OIL SERVICE					
	(2) HOSE MARKED WITH M.A.W.P.					
154.510	LOADING ARM MEETS ANSI, (IF AFTER 30 JUN. 1973)					
154.520	FREE END OF ALL HOSES/LOADING ARMS BLANKED OFF					
154.530(a)	SMALL DISCHARGE CONTAINMENT					
	(1) HOSE/LOADING ARM HANDLING AREA					
	(2) EACH HOSE MANIFOLD CONNECTION AREA					
(b)	FIXED CATCHMENT OR CURBING OF CORRECT CAPACITY					
154.540	DISCHARGE REMOVAL FROM CONTAINMENT					
154.545	DISCHARGE CONTAINMENT EQUIP. FOR SPILLS/TYPE:					
154.550	EMERGENCY SHUTDOWN WITHIN LIMIT OF REGULATION					
154.560	COMMUNICATION SYSTEM/TYPE:					
154.570	LIGHTING ADEQUATE FOR NIGHT OPERATIONS					

FACILITY MANNED: YES/NO COOPERATION GOOD: YES/NO POLLUTION CHECK MADE: YES/NO

TRANSFERS PER. YEAR:

NUMBER & TYPE OF FIRE EXTINGUISHERS:

DATE FIRE EXTINGUISHERS LAST INSPECTED:

DATE CARGO HANDLING GEAR LAST INSPECTED:

ADDITIONAL REMARKS:

BOARDING OFFICER

RATE/RANK

FACILITY REP.

TITLE

DATE

CAPTAIN OF THE PORT
U. S. COAST GUARD
4640 URQUHART STREET
NEW ORLEANS, LA 70117

(504) 589-7128/29

SPOT CHECK
FORMAL INSP.

TIME: _____ DATE: _____ HOURS OF OPS: _____
OF FACILITY/ ADDRESS: _____

OWNER/ADDRESS: _____ OPERATOR/ADDRESS: _____ PHONE NO: _____
FACILITY: _____
MAIN OFFICE: _____

PRODUCT HANDLED:

(a) _____ (b) _____
(c) _____ (d) _____

33 CFR 126.13 DESIGNATION OF WATERFRONT FACILITY

YES NO N/A

<input type="checkbox"/>	<input type="checkbox"/>	126.15(a) GUARDS ADEQUATE
<input type="checkbox"/>	<input type="checkbox"/>	126.15(b) SMOKING REGS OBEYED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(c) HOT WORK PERMIT POSTED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(d) TRUCKS AND OTHER VEHICLES LEGALLY PARKED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(e) PIER AUTOMOTIVE EQUIPMENT FREE FROM EXCESS GREASE, OIL, LINT, & NO REFUELING DONE ON PIER
<input type="checkbox"/>	<input type="checkbox"/>	126.15(f) WATERFRONT FACILITY IS FREE OF RUBBISH, DEBRIS AND WASTE MATERIALS
<input type="checkbox"/>	<input type="checkbox"/>	126.15(g) MAINTENANCE STORES AND SUPPLIES NOT STORED ON ANY PIER EXCEPT IN AMOUNT NECESSARY STORAGE COMPARTMENTS KEPT CLEAN AND COVERED METAL CONTAINERS ARE PROVIDED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(h) ELECTRIC WIRING AND EQUIPMENT IS MAINTAINED IN SAFE CONDITION
<input type="checkbox"/>	<input type="checkbox"/>	126.15(i) IS HEATING EQUIPMENT IN GOOD OPERATING CONDITION
<input type="checkbox"/>	<input type="checkbox"/>	126.15(j) IS FIRE EXTINGUISHING EQUIPMENT INSTALLED AND IN GOOD OPERATING CONDITION
<input type="checkbox"/>	<input type="checkbox"/>	126.15(k) MARKING OF FIRE STATION LOCATIONS ARE CONSPICUOUSLY MARKED, READY ACCESSIBILITY TO SUCH APPLIANCES IS MAINTAINED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(l) LIGHTING OF FACILITY IS ADEQUATELY ILLUMINATED
<input type="checkbox"/>	<input type="checkbox"/>	126.15(m) ARRANGEMENT OF CARGO, FREIGHT MERCHANDISE OR MATERIAL IS ARRANGED TO PERMIT COMPLETE ACCESS FOR PURPOSE OF FIRE EXTINGUISHMENT
<input type="checkbox"/>	<input type="checkbox"/>	126.15(m)(3) FOUR FEET CLEARANCE AND OPEN OPERATING SPACE AROUND ANY
<input type="checkbox"/>	<input type="checkbox"/>	FIRE ALARM BOX
<input type="checkbox"/>	<input type="checkbox"/>	STAND PIPE
<input type="checkbox"/>	<input type="checkbox"/>	FIRE HOSE
<input type="checkbox"/>	<input type="checkbox"/>	SPRINKLER VALVE
<input type="checkbox"/>	<input type="checkbox"/>	FIRE DOOR
<input type="checkbox"/>	<input type="checkbox"/>	DECK HATCH
<input type="checkbox"/>	<input type="checkbox"/>	126.15(n) ADEQUATE GUARDING OF FIRE EXTINGUISHING EQUIPMENT AND LIGHTING
<input type="checkbox"/>	<input type="checkbox"/>	126.15(o) CONTROL OF LIQUID CARGO TRANSFER SYSTEMS WHEN PERFORMING TRANSFER OPS.
<input type="checkbox"/>	<input type="checkbox"/>	126.15(o)(1) CARGO TRANSFER SYSTEM UNDER CONTINUOUS CONTROL AND SURVILLANCE QUALIFIED PERSON-IN-CHARGE
<input type="checkbox"/>	<input type="checkbox"/>	126.15(o)(2) PRIOR TO TRANSFER THE FOLLOWING CONDITIONS SHALL EXIST
<input type="checkbox"/>	<input type="checkbox"/>	126.15(o)(2)(i) WARNING SIGNS DISPLAYED AT POINT OF TRANSFER WITHOUT OBSTRUCTION AT ALL TIMES

REMARKS:

BOARDING OFFICER SIGNATURE: _____ RANK/RANK _____

RECEIVED BY _____ TITLE _____ DATE _____

State of Florida
Department of Natural Resources
Division of Law Enforcement

TERMINAL FACILITY INSPECTION REPORT

Date _____

FMP District No. _____

Certificate No. _____

County _____

1. Name of Facility _____

Address (Storage Area) _____

Address (Business) _____

Telephone (Storage Area) _____ (Business) _____

A. Owner of Terminal Facility _____

Address of Owner _____

Telephone (Business) _____ (Emergency) _____

B. Manager of Terminal Facility _____

Address of Operator _____

Telephone (Business) _____ (Emergency) _____

C. Person in Charge _____

(His Position)

Address of person in charge _____

Telephone (Business) _____ (Emergency) _____

2. Total capacity of storage tanks at this terminal facility. Barrels: _____

Compute in barrels (42 gallons per barrel). Liquid only. DO NOT INCLUDE WATER.

A. List number of tanks underground:

Tanks: _____

Underground tank capacity: _____

Tank: _____

B. List number of tanks above ground: _____

Tanks _____

Above ground tank capacity: _____

Tank: _____

5. Are tanks protected by dikes? (above ground only) ☐ Yes ☐ No

A. Type of dikes _____
(concrete, earth, etc.)

4. List the number of employees at this facility that are available and capable of deploying and operating the containment and cleanup gear at this facility.

5. When applicable, check one or more.

A. Pollutant handled, stored, pumped, or transferred.

☐ Oil Types _____
☐ Oil By products Types _____
☐ Gas _____
☐ Ammonia _____
☐ Chlorine _____
☐ Pesticides _____
☐ Other _____

B. Member of "Discharge Cleanup Organization" ☐ Yes ☐ No

Name of organization _____

Does company have a contingency plan of its own? ☐ Yes ☐ No
If so, obtain a copy and attach.

C. Containment and cleanup gear located at this facility.

☐ Vehicle Types & No. _____
☐ Pumps Types & No. _____
☐ Skimmers Types & No. _____
☐ Booms Types & No. of feet _____

D. Chemicals located at this facility

<input type="checkbox"/> Dispersants-Brand Name _____	Amount _____
<input type="checkbox"/> Sinking Agent-Brand Name _____	Amount _____
<input type="checkbox"/> Sorbents-Brand Name _____	Amount _____
<input type="checkbox"/> Combustion Promoters-Brand Name _____	Amount _____

<input type="checkbox"/> Biological degrading Agents - Type _____	Amount _____
<input type="checkbox"/> Gelling Agents-Brand Name _____	Amount _____
<input type="checkbox"/> Beach Cleaners-Brand Name _____	Amount _____
<input type="checkbox"/> Foam - Type _____	Amount _____

E. Condition of transfer equipment

Leaking Flange Gasket	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Operator on duty	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Manifold condition	<input type="checkbox"/> Good	<input type="checkbox"/> Fair <input type="checkbox"/> Needs Repair

F. Date this facility was last inspected: _____

Date facility was last inspected by the U. S. Coast Guard: _____

G. Number of spills this year _____

Cause of spills _____

H. Piers and Wharves ☐ Yes ☐ No Number _____

<u>Lighted</u>	<u>Need more light</u>	<u>Covered</u>	<u>Condition</u>
<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Good
<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> Fair
			<input type="checkbox"/> Poor

I. Transfer Hoses

☐ Good ☐ Fair ☐ Need replacing

List each hose number and date of last Hydrostatic Test. _____

<u>HOSE NUMBER</u>	<u>DATE LAST TESTED</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

J. What is the attitude of owner or operator toward improving his facilities or equipment to reduce his chances of a spill?

☐ Good ☐ Fair ☐ Poor ☐ Unsatisfactory

6. Vessels and Transfer Operation

Was transfer of pollutants underway while this inspection was made? ☐ Yes ☐ No

A. If inspection was during transfer, were scuppers plugged? ☐ Yes ☐ No

B. Were adequate drip pans properly placed? ☐ Yes ☐ No

C. Were hoses supported so as to avoid crushing or excessive strain? ☐ Yes ☐ No

D. Were hoses long enough so that they will not be subjected to excess stresses by any movement of the ship? ☐ Yes ☐ No

E. Were mooring lines tended to prevent excessive movement of the ship?

☐ Yes ☐ No

F. Were all connectors on the vessel, dock or shore, properly blanked, if not in use? ☐ Yes ☐ No

G. If centrifugal pump was being used, was it equipped with a check valve to prevent backflow of pollutant? ☐ Yes ☐ No

H. Were transfer hoses properly drained after transfer?

☐ Yes ☐ No

REMARKS: Explain the general condition of this facility, and in your opinion what could be done to reduce the danger of possible spillage.

Signature of Inspecting Officer: _____

Time spent inspecting facility (include travel time) _____

APPENDIX E

MARINE SAFETY PETTY OFFICER COURSE

This Appendix contains the Reserve Training Center Yorktown general outline for the Marine Safety Petty Officer Course. Also included is the lesson plan for 33 CFR 126 inspections.

MARINE SAFETY SCHOOL
STUDENT TRAINING REPORT
MARINE SAFETY PETTY OFFICER COURSE

E: Exceptional skill or
knowledge demonstrated
M: Passed all skills or
knowledge objectives
N: DID NOT pass all skill
or knowledge objectives

UNIT NUMBER/TITLE

	E	M	N
1.0 CARGO COMPLIANCE.....			
2.0 FACILITY COMPLIANCE.....			
3.0 VESSEL COMPLIANCE.....			
4.0 HARBOR, ZONE COMPLIANCE.....			
5.0 PHYSICAL SECURITY.....			
6.0 RESPONSE LAWS/AUTHORITY.....			
7.0 INVESTIGATIONS.....			
8.0 ASSESSMENT, EVALUATION.....			
9.0 HAZ. CHEM. RESPONSE.....			
10.0 OPERATIONAL CONTROL.....			
11.0 COORDINATION.....			
12.0 FUNDING.....			

(See Reverse)

MARINE SAFETY PETTY OFFICER COURSE

UNIT I INTRODUCTION

SCOPE: This unit provides a general overview of the Marine Safety program, merchant ships, and the port complex. This unit provides detailed coverage of the use of regulations, laws, and policy.

The student's ability to correctly locate and cite regulatory requirements is demonstrated in the next four units.

UNIT 1 CARGO COMPLIANCE

SCOPE: This unit provides training on the regulations relating to shipboard carriage of Bulk and Break-Bulk cargoes. The student is introduced and exercised in each set of applicable regulations one at a time (ie. 49 CFR 171, 172, 176; 46 CFR 30-40, 148, 150, 151, 153, & 154). The IMDG Codes are also covered. An overview of tank vessel operations and container nomenclature is included.

This unit culminates in a comprehensive exercise requiring the students to review stowplans for a tank vessel and a freighter.

UNIT 2 FACILITY COMPLIANCE

SCOPE: This unit provides training on the regulations relating to the operations of waterfront facilities. The student is introduced and exercised in the regulatory requirements and applicability of 33 CFR parts 126 & 154. For bulk facilities the student reviews example operations manuals.

UNIT 3 VESSEL COMPLIANCE

SCOPE: This unit provides training on the regulations applicable to vessel operations in U.S. waters. These include the requirements for pollution prevention, navigation safety, marine sanitation devices, and policy relating to the standard vessel boarding program. Once again, the student is exercised in the substance and applicability of these regulations.

Instruction in this unit concentrates on the operational activities of the vessel, and specific equipment the vessel is required to have. A comprehensive exercise requires the student to properly apply all the references, and stresses use of COMDTINST 5010.8.

UNIT 4 HARBOR & ZONE COMPLIANCE

SCOPE: This unit provides instruction on the COTP responsibilities and authorities relating to management of the waterways. Most of the references for these lessons deal with Marine Safety Manual and Commandant Instructions. Subjects include: Patrol duties and responsibilities; Permits; COTP orders; Restricted Areas; Methods of Enforcement & Violation Reports. The student is introduced to the MSIS violation report system.

UNIT 5 PORT SECURITY OVERVIEW

SCOPE: Using the MSM Volume VIII, Shipping Agent Guidelines, and handouts, this unit provides detailed instruction on the handling of SIVs. The SIV lesson offers examples of required message traffic, discussion of entry requirements, and a thorough familiarization of the references noted. Students receive instruction on boarding procedures and an opportunity to discuss actual experiences. This unit also provides an overview of the Port Security program. The overview lesson uses the Commandant (WPE) program summary guide to walk the student through the different areas, including: MTMC, physical security, readiness, port security cards, counterterrorism, and mobilization planning. This unit is basically conducted as a briefing to define terms and discuss current activities or responsibilities. For example, instruction is provided in the organization of MARDEZ with discussion on the current status, that can change from day to day. There is no testing of this material.

UNIT 6 LAWS AND AUTHORITY

SCOPE: This unit provides detailed coverage of Environmental Response Laws including the Rivers and Harbors Act of 1899, Federal Water Pollution Control Act, Resource Conservation & Recovery Act, and the Comprehensive Environmental Response Compensation and Liability Act.

UNIT 7 INVESTIGATIONS

SCOPE: The Investigations Unit covers the types of pollution investigations conducted in the response field. The necessary elements to determine if a law violation exists are discussed. Detailed coverage of the rules of evidence, including the forms and admissibility of evidence, and the procedures for the identification and custody of evidence is provided. Procedures for the use of photographic evidence and for obtaining and maintaining pollution samples are covered. Lessons on locating the source of a discharge and the policies and procedures for entering private property are also included. Interviewing techniques are presented and practiced through a live interview exercise that concludes with the development of a pollution case file that is submitted for review.

UNIT 8 ASSESSMENT AND EVALUATION

SCOPE: This unit provides training towards assessing and evaluating a hazardous environment. The student will develop necessary skills that will enable them to go to the unit reference book library and find vital information about the hazardous chemical. The student will also gain knowledge in the area of computer information systems. This will broaden their base of available information sources.

Once the student has assessed the hazard by use of the various references available, an evaluation of the situation is initiated. This evaluation includes the use of CHRIS and the use of atmospheric measurements. The students develop proficiency in these areas by actual hands-on training during the course. The students also learn the Coast Guard's policy on pollution response and confined space entry, and how it relates to their particular job. They also learn about the Coast Guard's medical monitoring program and its vital role in their continued good health.

The information gained in this unit is used in various drills and exercises that are presented throughout the course.

UNIT 9 HAZARDOUS CHEMICAL RESPONSE

SCOPE: This unit provides training towards developing the basic knowledge of hazardous chemical release site safety including personal protective equipment. The students develop this knowledge through classroom lectures and actual hands-on use of equipment. The hands-on sessions involve selection, donning and doffing of respiratory protection devices and chemical protective clothing.

The information gained in this unit is demonstrated by participation in a field exercise that involves several activities. The students perform a variety of tasks while wearing the protective equipment.

UNIT 10 OPERATIONAL CONTROL

SCOPE: The Operational Control Unit includes principles for effective containment of pollutants, types of containment equipment available and techniques for proper deployment. Shoreline cleanup techniques, methods to protect shorelines, policy concerning "how clean is clean" and requirements for proper disposal are also covered. Selection techniques for choosing effective recovery equipment based upon the physical characteristics of the pollutant are presented. Deployment techniques are presented for recovery equipment. Methods available for securing the source of a discharge are also discussed.

UNIT 11 COORDINATION

SCOPE: The Coordination Unit provides for the use of the Local Contingency Plan in coordinating a response to an oil or hazardous substance spill. The required format and proper content of a Local Contingency Plan is presented. Incident Action plans are discussed and the use of the National Strike Force on pollution incidents is covered. Procedures for dealing with the media are presented and press briefings and interviews are conducted with representatives from PIAT.

UNIT 12 FUNDING AND DOCUMENTATION

SCOPE: This unit covers procedures to access and utilize the "Revolving Fund" under the Federal Water Pollution Control Act. The use of the "Superfund" for funding Federal responses to releases of hazardous substances under CERCLA is also presented. Availability of other funds from sources such as the Trans-Alaska Pipeline Act, the Deepwater Ports Act, and the Outer Continental Shelf Lands Act is discussed. Documentation of pollution incidents including POLREPS, funding documents and OSC reports is covered.

MS400 R
2.1SN
12/11/85

MARINE SAFETY SCHOOL
UNITED STATES COAST GUARD
RESERVE TRAINING CENTER
YORKTOWN, VIRGINIA

PORT OPERATIONS DEPARTMENT

LESSON TITLE: BREAKBULK FACILITY INSPECTIONS - LESSON 2.1

LESSON OBJECTIVES:

- a. Student will be able to list regulations that apply to waterfront facilities, designated waterfront facilities and facilities of particular hazard.
- b. Student will be able to classify regulations that apply to waterfront facilities, designated waterfront facilities and facilities of particular hazard.

REFERENCES:

- a. 33 CFR Part 126
- b. MSM VOL II, CH 22

MATERIAL NEEDED:

- a. 33 CFR part 1-199
- b. MSM VOL II, CH 22

33 CFR 126 BREAKBULK FACILITIES SLIDE CATALOG

MS400R 2.1 SLIDES

BM1 KILLIP
23 JAN 1986

1.	DEFINITIONS	WATERFRONT FACILITIES	126.01
2.		DESIGNATED WFF	126.05
3.		DANGEROUS CARGO	126.07
4.		DESIGNATED DANGEROUS CARGO	126.07
5.		CARGO OF PARTICULAR HAZARD	126.10
6.	AUTOMATIC DOOR	DISCREPENCIES	
7.	GUARD		126.15(a)
8.	SMOKING		126.15(b)
9.	WELDING OR HOT WORK		126.15(c)
10.	TRUCKS & OTHER MOTOR VEHICLES		126.15(d)
11.	PIER AUTOMOTIVE EQUIPMENT		126.15(e)
12.	RUBBISH & WASTE		126.15(f)
13.	MAINTENANCE STORES AND SUPPLIES		126.15(g)
14.	ELECTRICAL WIRING		126.15(h)
15.	HEATING EQUIPMENT		126.15(i)
16.	FIRE EXTINGUISHER EQUIPMENT		126.15(j)
17.	MARKING OF FIRE APPLIANCE LOCATIONS		126.15(k)
18.	LIGHTING		126.15(l)
19.	ARRANGEMENT OF CARGO		126.15(m)(1)
20.	FLAMMABLE OR COMBUSTABLE		126.15(m)(2)
21.	FIRE STATION CLEARANCE		126.15(m)(3)
22.	ALARM BOXES & OTHER SAFETY EQUIPMENT		126.15(m)(4)
23.	MAIN AISLE CLEARANCE		126.15(m)(5)
24.	CROSS AISLE		126.15(m)(6)
25.	ADEQUACY		126.15(n)
26.	thru 51.	VARIOUS FACILITY DISCREPANCIES	

Review definitions from Homework and let students tell you what a WFF, DWFF and FOPH is, Make sure they understand the difference.

What is an example of a Waterfront Facility?

SHOW SLIDE OF WATERFRONT FACILITY DEFINITION.

What is a DWFF?

SHOW SLIDE OF DESIGNATED WATERFRONT FACILITY DEFINITION.

Are grain elevators DWFF? No

What about Coal Docks? No

Are they WFF? Yes.

What about an oil refinery dock? yes

Can anyone tell me what a Facility of Particular is?

(NOTE: Definition for a FOPH is at bottom of DWFF Slide.)

What might it handle?

NOTE: Stress that a FOPH is a DWFF to handle COPH.

What regulations apply to Dangerous Cargoes?

SHOW SLIDE OF DANGEROUS CARGO DEFINITION.

NOTE: Remember students have already covered 46 regs.

Examples of 46 CFR 148 (BULK SOLIDS) Ammonium Nitrate, sawdust
Sulfur, Charcoal Bisquets

Examples of 46 CFR 146, (MILITARY EXPLOSIVES) Black powder,
picric acid.

Would gasoline be a DC? Yes.

What about soybean oil? Yes

Is a case of strike anywhere matches a DC? Yes

What are Class "A" explosives called?

SHOW SLIDE OF DESIGNATED DANGEROUS CARGO DEFINITION.

Example: Mines, torpedoes and missiles.

What are Cargoes of Particular Hazard?

SHOW SLIDE OF COPH DEFINITION.

SHOW SLIDE OF ADDITIONAL COPH PRODUCTS.

BREAKBULK FACILITY INSPECTIONS LESSON 2.1

I. DEFINITIONS

A. Waterfront Facility: Piers, wharves, docks and similar structures to which a vessel may be secured. Areas of land and water in immediate proximity. DOES NOT include DOD facilities. (33 CFR 126.01)

B. Designated Waterfront Facility: A WFF designated for the handling and stowage of and for vessel loading and discharge of: (33 CFR 126.05 (a))

1. Flammable or combustible liquid in bulk (46 CFR 30-38). (THIS INCLUDES 46 CFR 150-154 see VOL II, MSM 36-1-5b)
2. Hazardous Materials (46 CFR 146 & 148).
3. Hazardous Materials (49 CFR 170-179)

C. Facility of Particular Hazard: A DWFF authorized to handle a CPH as defined in 126.10. (33 CFR 126.05(b))

D. Dangerous Cargo. (33 CFR 126.07)

6 military emphasis All explosives in 46 CFR 146 military emphasis materials in bulk 46 CFR 148 solid hazardous material in bulk.

2. 46 CFR 30-40 - flammable and combustible liquids in bulk.
3. Packaged hazardous materials in 49 CFR 170-179. Except those preceded by "A" in Table 172.101.

E. Designated Dangerous Cargo. Class "A" explosives, both civilian and military, as classed by 46 CFR 146 and 49 CFR 172. (33 CFR 126.09)

F. Cargo of Particular Hazard. (33 CFR 126.10)

1. Class "A" explosives as defined by 46 CFR 146 and 49 CFR 173.
2. Oxidizing material or blasting agents which require a permit under 49 CFR 176.415.
3. Large quantities of radioactive materials.
4. Certain specific commodities as listed in 33 CFR 126.10(d).

Now that we have an idea what a DWFF is and what type products are considered to have properties requiring our concern, Lets' talk about what they are required to provide to insure a safe operation and what we might look for when we inspect them.

What is one condition for designation as a DWFF?

Have Students look for 126.15 if no answers.

SHOW TRANSPARENCY OF CG 4200 ON BOARD AND CHECK ITEMS AS YOU GO ALONG.

Does the guard conduct inspections of fire fighting equipment?
Yes

SHOW SLIDE OF FIRE DOOR AND DISCUSS DISCREPANCIES AND GUARD DUTIES.

Can you smoke on a DWFF?
Yes, in designated areas.

SHOW SLIDE OF SMOKING/ NO SMOKING SIGNS - STRESS OWNER DESIGNATES AREAS.

Can you weld or burn on a DWFF? Yes with COTP Hot Work Permit.
SHOW SLIDE OF GUARD AND HW PERMIT.

Should you insure local Fire Marshall is aware of Hot Work? Yes, may be local ordinance affected.

Can Trucks and Motor Vehicles park on DWFF just anywhere? No.
SHOW SLIDE OF TRUCK

What should we be looking for when we check pier automotive equipment such as forklift?

SHOW SLIDE OF PIER EQUIP. AND STRESS FIRE EXTINGUISHERS AND FUELING FREE from EXCESS grease, OIL OR LINT NOT TO CONSTITUTE FIRE HAZ

Can you burn rubbish on a DWFF in an open container? No.
SHOW SLIDE OF RUBBISH BURNING.

Where must maintenance supplies be kept on a DWFF?
SHOW SLIDE OF MAINTENANCE SUPPLY AREAS

What would you look for when inspecting electric wiring?
SHOW SLIDE OF ELECTRIC WIRING REQUIREMENTS.

Are open fires permissible to keep people warm? No.
SHOW SLIDE OF HEATING EQUIPMENT

(DON'T FORGET THE CG 4200 ON THE BOARD)

II. INSPECTION OF DWFF. (33 CFR 126.15)

A. Guards. Provided by the owner or operator to provide surveillance, unlawful entry, detect fire hazards and check fire fighting equipment. NFPA has 2 standards.

1. Guard Service (NFPA 601)
2. Guard Operations (NFPA 601A)

B. Smoking. Smoking areas must be designated. Guards enforce this provision.

C. Welding and Hot Work.

1. NFPA - 51 Welding & Cutting
2. NFPA - 51B Welding Processes.
3. NFPA - 306 Control of Gas Hazards on vessels to be welded.

D. Trucks and Motor Vehicles. Should be off when being loaded or offloaded and driver should be in attendance.

E. Pier Automotive Equipment.

- sive oil and grease
1. Must be kept free of excessive oil and grease.
 2. Fire Extinguishers.

F. Rubbish and Waste Material. Ensure fire safety not affected and access/regress not impeded.

G. Maintenance Stores and Supplies. Must be stored remotely.

H. Electric Wiring.

1. Conformity with local codes, National Electric codes, UL, Etc.
2. Bare and loose wires prohibited.
3. Defective insulation.
4. Improper overload protection.
5. Rust & lint on motors.

I. Heating Equipment.

1. Safely Installed and properly operating. See National Board of Fire Underwriters Building Code for guidance.

How much fire extinguishing equipment is required?

SHOW SLIDE OF FIRE EXTINGUISHER

How are Fire Appliances marked?

SHOW SLIDE OF MARKED EXTINGUISHERS

Lighting must be adequate. Use common sense and good judgement.
SHOW SLIDE OF LIGHTING.

REMIND CLASS TO LOOK AT WAREHOUSE PROFILE IN HANDOUT.

Can anyone tell me one requirement for the arrangement of cargo?
ASK FOR MORE REQUIREMENTS AS THE CLASS RESPONDS.

SHOW NEXT SIX SLIDE OF CARGO ARRANGEMENTS AND EXPAND ON THEM.
THEY FOLLOW M 1 TO 6 IN OUTLINE ON THE OPPOSITE PAGE.

Who determines adequacy of guarding, fire extinguishing equipment and lighting?

SHOW SLIDE OF ADEQUACY DEFINITION AND SPEND TIME MAKING CLEAR
THAT THE OWNER OPINION IS CONSIDERED SATISFACTORY UNLESS GROSS
NON COMPLIANCE CAN BE SHOWN.

What additional requirement must a FACILITY OF PARTICULAR HAZARD have? Warning light or alarm, COMDT recommends red light see MSM VOL II.

STOP AT THIS POINT AND ADVISE STUDENTS THAT THE REMAINING REQUIREMENTS WILL BE COVERED IN THE NEXT LESSON. Then go on with the following:

Explain briefly permit to handle designated dangerous cargo. Hand out sample permit and inform student further instruction concerning these form will be given later in course.

NOTE: The facility can handle only cargo and amount specified.

How often does the COMDT say we should inspect DWFF?
NOTE YOU WILL PROBABLY GET LITTLE OR NO RESPONSE, SO GO OVER MISSION PERFORMANCE STANDARDS IN A LECTURE METHOD.

J. Fire Extinguishing equipment. Adequate quantity, type and location. NFPA Standards apply.

K. Marking of Fire Appliance Locations. Equipment should be numbered and marked on facility floor plan. Normally red and should not be obstructed by cargo.

L. Lighting. Self explanatory

M. Arrangement of Cargo, freight, merchandise or material.

1. At least 2 feet of free open space, free of rubbish, etc. between cargo and walls.

2. Flammable or combustible cargo tiered no higher than 12 feet.

a. Not less than 36 inches from beams with at least 12 inches clearance from sprinkler heads.

3. 4 feet clearance around fire alarms, hoses sprinkler valves, fire doors, etc.

4. 3 feet aisle running to center aisle when fire equipment is surrounded by cargo.

5. 20 foot main aisle when fire trucks are required, and 8 foot main aisle when not required.

6. 5 foot cross aisles not to exceed 75 foot intervals.

N. Adequacy. Determination which a reasonable person would make under the circumstances of the particular case. Unless GROSS noncompliance the OWNER'S JUDGEMENT IS considered acceptable.

O. Warning Devices for FOPH - Siren, rotating flashing light seen or heard for one mile. (33 CFR 126.16(b))

III APPLICATION TO HANDLE DESIGNATED DANGEROUS CARGO (CG 4269).

A. Used by facility to request permission.

B. Used by COTP to permit modify and/or deny.

IV. MISSION PERFORMANCE STANDARDS. Best estimate of optimum utilization of CG funds. PRODUCTIVITY EXPECTATIONS- minimum level of performance expected of a unit.

A. COMDTINST 5010.7 of 21 Dec 81.

1. Spot checks bi-monthly
2. Yearly inspection.

V. SUMMARY.

- A. Review 126 and MSM.
- B. Review application for permit.
- C. Performance Standards.

APPENDIX F

FACILITY INSPECTOR TRAINING GUIDE

This Appendix contains the field training guide for waterfront facility inspectors.

U.S. Department
of Transportation
United States
Coast Guard



MARINE SAFETY TRAINING AND QUALIFICATION FACILITY INSPECTOR (FD)



MARINE SAFETY TRAINING GUIDE

FACILITY INSPECTOR (FI)

This booklet is one section of your personal OJT Manual and serves two purposes. First it lists and defines all of the things that you should observe while participating in your unit's On-the-Job Training Program. You should note the dates on which you observed a qualified person perform, and/or explain, each of the items listed. You make these notations in the Date Observed column of this booklet.

Second, this booklet lists and defines all of the things that you must do to demonstrate your ability to carry out the functions and responsibilities required of each marine safety task comprising this section. It represents your On-the-Job guide to qualification in this area of marine safety work. All of the training that you are to receive in resident courses, correspondence courses, unit provided lesson plans and exercises, and on-the-job, are listed here. Your responsibility for documenting completed resident training and unit training items is self explanatory. For On-the-Job training, a person already qualified in this area, called a verifying officer, is to observe you perform each of the items listed, note the date on which you correctly performed each item, and sign in the appropriate space provided in your booklet. It may be necessary to perform an item several times. The verifying officer will not give credit for any task that is not performed satisfactorily.

Carefully note those items listed as "Optional" in this section of your OJT Manual. This notation indicates that your command will determine whether or not that item must be completed in order for you to finish training in this area. You should discuss these "Optional" items with your Training Officer/Coordinator, or other Command designated representative.

You should actively search for identical items that you may have completed in other sections of your OJT Manual. In some cases your command may desire that these items be repeated for each section even though they are very similar, or even identical to items that you have completed in this or other sections. Repeating important tasks several times can provide valuable reinforcement. Your command will determine whether or not such reinforcement training is necessary or desirable for each of these redundant sections. Once again, you should discuss these items with your Training Officer/Coordinator, or other Command designated representative.

When you have satisfactorily completed all of the items required by your Command for this section, your Command will issue a letter of designation to you which will become a part of your permanent record. This letter states that you have satisfactorily completed all of the training requirements for this area of designation.

NAME _____

FACILITY INSPECTOR

FI-R RESIDENT TRAINING REQUIREMENTS

- A. Complete MS 400 R, Marine Safety Petty Officer Course,
OR
- B. Complete MS 452 R, Inspection Department Course,
OR
- C. Complete MS 422 R, Port Operations Department Course.

DATE COMPLETED

--

FI-U UNIT TRAINING

- A. Complete MS 402 U 01, Facility Design And Organization
- B. Complete MS 422 U 01, Cargo Containment
- C. Complete MS 423 U 01, Pollution Avoidance
- D. Complete MS 424 U 01, Fighting Pollution

DATE COMPLETED

--

FI-1 CONDUCT PRE-INSPECTION OF FACILITY

- A. Identify various types of designated waterfront facilities and state which parts of the CFR and MSM apply.
1. Package/Dry Bulk Facility (33 CFR 126.15(a)(m).
 2. Bulk Hazardous Liquids Facility (33 CFR 126(a)-(o)).
 3. Facility of Particular Hazard (33 CFR 126.15(a)-(o), 33 CFR 126.16).
 4. Marine Oil Transfer Facility (33 CFR 154 & 156, 33 CFR 126.15(a)-(o)).
 5. Waste Reception Facility (to be developed) (33 CFR 158).
- B. Choose which standards apply to facility to be inspected (33 CFR 126.15, 154, MSM 36-2).

DATE
OBSERVED

DATE
PERFORMED

VERIFYING OFFICER
SIGNATURE

--	--	--

FI-3 INSPECT PACKAGE & DRY BULK FACILITY

DATE DATE VERIFYING OFFICER
OBSERVED PERFORMED SIGNATURE

A. Describe conditions for designation as designated waterfront facility and inspect the facility and equipment for compliance. State which parts of CFR and MSM apply.

1. Guards (33 CFR 126.15(a) and MSM 36-2-5A)
2. Smoking (33 CFR 126.15(b) and MSM 36-2-5B)
3. Welding or Hotwork
(33 CFR 126.15(c) and MSM 36-2-5C)
4. Trucks and Other Motor Vehicles
(33 CFR 126.15(d) and MSM 36-2-5D)
5. Pier Automotive Equipment
(33 CFR 126.15(e) and MSM 36-2-5E)
6. Rubbish and Waste Materials
(33 CFR 126.15(f) and MSM 36-2-5F)
7. Maintenance Stores and Supplies
(33 CFR 126.15(g) and MSM 36-2-5G)
8. Electric Wiring (33 CFR 126.15(h) and MSM 36-2-5H)
9. Heating Equipment and Open Fires
(33 CFR 126.15(i) and MSM 36-2-5I)
10. Fire Extinguishing Equipment
(33 CFR 126.15(j) and MSM 36-2-5J)
11. Marking of Fire Appliance
Locations (33 CFR 126.15(k) and MSM 36-2-5K)
12. Lighting (33 CFR 126.15(l) and MSM 36-2-5L)
13. Arrangement of Cargo, Freight
Merchandise or Material
(33 CFR 126.15(m) and MSM 36-2-5M)
14. Adequacy of Guarding,
Fire Extinguishing Equipment and
Lighting (33 CFR 126.15(n) and
MSM 36-2-5A, 36-2-5J, 36-2-5L,
and 36-2-5N)

B. Describe examples of non compliance with the above requirements.
(MSM 36-2 and local policy)

--	--	--

FI-6 INSPECT MARINE OIL TRANSFER FACILITY (Continued)

	DATE OBSERVED	DATE PERFORMED	VERIFYING OFFICER SIGNATURE
C. State which parts of the CFR, MSM, and NVC apply and inspect the facility and equipment for compliance.			
2. Loading Arms (33 CFR 154.510 and MSM 44-2-5J)			
3. Closure Devices (33 CFR 154.520)			
4. Monitoring Devices (33 CFR 154.525 and MSM 44-2-5K)			
5. Small Discharge Containment (33 CFR 154.530 and MSM 44-2-5L)			
6. Discharge Removal (33 CFR 154.540 and MSM 44-2-5M)			
7. Discharge Containment Equipment (33 CFR 154.545 and MSM 44-2-5N)			
8. Emergency Shutdown (33 CFR 154.550 and MSM 44-2-5O)			
9. Communications (33 CFR 154.560 and MSM 44-2-5P)			
10. Lighting (33 CFR 154.570 and MSM 44-2-5Q)			
11. Person In Charge (33 CFR 154.710 and 730)			
12. Compliance with Operations Manual (33 CFR 154.750)			
D. State which parts of the CFR, MSM and NVC apply and inspect the facility for compliance during oil transfers involving vessels (33 CFR 156.120, NVC 9-73, and MSM 44-2-15D)			
1. Advance notice of transfer (33 CFR 156.118)			
2. Requirements for oil transfer (33 CFR 156.120; MSM 44-2-15D)			
3. Oil discharge cleanup equipment (33 CFR 156.125; MSM 44-2-15E)			
4. Connections (33 CFR 156.130)			
5. Declaration of inspection (33 CFR 156.150; MSM 44-2-15F)			
6. Supervision by Person-in-Charge (33 CFR 156.160; MSM 44-2-15G)			
7. Equipment tests and inspections (33 CFR 156.170; MSM 44-2-15H)			

FI-Q QUALIFICATION REQUIREMENTS

SATISFACTORILY COMPLETE THE FOLLOWING:

DATE COMPLETED VERIFYING OFFICER

- FI-R RESIDENT TRAINING REQUIREMENTS
- FI-U UNIT TRAINING REQUIREMENTS
- FI-1 CONDUCT PRE-INSPECTION
- FI-2 INSPECT FACILITY DOCUMENT AND PAPERS
- FI-3 INSPECT PACKAGE & DRY BULK FACILITY
- FI-4 INSPECT BULK HAZARDOUS LIQUID FACILITY
- FI-5 INSPECT FACILITY OF PARTICULAR HAZARD
- FI-6 INSPECT MARINE OIL TRANSFER FACILITY
- FI-7 INSPECT WASTE RECEPTION FACILITY
- FI-8 TAKE FOLLOW-UP ACTION

--	--

EXAMINATION ADMINISTERED BY TRAINING BOARD

ALL QUALIFICATION REQUIREMENTS HAVE BEEN SATISFACTORILY COMPLETED.

TRAINING OFFICER/COORDINATOR

[illegible]

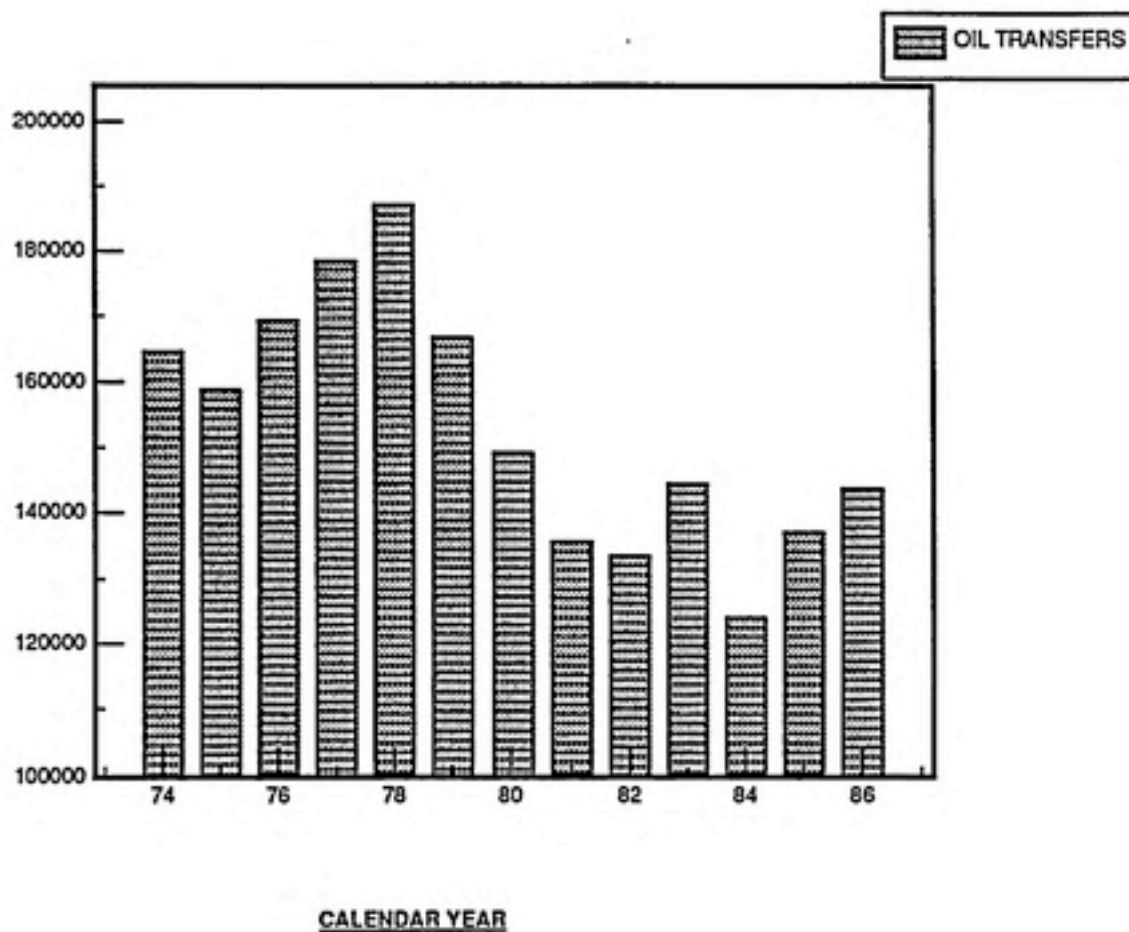
APPENDIX G

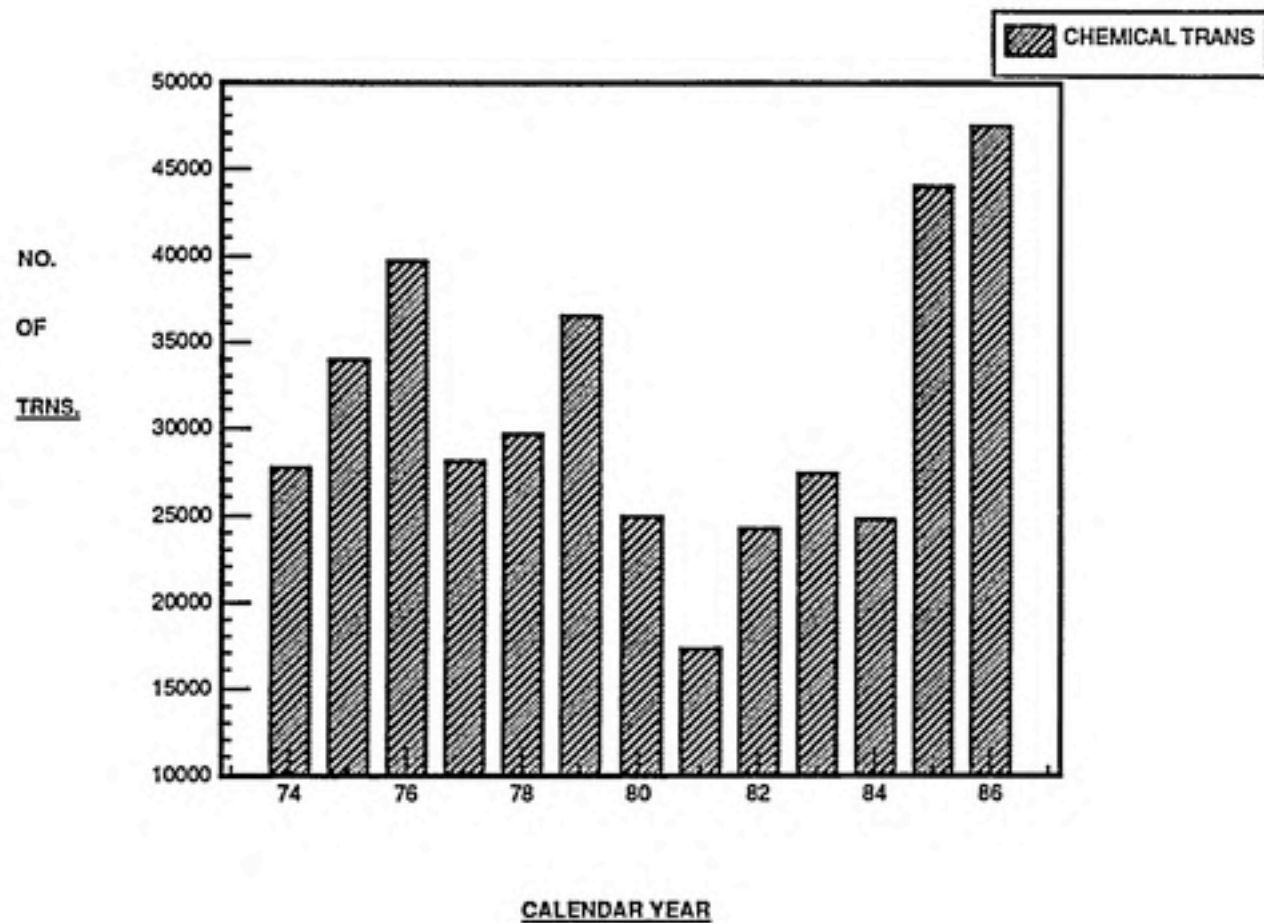
This Appendix contains oil spill, chemical spill, oil transfer, and chemical transfer data taken from the Coast Guard's Marine Safety Information System.

	OIL SPILLS	CHEMICAL SPILLS	OIL TRANSFERS	CHEMICAL TRANSFERS	OIL SPILL RATE
1974	1,602	53	164,655	27,661	9.729
1975	1,403	54	158,898	34,008	8.830
1976	1,466	63	169,397	39,679	8.654
1977	1,618	63	178,596	28,154	9.060
1978	1,753	59	186,843	29,700	9.382
1979	1,664	59	167,009	36,433	9.964
1980	1,429	23	149,326	24,919	9.570
1981	1,245	17	135,687	17,270	9.176
1982	995	12	133,513	24,254	7.452
1983	922	28	144,482	27,369	6.381
1984	914	24	124,038	24,780	7.369
1985	914	41	137,072	43,931	6.668
1986	1,326	119	413,877	47,391	9.216

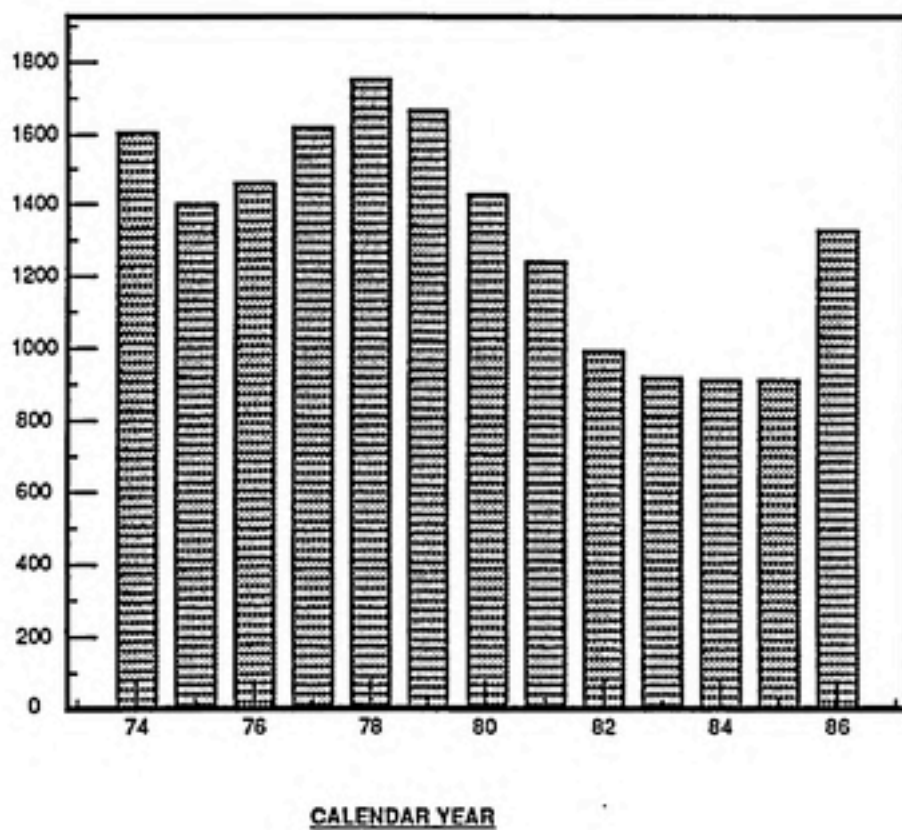
	CHEM SPILL RATE	OIL MONITORS	CHEMICAL MONITORS	% OIL MONITORED	% CHEMICAL MONITORED
1974	1.916	15,140	2,585	9.195	9.345
1975	1.588	17,286	3,306	10.879	9.721
1976	1.588	14,596	3,946	8.616	9.945
1977	2.238	17,980	4,197	10.067	14.907
1978	1.987	18,303	3,869	9.796	13.027
1979	1.619	13,906	3,746	8.326	10.282
1980	0.923	11,778	2,698	7.887	10.827
1981	0.984	10,118	2,556	7.457	14.800
1982	0.495	8,999	2,608	6.740	10.753
1983	1.023	8,075	2,915	5.589	10.651
1984	0.969	8,904	2,582	7.178	10.420
1985	0.933	5,119	1,966	3.735	4.475
1986	2.511	4,970	1,722	3.454	3.634

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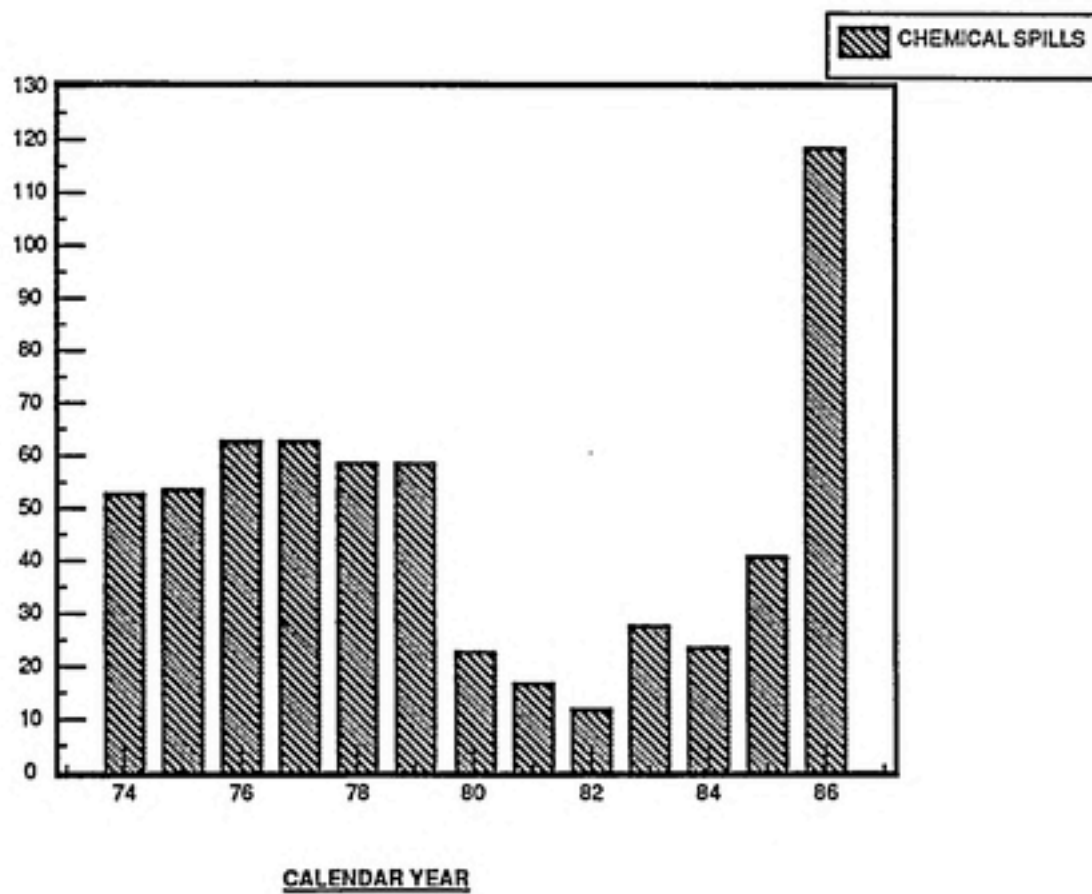


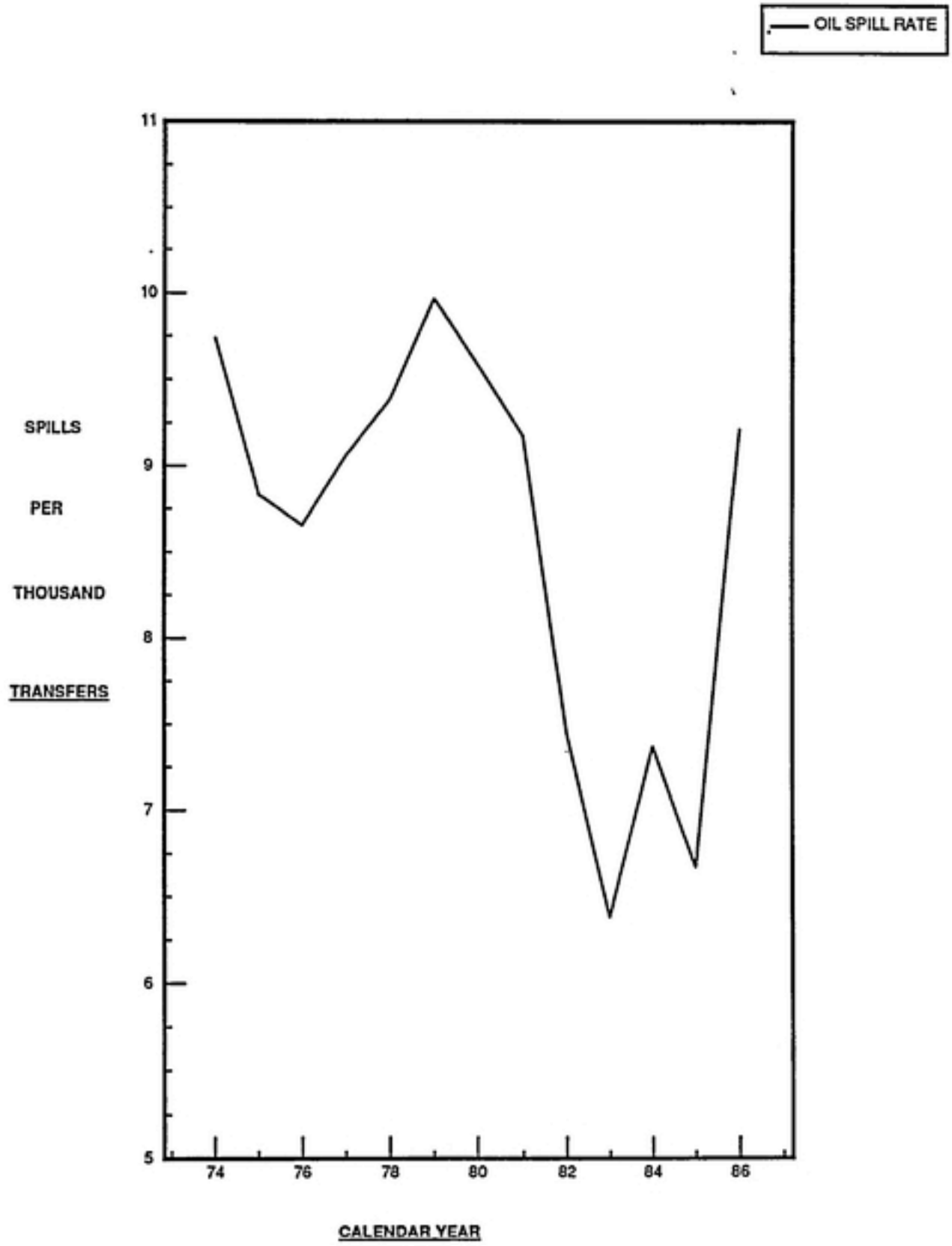


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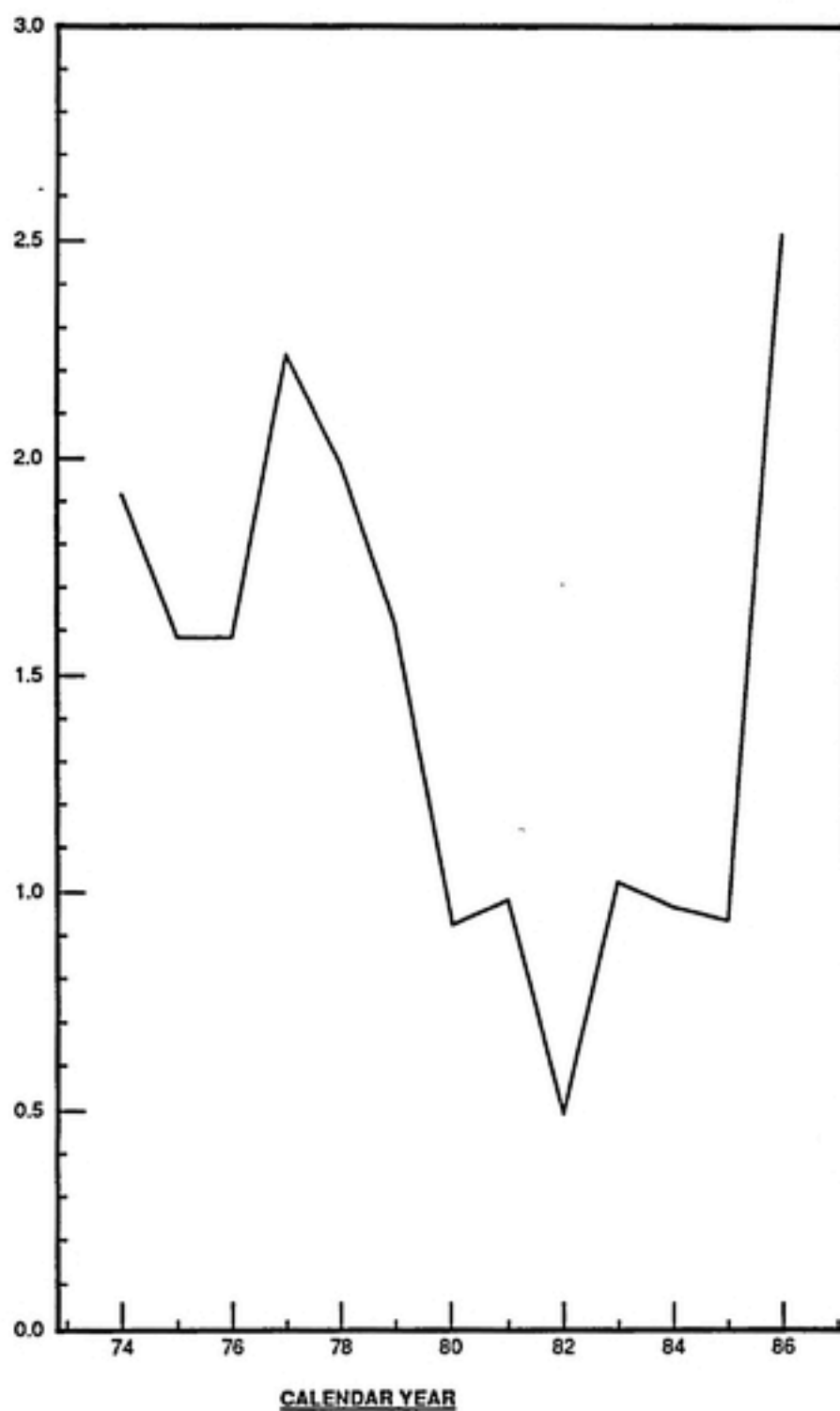
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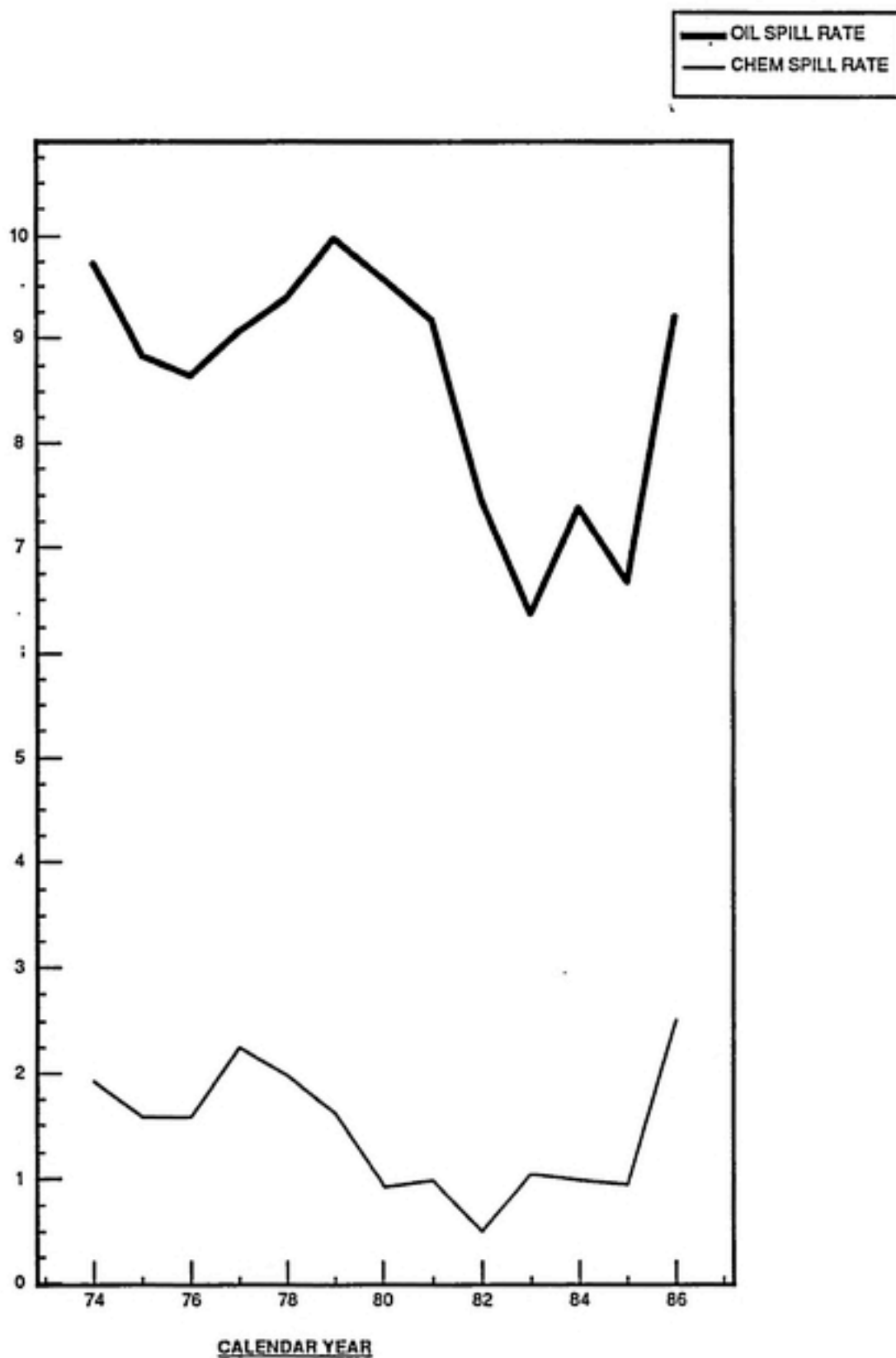


SPILLS
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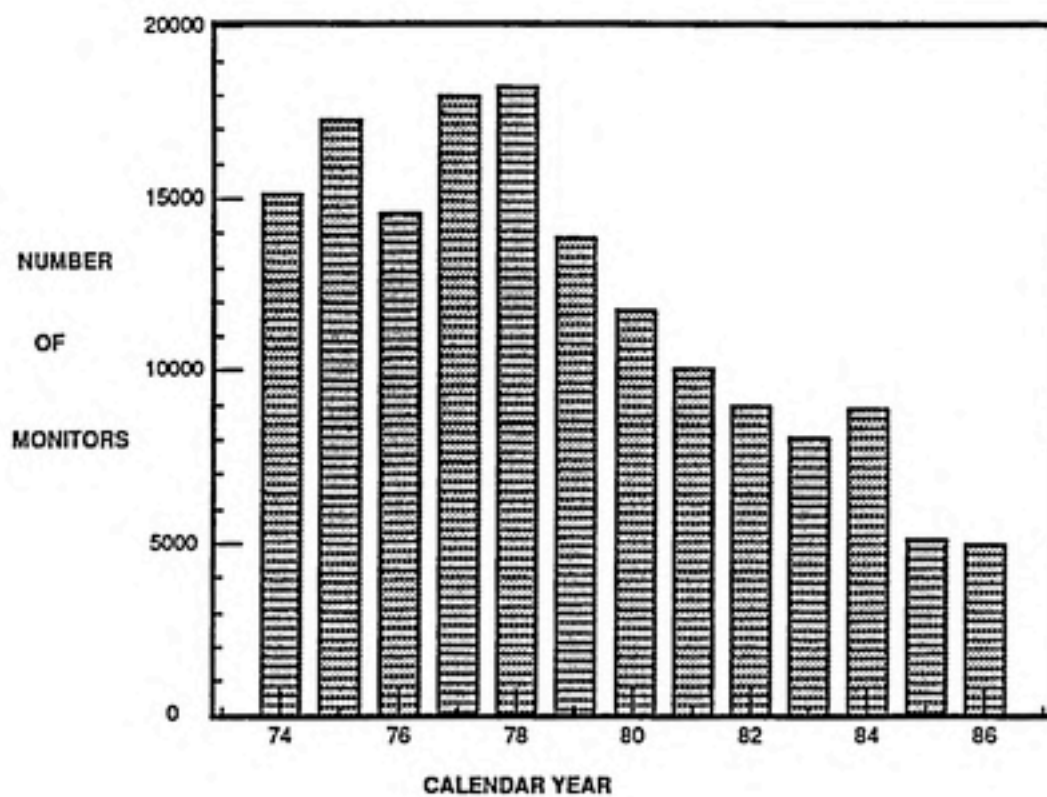
— CHEM SPILL RATE



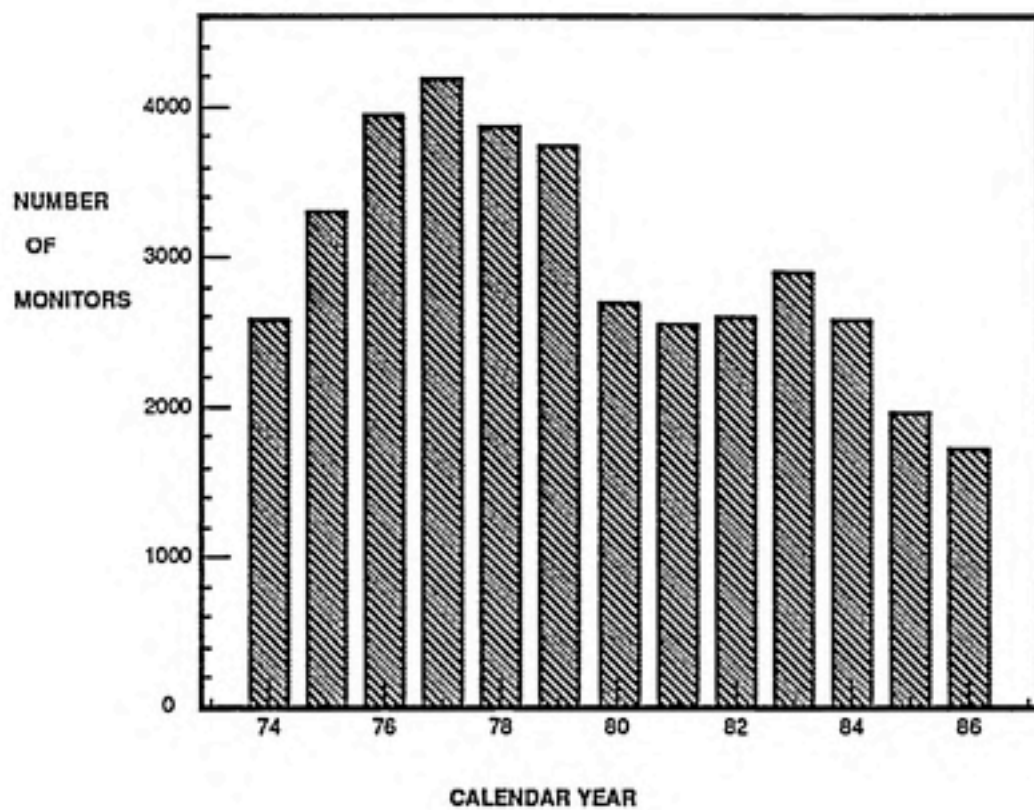
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THOUSAND
TRANSFERS



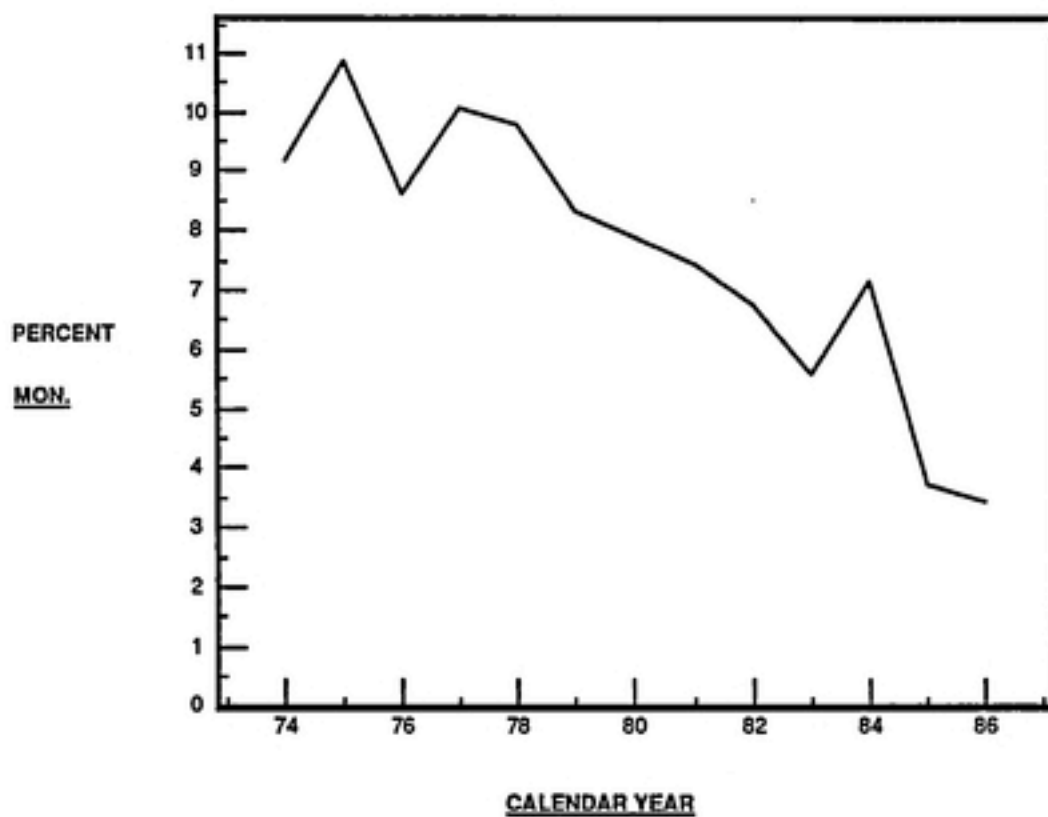
OIL TRANSFER MONITORS



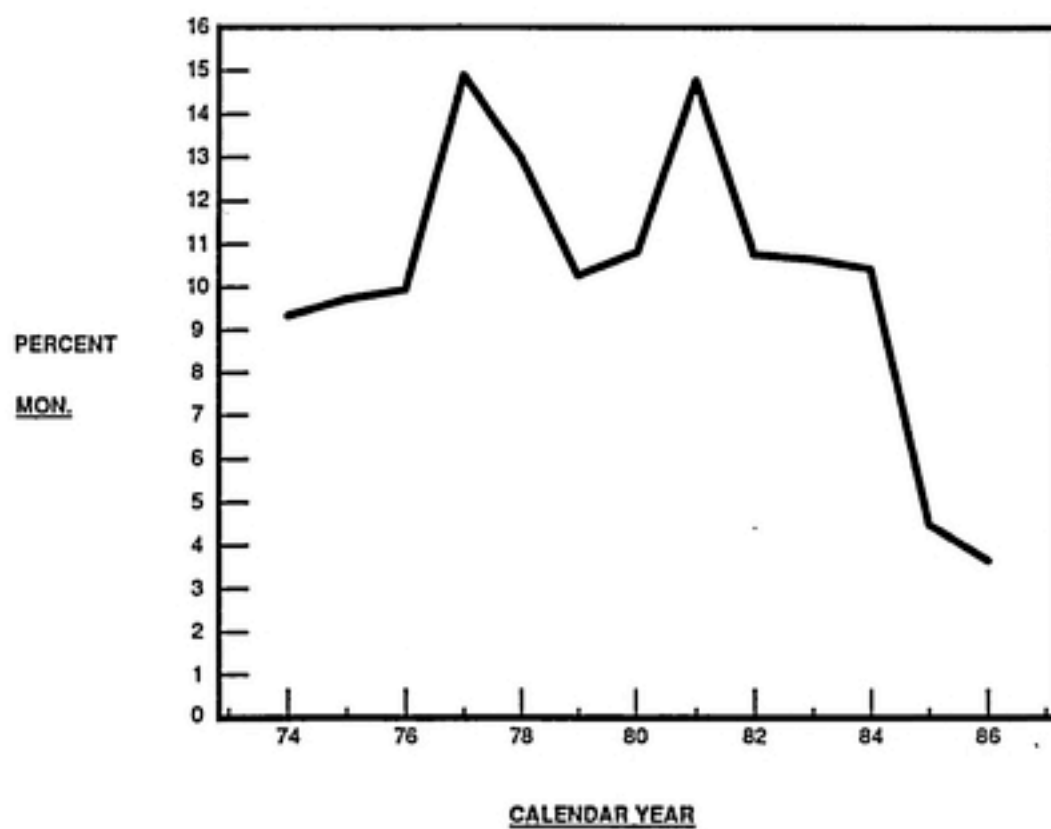
BULK LIQUID CHEMICAL MONITORS



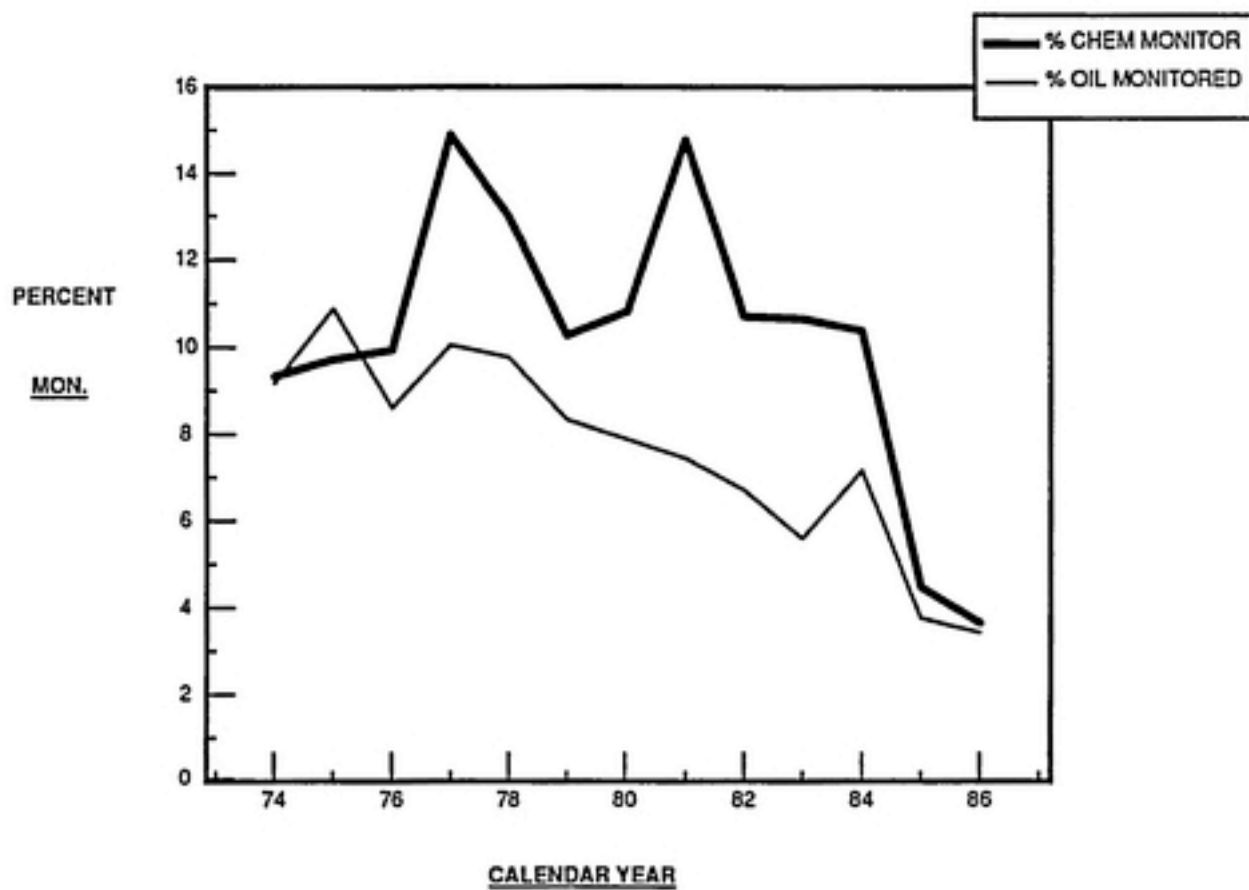
OIL TRANSFER MONITORS



CHEMICAL TRANSFER MONITORS

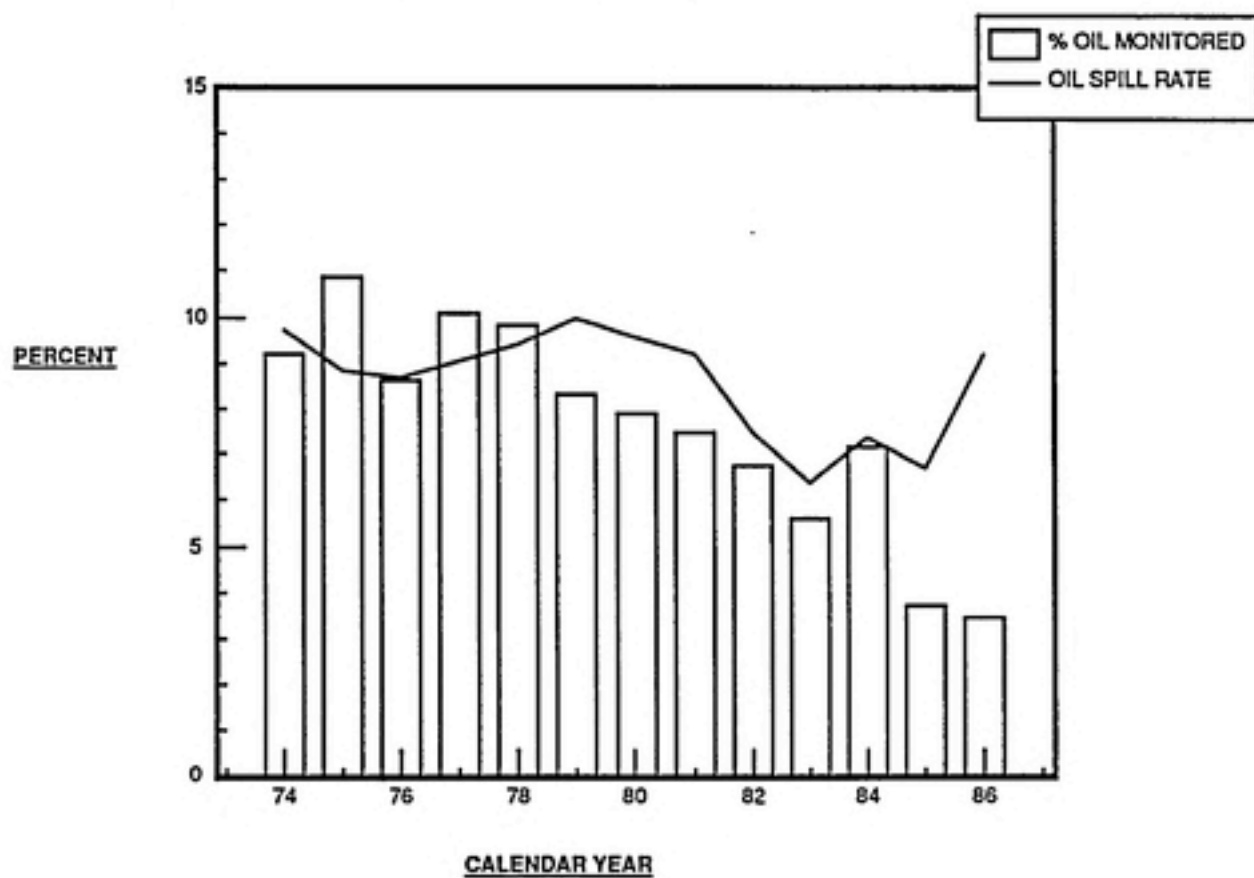


OIL AND CHEMICAL TRANSFER MONITORS



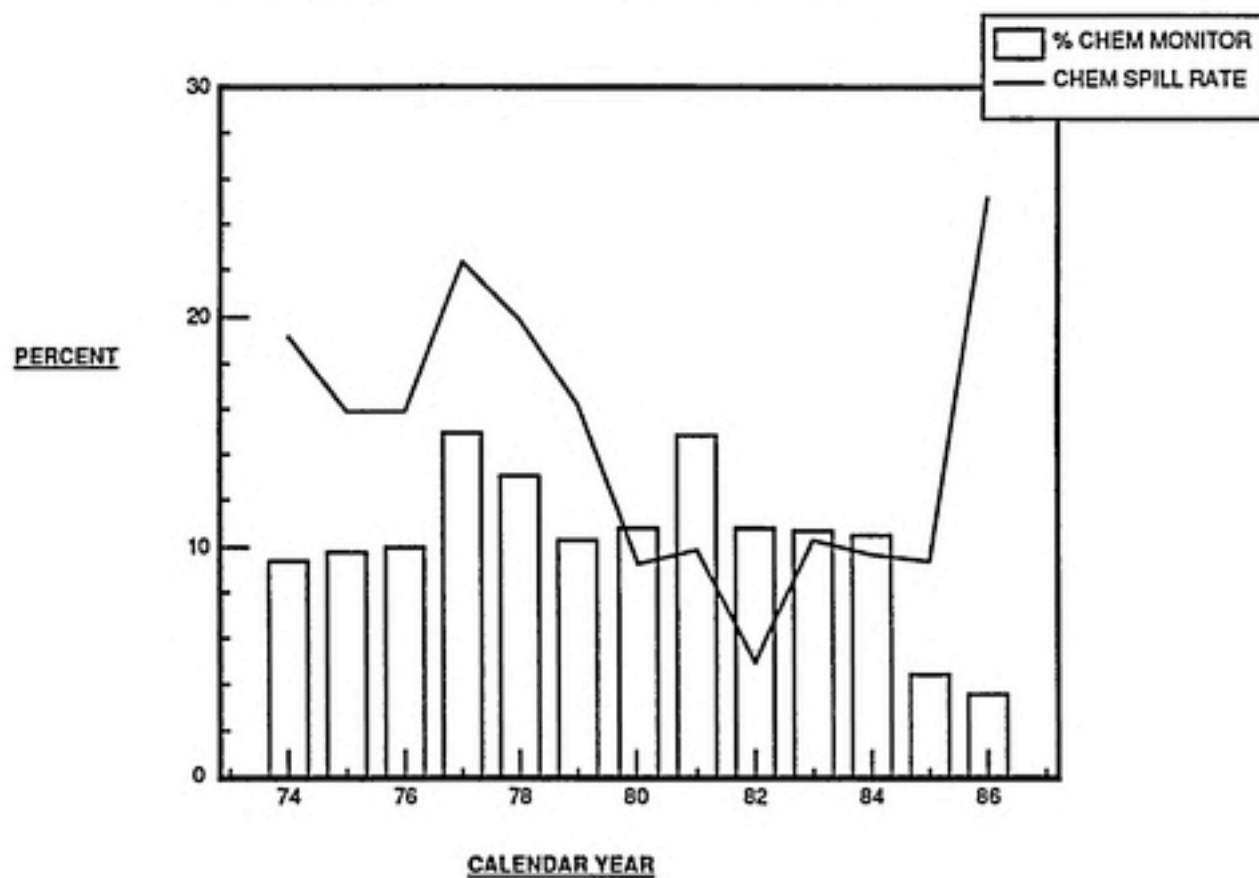
PERCENT OF OIL TRANSFERS MONITORED WITH

NUMBER OF OIL SPILLS PER 1000 TRANSFERS



PERCENT OF CHEMICAL TRANSFERS MONITORED WITH

NUMBER OF CHEMICAL SPILLS PER 10000 TRANSFERS



APPENDIX H

MARINE SAFETY MANUAL, VOL. II, CHAPTER 22

This Appendix contains the waterfront facility portion of the Coast Guard's field inspection guidance manual, the Marine Safety Manual.

MARINE SAFETY MANUAL

CHAPTER 22. MARINE FACILITIES AND STRUCTURES

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CHAPTER 22. MARINE FACILITIES AND STRUCTURES

A. Authorities.

1. Magnuson Act, 50 U.S.C. 191. This statute authorizes the President to require the safeguarding of U.S. harbors, ports, waters, and vessels and waterfront facilities therein, and all territory and water, continental or insular, subject to the jurisdiction of the U.S., whenever he finds the security of the United States to be endangered by subversive activity.
2. Ports And Waterways Safety Act (PWSA) Of 1972, 33 U.S.C. 1221-1231a. This statute promotes the safety and environmental quality of ports, harbors, waterfront areas, and navigable waters of the United States (the states, the District of Columbia, Puerto Rico, the Panama Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands). The Secretary of the Department in which the Coast Guard operates has been given broad authority to prevent damage to, or the destruction or loss of, any vessel, bridge, or other structure on or in U.S. navigable waters, or any land structure or shore area immediately adjacent to those waters; and to protect the navigable waters and resources therein from environmental harm resulting from vessel or structural damage, destruction, or loss.
3. Federal Water Pollution Control Act (FWPCA), 33 U.S.C. 1321. Section 311 of this statute prohibits discharges of oil or hazardous substances in "harmful quantities" or reportable quantities into or upon the navigable waters of the U.S. and adjoining shorelines; into or upon the waters of the contiguous zone; in waters connected with activities subject to the Outer Continental Shelf Lands Act (OCSLA) or the Deepwater Port Act (DPA) of 1974; or so as to affect natural resources belonging to, appertaining to, or under the exclusive authority of the U.S., including resources under the Fishery Conservation and Management Act of 1976. The act directed the President to determine those quantities of oil and hazardous substances that, when discharged at certain times, locations, and circumstances, may be harmful to the public health or welfare of the United States. He was authorized to delegate the administration of the act to those federal departments and agencies that he determined to be appropriate. The President delegated these functions by Executive Order (E.O.) 11735, dated 3 August 1973.
4. Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. 1331-1356. This statute, as amended, provides that the Secretary of the Department in which the Coast Guard operates may promulgate and enforce reasonable regulations with respect to lights and other warning devices, safety equipment, and other matters relating to the promotion of safety of life and property on the artificial islands and structures located on the Outer Continental Shelf (OCS) or in adjacent waters. The Secretary of the Department of Transportation (SEC DOT) has delegated this authority to the Commandant, who promulgated the safety regulations now contained in 33 CFR 140-147 (see chapter 24 of this volume).

22.A.5. E.O. 10173, As Amended By E.O.'s 10277, 10352, And 11249. These orders, issued pursuant to the Magnuson Act, 50 U.S.C. 191, declared the security of the U.S. to be endangered, and prescribed certain port security regulations (33 CFR 6) to be enforced by the Coast Guard. The Commandant was further authorized to issue supplemental regulations to carry out this program. These orders provide authority to prevent both intentional and accidental loss or destruction of vessels or waterfront facilities. Over the years, greater emphasis has been placed upon the prevention of accidental losses. As a result, the term "port safety" has become prevalent when referring to the Coast Guard's responsibilities under this order.

6. E.O. 11735. This order has delegated to the Secretary of the Department in which the Coast Guard operates, FWPCA authority for "the establishment of procedures, methods, and equipment and other requirements for equipment to prevent discharges of oil and hazardous substances from vessels and transportation related onshore and offshore facilities, and to contain such discharges." To this end, regulations for marine oil transfer facilities and oil and hazardous material transfer operations were promulgated (see 33 CFR 154-156). The Administrator of the Environmental Protection Agency (EPA) was charged with determining those quantities of oil and hazardous substances that may be harmful and those that are not.

7. Regulations.

- a. 33 CFR 6.12. These regulations authorize the Commandant to designate waterfront facilities for the handling, storage, and loading and discharging of explosives, flammable or combustible liquids in bulk, and other dangerous articles. Authority to require permits for such handling, storage, loading, and unloading is also provided. Under 33 CFR 6.14, the Commandant is authorized to prescribe conditions and restrictions relating to the safety of waterfront facilities and vessels in port, as he deems necessary.
- b. 33 CFR 126. To implement 33 CFR 6.12 and 6.14, the Commandant prescribed the supplemental regulations contained in 33 CFR 126 (Handling of Explosives or Other Dangerous Cargoes Within or Contiguous to Waterfront Facilities). These regulations designate types of waterfront facilities, permit requirements, and conditions that must be met and maintained by facilities involved in the handling, storage, loading, or discharging of explosives, flammable and combustible liquids in bulk, or other dangerous articles. Although these regulations initially were issued under the Magnuson Act, they were reissued in 1977 under authority of the PWSA. Thus, the civil and criminal penalties of the PWSA now apply to facility regulations.
- c. 33 CFR 154. These regulations apply to all onshore and offshore facilities engaged in transfer of oil in bulk to or from any vessel with a capacity of 250 or more barrels (about 10,000 gallons) (see 33 CFR 154.100 and 156.100). 33 CFR 156 applies to both the facility and the vessel during the transfer of oil to or from any vessel with a

22.A.7. c. (cont'd) capacity of 250 or more barrels on the navigable waters or contiguous zone of the United States (see chapter 31 of this volume).

d. Additional Regulations. There are various references to waterfront facilities throughout Titles 46 and 49 of the Code of Federal Regulations (CFR). These regulations were promulgated under the authority of the Hazardous Materials Transportation Act (HMTA) (49 U.S.C. 1804).

B. General Facility Concerns.

1. Facilities Discussed In E.O. 10173. E.O. 10173, as amended, prescribed the regulations contained in 33 CFR 6. The term "waterfront facility" is defined therein (see 33 CFR 6.01-4). Identifying a waterfront facility based on the definition is sometimes difficult, and the captain of the port (COTP), when making such a judgment, may be guided by the following examples:

- a. Jurisdiction. Federal jurisdiction over waterfront facilities includes any facility located on, or adjacent to, and adjoining buildings located on or contiguous to docks, wharves, or similar structures to which a vessel may be secured. Facilities used in conjunction with pier equipment, but not within the areas described above, do not come within the meaning of a waterfront facility. For example, storage tanks located beyond the immediate area of a pier facility, which are separate and distinct units connected to the pier facility only by pipeline, are not considered parts of the facility. On the other hand, tanks within the immediate confines of the vessel operating area are considered part of the facility, and jurisdiction applies to them.
- b. Contiguity Of Buildings. In 33 CFR 6.01-4, the word "contiguous" means those buildings that connect with or adjoin piers, wharves, docks, and similar structures, including those buildings that connect directly with other buildings situated in whole or in part upon such structures. Therefore, a building that is located entirely off the structure of a pier or wharf and has no direct contact with, nor adjoins, a building that meets the stated criteria, is not a contiguous building and is not part of the facility.
- c. Vessels And Other Entities. The definition of a waterfront facility does not include vessels, railways, cranes, working areas, roadways, entrance and operating areas, stock and cargo piles, storage areas, container fields, parking lots, fueling areas, storage tanks, and handling areas, unless they are located upon the structure of the pier or wharf, or within a building upon or contiguous to the structure. Hence, a vessel moored to a waterfront facility does not become part of the facility, subject to the requirements of 33 CFR 6 and 126.

22.B.2. Designated Waterfront Facilities. This term is defined in 33 CFR 126.05(a). It includes facilities that handle dangerous cargoes subject to 46 CFR 30-38, 46 CFR 146 and 148, and 49 CFR 170-179. Under the provisions of 33 CFR 126.13 these cargoes can be handled, stored, stowed, loaded, discharged, or transported only at designated waterfront facilities.

a. Exemptions. Since the definition of designated waterfront facilities limits itself to commodities "subject to" specific regulations, it follows that commodities and/or quantities exempted by those regulations need not be handled at designated waterfront facilities. For example, combustible liquids in containers of 110 gallons or less are exempt from the requirements in 49 CFR Subchapter C (49 CFR 173.118a); therefore combustible liquids in such containers need not be handled at a designated waterfront facility. However, applicability and/or exemptions in any part of the regulations must be carefully applied to that part only, unless otherwise specified in that part. Combustible liquids in drums of 110 gallons or less need not be handled at a designated waterfront facility. Conversely, a waterfront facility handling only these liquids and only in drums of less than 110 gallons is not "designated" and need not meet the conditions in 33 CFR 126.15. However, it is important to remember that if a facility does handle other materials such that it otherwise must meet those conditions, then it is a designated waterfront facility, and as such must store all combustible liquids in accordance with 33 CFR 126.15(m), regardless of the quantity in which they are packaged.

b. Limits To Applicability. Facilities which handle only certain bulk dangerous cargoes covered by 46 CFR 150-154a, if these commodities are not flammable or combustible, classified as oil, or classified as Cargo of Particular Hazard by 33 CFR 126.10, do not fall under the definition in 33 CFR 126.05(a) and are not designated waterfront facilities. In the absence of specific regulatory requirements, such facilities should be encouraged to comply with the conditions in 33 CFR 126.15 in the interest of safety. If a hazardous condition is determined to exist at such a facility, the COTP has broad authority under the Ports and Waterways Safety Act (PWSA) (33 USC 1221 et seq., and 33 CFR 160 Subpart B) to protect the safety of the port, and may:

- (1) Control the movements of vessels at the facility;
- (2) Direct the handling, loading, unloading, storage, and movement of hazardous materials; or
- (3) Order the emergency removal and disposition of dangerous cargoes.

3. Facilities Of Particular Hazard. These are designated waterfront facilities authorized to handle the cargoes listed in 33 CFR 126.10. They must meet all the conditions in 33 CFR 126.15, plus the additional requirements in 33 CFR 126.16.

22.C. Facility And Structure Inspections.1. Types Of Inspections.

- a. Semiannual Inspections Of Designated Waterfront Facilities. This is a thorough, prearranged examination of a facility to verify compliance with the regulations in 33 CFR 126 (and, if applicable, 33 CFR 154 and 156). The inspection team shall be accompanied by a facility representative, and shall cite instances of noncompliance. Discrepancies, including those corrected immediately, shall be reported to the COTP on a Waterfront Facility Inspection Report, Form CG-4200, or a locally prepared form. A copy of this report shall be provided to the facility owner or operator.
 - b. Inspection Of Artificial Islands And Structures On The OCS. Such inspections shall be conducted by the officer in charge, marine inspection (OCMI) at such time(s), as deemed necessary. Guidance on the scope of such inspections and the reporting of deficiencies is contained in 33 CFR 142 and 43 U.S.C. 1348(c) (also see chapter 24 of this volume).
2. Facility Inspection Records. Under 33 CFR 154.740, all marine oil transfer facilities must keep and make available to the COTP, a record of each inspection conducted of that facility. A similar file, for each facility, shall be maintained by the COTP.

D. Entry Into Private Property.

1. General. Entry into private property that is part of a shoreline adjoining U.S. waters may be necessary to undertake immediate response activities and subsequent investigations, and to perform inspections to ensure compliance with regulations. In G-LMI memo 5800 of 25 SEP 1972 to G-W, the Chief Counsel of the Coast Guard determined that, in general: Coast Guard personnel have the authority to enter private property on or near navigable waters without a warrant to carry out discharge response activities, and related investigations or inspections; and may also conduct warrantless administrative inspections where the property is subject to regulation concerning pollution prevention and hazardous materials.
2. Access Authorized. Inspections shall be conducted on a prearranged basis whenever practical, with a representative of the owner or operator accompanying the inspection team. Industry members have, historically, responded to the Coast Guard's needs by permitting inspection personnel almost unlimited access to their property. It is a rare occasion when a Coast Guard member is "turned away at the gate."
3. Access Denied. When this occurs, the COTP/OCMI must determine what actions are appropriate. Force shall not be used in nonemergency situations. If a search warrant is considered necessary, the district commander (dl) should be contacted for assistance. The COTP should point out to an owner who refuses entry to his or her property that:

- 22.D.3. a. The facility's general permit may be revoked if an inspection is not completed. Without inspection, there can be no verification that the facility or structure is entitled to a permit to continue operations.
- b. Vessels may be prohibited from mooring at the facility, to prevent possible damage to the vessel brought about by hazardous conditions. A vessel already moored may be required to depart the facility for the same reason.
- E. Penalty Authority Of 33 CFR 126. On 25 October 1977, the PWSA became the statutory authority for 33 CFR 126. This restatement of authority makes the civil and criminal penalties of the PWSA applicable to waterfront facility violations. Owners or operators of waterfront facilities may be cited on a Violation Report for violations of the following regulations: 33 CFR 126.13, 126.17, 126.21, 126.28, and 126.29. Noncompliance with the conditions in 33 CFR 126.15, 126.16, or 126.27 may warrant one or more of the following responses:
1. On-the-spot correction;
 2. Report of violation of 33 CFR 126.13;
 3. Action against a facility's general permit (see 33 CFR 126.31); or
 4. Referral to a U.S. Attorney for prosecution in extreme cases.
- F. Waterfront Facility Inspections.
1. Introduction. The facility inspection is generally described in section 22.C above. Before commencing such an inspection, personnel should review the inspection record of the facility concerning previous instances of noncompliance, hot work permits, outstanding deficiencies, the latest facility survey, waivers granted under 33 CFR 126.11, the facility's operations manual, etc. The Waterfront Facility Inspection Report, Form CG-4200, provides the inspection team with a listing of the conditions that must be met for the facility to handle hazardous materials. This form is ideal for the inspection of a general cargo facility.
 2. Conditions For Designation (33 CFR 126.15).
 - a. Employment Of Guards (33 CFR 126.15(a)). The intent of this requirement is to have qualified guards, in sufficient numbers to ensure adequate surveillance, prevention of unlawful entry, detection of fire hazards, and checking of readiness of protective equipment. Guards should be regularly employed and thoroughly instructed in the operation of fire alarm boxes, firehose and related equipment, and portable fire extinguishers. They should be familiar with the location of telephones and emergency equipment, other fire protection measures, and fire department notification procedures. The National Fire Protection Association (NFPA) has developed two standards applicable to guards: Guard Service - NFPA 601, and Guard Operations - NFPA 601A.

22.F.2. b. Smoking Prohibitions (33 CFR 126.15(b)). Under 46 CFR 146.29-29, smoking is prohibited on or near any vessel handling military explosives at an explosives or ammunition loading pier. Smoking areas may be designated by a facility owner/operator upon approval of the COTP, provided such areas are a safe distance from the vessel. Likewise, at least one "NO SMOKING" sign must be conspicuously posted on the pier, at a reasonable distance from the vessel. Under 49 CFR 176.171, smoking is likewise prohibited on or near any vessel loading or unloading explosives at a waterfront facility. The COTP's representative may designate areas at a safe distance from the vessel. At least one "NO SMOKING" sign must be conspicuously posted on the pier at a reasonable distance from the vessel during the handling of explosives. The COTP must be aware of any local ordinances or regulations that may affect the facility's compliance with this condition. Questionable cases should be discussed with local authorities. It is not enough for the facility owner/operator to post signs. The restriction of designated areas must be enforced by facility guards in their efforts to detect fire hazards.

c. Welding Or "Hot Work" (33 CFR 126.15(c)).

- (1) General. The intent of this requirement is to prohibit indiscriminate hot work by providing the COTP with authority to regulate such an operation. The requirements in the Welding and Hot Work Permit, Form CG-4201, outline optimum safety requirements. Local or unusual conditions may be such that not all of these requirements are necessary or feasible. In these instances, the COTP may use the waiver authority provided by 33 CFR 126.11. This regulation also prohibits welding at facilities, or on vessels moored thereto, when explosives are present. No reference is made to the different classes of explosives; therefore, this condition is overly restrictive. Here again, COTP's may use the latitude provided in 126.11 to maintain an acceptable level of safety without prohibiting the maximum use of waterfront facilities. The prime consideration in evaluating all hot work requests must be safety. If the degree of safety is questionable, a permit should not be issued. Liaison with local fire authorities should be of benefit in evaluating permit requests of a dubious nature.
- (2) References. NFPA has published the following standards for hot work: "Welding and Cutting," NFPA 51; "Welding Processes," NFPA 51B; and "Control of Gas Hazards on Vessels to be Repaired," NFPA 306. The regulations concerning welding and burning that apply to vessels moored at the facility are contained in 46 CFR 146.02-20 and 49 CFR 176.54.

d. Carriage Of Motor Vehicles (33 CFR 126.15(d)). The conditions outlined in this regulation are rather straightforward; however, additional guidance is useful. Transient trucks and automobiles should be allowed to remain on piers and wharves only for a period of time long enough to load or unload cargo. The number of vehicles

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- 22.F.2. d. (cont'd) permitted upon the pier or wharf at one time should be limited to permit free traffic flow. Vehicle engines should be stopped during loading and unloading. Filling or draining of vehicle fuel tanks, or the making of repairs, should not be permitted on the pier or wharf.
- e. Vehicle Equipment On The Pier (33 CFR 126.15(e)). Such equipment must be kept free from excessive oil, grease, and lint so as not to constitute a fire hazard. Each vehicle must carry an approved fire extinguisher. The only permitted exception is when the equipment is operating in an area where other facility extinguishers are available, and the COTP has approved this arrangement. This alternate arrangement should be noted in the COTP's facility record. Vehicle equipment shall not be repaired on a pier or wharf. All repairs should be conducted at properly protected locations. Likewise, equipment should be stored in designated areas away from the pier or wharf.
- f. Rubbish And Waste Materials (33 CFR 126.15(f)). Poor housekeeping creates a constant fire hazard. Inspectors shall be alert to:
- (1) Piles of dunnage or scrap.
 - (2) Rubbish or waste materials left on piers or wharves.
 - (3) Sloppy carpenter and paint shops, etc.
 - (4) Railcars laden with waste materials.
 - (5) Inadequate or unsuitable waste cans (rubbish should be kept in metal containers with self-shutting covers, and removed or emptied at frequent intervals to prevent dangerous accumulations).
 - (6) Hazardous accumulations of dust on trusses, girders, or other structural members.
- Inspections should not be limited to obvious areas, but should include out-of-the-way places as well. Both the insides and outsides of sheds and other buildings should be examined. Hazards and potential hazards that could cause a fire to start or hinder firefighters should be particularly noted and corrected.
- g. Maintenance Stores And Supplies (33 CFR 126.15(g)). Supplies that are regulated as "hazardous materials" under Title 46 or 49, CFR may be kept on designated waterfront facilities in amounts necessary to meet normal operating requirements. These materials must not be stored on piers or wharves, but in safe locations that are remote from combustible materials. Adequate fire extinguishing equipment should be readily available.
- h. Electrical Wiring (33 CFR 126.15(h)). New installations of electrical wiring and equipment shall conform to the current requirements of the

22.F.2. h. (cont'd) National Electric Code (NEC), and to local ordinances and regulations. Materials, fittings, and other devices must be approved for use by the Underwriters Laboratories, Inc. (UL), the Associated Factory Mutual Laboratories, or the National Bureau of Standards (NBS). Facilities must maintain existing wiring in a safe condition, without defects or modifications that could cause a fire or personal injury. Defective or dangerous wiring, equipment, and devices must be permanently disconnected. Among the electrical hazards that inspectors should look for are:

- (1) Conditions which could cause arcing;
- (2) Hazards common to electric motors:
 - (a) Location too near combustible material;
 - (b) Location in damp place subjected to corrosive vapors;
 - (c) Motor allowed to become covered with lint or dust;
 - (d) Burning out because of overloading or low voltage at motor terminals;
 - (e) Improper overcurrent protection;
 - (f) Single phasing of multiphase motors;
 - (g) Starting equipment that produces arcs; and
 - (h) Heat from starting equipment.
- (3) Electrical deficiencies:
 - (a) Bare wires;
 - (b) Loose or frayed connections;
 - (c) Overloaded outlets;
 - (d) Corroded terminals;
 - (e) Rust and lint-laden motors;
 - (f) Lack of high voltage signs near transformers and switch boxes; and
 - (g) Defective insulation.

i. Heating Methods (33 CFR 126.15(i)). The recommended guide for safe installation of heating equipment is the National Board of Fire Underwriters Building Code (current edition). Equipment must be maintained in good operating condition. Adequate clearances must be

- 22.F.2. i. (cont'd) provided to prevent undue heating of nearby combustible materials. Spark arresters are required where sparks constitute a hazard. Portable heating equipment must conform to current UL requirements, and must be installed in accordance with the NEC. Open fires in barrels, drums, or similar apparatus are prohibited.
- j. Fire Extinguishing Equipment (33 CFR 126.15(j) And (k)). Fire extinguishing equipment must be available in adequate quantities, types, and locations for the types of hazards present. Fire extinguishing and safety equipment must be maintained in good condition at all times. NFPA Pamphlets 10 and 10A provide guidance on the selection, location, and maintenance of extinguishers. Fire appliances such as hydrants, standpipes, fire extinguishers, hose stations, and fire alarm boxes must be conspicuously marked and readily accessible. The color used in marking depends upon local regulations but, generally, they are marked in red, their purpose or number shown in white lettering. The marks must be placed sufficiently high so they will not be hidden by cargo, stanchions, columns, risers, etc. All locations of fire appliances should be numbered and shown on the facility's floor plan.
- k. Lighting Methods (33 CFR 126.15(l)). Waterfront facilities must be adequately illuminated during the handling of hazardous materials. Lights should be installed over aisles and in other locations where they will not be damaged when cargo or vehicles are being worked. Light fixtures should be protected by wire guards. Open flame lights or lanterns using kerosene or gasoline are prohibited. Temporary lighting, when required, should be obtained from battery powered hand lamps or protected electric lamps that are energized from portable electric generators, located outside of the building or off the pier. The more stringent requirements of 33 CFR 154.570 shall apply to facilities transferring oil.
- l. Arrangement Of Cargoes And Materials (33 CFR 126.15(m)). Cargoes at a waterfront facility must be stowed in an orderly arrangement to permit complete access for firefighting. Under 33 CFR 126.15(m)(2), flammable or combustible cargoes, freight, merchandise, and materials (not including bulk materials) may not be tiered higher than 12 feet. This restriction is very broad in scope. Some older facilities are constructed at least partially of wood, and most materials will burn if enough heat is applied. The COTP must carefully weigh all factors if a waiver of this requirement is requested. The following NFPA pamphlets provide further guidance in cargo arrangement and storage:
- | | |
|---------------|------------------------------------|
| (1) NFPA 231 | Indoor General Storage; |
| (2) NFPA 231A | Outdoor General Storage; |
| (3) NFPA 307 | Operation of Marine Terminals; and |
| (4) NFPA 490 | Ammonium Nitrate. |

22.G. Bulk Liquid Facilities.

1. Introduction. The inspection of a bulk liquid facility may involve compliance with the regulations in 33 CFR 126 and the pollution prevention regulations in 33 CFR 154 and 156, or only parts of them. For example, the regulations contained in 33 CFR 154 and 156 do not apply to liquefied natural gas (LNG) or liquefied petroleum gas (LPG) facilities; only compliance with 33 CFR 126 is required. However, it should be noted that 33 CFR 156 may be applicable to a vessel that is moored at an LNG or LPG facility.
2. Title 46, CFR Requirements.
 - a. Watchmen (46 CFR 35.05-15). Under 46 CFR 35.05-15, at least one crewmember of a manned tank vessel must be aboard at all times, except when the vessel is gas-freed or moored at a dock or terminal at which watchman service is provided. When an unmanned barge is moored to a dock or terminal and is not gas-freed, a watchman must be provided or the cargo tank hatches must be clearly marked "DANGER - KEEP OUT" and securely dogged, so that no one can open the hatches by hand.
 - b. Smoking (46 CFR 35.30-5(d)). Smoking is prohibited on the weather decks of tank vessels moored alongside a dock.
3. Control Of Liquid Cargo Transfer Systems Under 33 CFR 126.15(o).
 - a. Introduction. The intent of 33 CFR 126.15(o) is to provide conditions that must be met for facilities to be "designated waterfront facilities."
 - b. Control And Supervision. The cargo transfer system in use must be under the continuous control and surveillance of the waterfront facility owner or operator, or an assigned representative; this latter person is considered the "person in charge" of the shoreside transfer operation. The implication is that a person shall be in charge of the shoreside transfer operation, and another person in charge of the vessel's transfer operation. [NOTE: Single-operator transfers may be permitted by the COTP, if the proposed operations provide adequately for the safety of the vessel and the facility.] Under 33 CFR 154.710 and 154.730, persons in charge must be designated in writing and must carry evidence of such designation when they are engaged in transfer operations, unless such evidence is readily available at the facility. The shoreside person in charge must be trained in, and capable of performing completely, all operations necessary for the transfer of the specific cargo; the COTP shall be provided with satisfactory evidence to this effect. The person in charge must know:
 - (1) The hazards of the cargo being transferred;
 - (2) The regulations that apply to the operation and to the cargo itself;

22.G.3.b. (3) The facility's operating procedures, local discharge reporting procedures, and emergency procedures; and

(4) The operation of the facility's cargo piping system.

c. Warning Signs And Cargo Information Cards. Warning signs are required at the facility's point of transfer. They must face perpendicular to and parallel to the shoreline, and must be unobstructed at all times during connect, transfer, and disconnect. The intent of this requirement is that the warning signs will be visible to a vessel approaching the facility directly, or from a course parallel to the shoreline from either direction. These signs must conform to the requirements in 46 CFR 151.45-2(e)(1), insofar as description and required information are concerned. Additional information on warning signs, as they apply to vessels carrying bulk cargoes, may be found in 46 CFR 35.30-1, 39.15-1, 151.45-2, and 153.955. Cargo information cards for the cargoes, being transferred must be in the possession of the shoreside person in charge. They must include information on:

- (1) Cargo Identification And Characteristics. These should include: the name of the cargo, its appearance and odor, the hazards involved and instructions on the safe handling of the cargo, and (as applicable) the need for special cargo environments.
- (2) Emergency Procedures. These should include: precautions to be observed in the event of spills, leaks, or equipment or machinery breakdown; uncontrolled release of the cargo into the waterway or atmosphere; and precautions to be observed in the event of exposure of personnel to toxic cargoes.
- (3) Firefighting Procedures. These should include: precautions to be observed in the event of a fire occurring at or adjacent to the facility, identification of firefighting appliances suitable for combatting a cargo fire, and availability of local firefighting support.

Additional information on cargo information cards for vessels carrying bulk liquid cargoes may be found in 46 CFR 151.45-2 and 153.907.

d. Actions Prior To The Transfer Of Cargoes. The person in charge shall ensure that no welding or burning or other types of repair work are conducted on the transfer system or receiving tanks during transfer operations. Any welding or burning conducted at a facility that handles or transships dangerous cargoes must be done with the COTP's approval. The person in charge shall likewise ensure that appropriate warning signs are displayed at the facility's point of transfer. Where a fixed discharge containment system is not used, the person in charge shall ensure that adequate portable containment means are provided to meet the requirements of 33 CFR 154.530. The type of material used in transfer connection joints and couplings must be suitable to make a tight seal (see 33 CFR 156.130). Under 33 CFR 126, "sufficient" bolts are required in bolted couplings to prevent

- 22.G.3. d. (cont'd) leakage; this requirement can be met by complying with 33 CFR 156.130. The on board person in charge must report that he or she is ready for the transfer of cargo; the shoreside person in charge shall, upon receiving this report, obtain a copy of the Declaration of Inspection (DOI) and shall reasonably determine that the vessel's condition is as stated on the DOI, under 46 CFR 35.35-30 and 33 CFR 156.150.
- e. Communications. Maintaining communications between the person in charge shoreside and the person in charge aboard the vessel is vital. The requirements of 33 CFR 126.15(o) shall be observed. Under the regulations for self-propelled vessels carrying hazardous liquids (46 CFR 153), the person in charge aboard a foreign tankship must be able to communicate readily, in English, with the shoreside person in charge, either directly or through an interpreter, who is available to the person in charge during the transfer. The requirements in 33 CFR 154.560 are more stringent and shall apply for facilities transferring oil.
- f. Annual Testing Requirements For Liquid Cargo Transfer Systems. The cargo hose and piping system shall be hydrostatically tested at least once each year to 1.5 times its maximum allowable working pressure (see 33 CFR 126.15(o)(7)(v)). The inherent dangers of pneumatic testing prohibit its random substitution for hydrostatic testing. If no other means of testing are available, its risks should be weighed against those of conducting no test at all. (See 46 CFR 56.97 for precautions to be taken in conducting pneumatic tests.) Alternatives are to pressurize the system slowly until relief valves engage or maximum pump pressure is reached, while continuously monitoring the system for leaks or other abnormal conditions, or substituting a nonreactive liquid for water. However, each time major alterations are made to a system, the hydrostatic test should be required. For waivers of hydrostatic tests, the following points should be considered:
- (1) Length of transfer system under evaluation;
 - (2) Access to transfer system (buried, elevated, insulated, etc.);
 - (3) The presence of any relief valves in the system and their routine maintenance schedule;
 - (4) The age of the system;
 - (5) The history of the system (e.g., what commodities the system has been used for, major alterations made); and
 - (6) The date of the last hydrostatic test.

- 22.H. Inspections Of "Facilities Of Particular Hazard." The requirements for inspecting a "facility of particular hazard" are the same as for a "designated waterfront facility," with the additional requirement for the facility to have a warning alarm (see 33 CFR 126.16(b)). This requirement does not prescribe the color of the alarm's rotating flashing light. However, amber is recommended because it is considered most effective in alerting personnel to a hazard.
- I. Inspections Of Waterfront LNG Facilities. Within the Department of Transportation (DOT), the Coast Guard and the Materials Transportation Bureau (MTB) exercise overlapping authorities to regulate the location, design, construction, maintenance, and operation of LNG facilities adjoining U.S. navigable waters. In February 1978, in recognition of the agencies' respective responsibilities, the Commandant and the Director of MTB signed a memorandum of understanding (MOU) to avoid duplication of regulatory efforts and to maximize the exchange of information. Further information in this regard can be obtained from Commandant (G-WPE).

APPENDIX I
QUARTERLY ACTIVITIES REPORT

This Appendix contains the Port and Environmental Safety/
Marine Environmental Response Activities Report. This report
is submitted quarterly by all MSOs, COTPs and MSDs.

ACTIVITY	Operations Total	Total Ops by USCG	Number by MSO Forces	Work hours by MSO Forces	Number by Reserve Forces	Work hours by Reserve Forces	Number by other CG Forces	Work hours by other CG Forces	Total Vessel Hours
FACILITIES									
Liquid bulk facility inspections									
Dry bulk facility inspections									
Facility inspections by other agencies									
Liquid bulk facility surveys									
Dry bulk facility surveys									
Facility Operations manual review									
Hot work permits									
PATROLS									
Safety zone patrols									B C
Security zone patrols									
Harbor patrols			B V		B V		B V		B C
Remote harbor patrols			B V		B V		B V		B C
VESSEL MOVEMENT CONTROL									
Vessel movement control									B C
Vessel escorts									B C
DRILLS/EXERCISES									
Contingency planning									
Contingency drills									B C
Mobilization planning									
Mobilization exercises									B C
SIV ACTIVITY									
SIV boardings									
SIV surveillance									B C

Number of Facility Violations

	33CFR 6	33CFR 126	33CFR 154	33CFR 156	33CFR 160	49CFR 170-176
Violation forwarded to district						
COTP Letter of Warning issued						
Discrepancy noted, corrected, no action						

ACTIVITY	Operations Total	Total Ops by USCG	Number by HSO Forces	Work hours by HSO Forces	Number by Reserve Forces	Workhours by Reserve Forces	Number by other CG Forces	Work hours by other CG Forces	Total Vessel Hours
POLLUTION ACTIVITY									
Pollution investigations for oil/unknown substance									B
Pollution investigations for hazardous substances									C
Monitored oil pollution removals									B
Monitored hazardous substance removals									C
Supervised oil pollution removals									B
Supervising hazardous substances removals									C
Pollution violation reports									
MISC ACTIVITIES									B
Firefighting									C
COTP orders									
Port security cards									
ACCIDENT INVESTIGATIONS									
Facility incident investigations									
Bridge incident investigation									
Unusual occurrence investigations									
Other Coast Guard vessel hours									

Additional Work Hours

	HSO Work hours	Reserve Work hours		HSO Work hours	Reserve Work hours
Training			On call watch standing		
Other PES/MER			FOIL		
Other activities			Administrative		
Live watch standing			Support		

Date Submitted	Signature of C.O.	Date of District Review	Signature
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