



Marine Environmental Response (MER) Pollution Response Tactics, Techniques, and Procedures (TTP)



U.S. Coast Guard
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Subj: MARINE ENVIRONMENTAL RESPONSE (MER) POLLUTION RESPONSE TACTICS, TECHNIQUES, AND PROCEDURES (TTP)

- Ref:
- (a) Federal Water Pollution Control Act (FWPCA), 33 U.S.C. § 1321, as amended by the Oil Pollution Act (OPA) of 1990, 33 U.S.C. §§ 2701-2762
 - (b) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9607
 - (c) USCG Marine Safety Manual, Volume I, Administration and Management, COMDTINST M16000.6 (series)
 - (d) USCG Marine Safety Manual, Volume V, Investigations and Enforcement, COMDTINST M16000.10 (series)
 - (e) National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300
 - (f) Ports and Waterways Safety - General, 33 CFR Part 160
 - (g) Marine Casualties and Investigations, 46 CFR Part 4
 - (h) Navigation and Navigable Waters, 33 U.S.C.
 - (i) MARPOL (series)
 - (j) Vessels Carrying Oil, Noxious Liquid Substances, Garbage, Municipal or Commercial Waste, and Ballast Water, 33 CFR Part 151
 - (k) CERCLA Response Authority and Associated Coast Guard Policies, COMDTINST M16465.29 (series)
 - (l) U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series)
 - (m) U.S. Coast Guard Command Center Manual (CCM), COMDTINST M3120.20 (series)
 - (n) Critical Incident Communications, COMDTINST 3100.8 (series)
 - (o) U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series)
 - (p) Assignment and Performance of Duties, 14 U.S.C. § 831
 - (q) Discharge of Oil, 40 CFR § 110.3
 - (r) Demonstration Projects, 40 CFR § 117.14
 - (s) Designation, Reportable Quantities, and Notification, 40 CFR Part 302

CGTTP 3-75.4
MER Pollution Response TTP

- (t) Determination of Reportable Quantities, 40 CFR § 302.5
- (u) Notification Requirements, 40 CFR § 302.6
- (v) Safety and Environmental Health Manual, COMDTINST M5100.47 (series)
- (w) Naval Engineering Manual, COMDTINST M9000.6 (series)
- (x) Naval Ships' Technical Manual, Chapter 074, Volume 3 - Gas Free Engineering S9086-CH-STM-030, August 1, 2011
- (y) Occupational Safety and Health Standards for Shipyard Employment, 29 CFR Part 1915
- (z) NFPA 306: Standard for the Control of Gas Hazards on Vessels, 2014 Edition
- (aa) U.S. Coast Guard Maritime Law Enforcement Manual (MLEM), COMDTINST M16247.1 (series)
- (bb) Occupational Safety and Health Standards, 29 CFR Part 1910
- (cc) Maritime Radiation Detection Policy, COMDTINST M16600.2 (series)
- (dd) Criminal Penalties, 33 CFR § 1.07-90
- (ee) Civil Penalty Enforcement (CPE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.7
- (ff) Facilities Transferring Oil or Hazardous Material in Bulk, 33 CFR Part 154
- (gg) Oil or Hazardous Material Pollution Prevention Regulations for Vessels, 33 CFR Part 155
- (hh) Worst Case Discharge, 49 CFR § 194.105
- (ii) U.S. Coast Guard Incident Management Handbook, COMDTPUB P3120.17 (series)
- (jj) National Oceanic and Atmospheric Administration Open Water Oil Identification Job Aid for Aerial Observation, Version 2, July 2012
- (kk) Coast Guard External Affairs Manual, COMDTINST M5700.13 (series)
- (ll) External Affairs Tactics, Techniques, and Procedures (TTP), CGTTP 1-04.1
- (mm) National Oceanic and Atmospheric Administration Trajectory Analysis Handbook, January 2002
- (nn) Boat Crew Seamanship Manual, COMDTINST M16114.5 (series)
- (oo) Marine Safety Manual, Volume VI, Ports and Waterways Activities, COMDTINST M16000.11
- (pp) Marine Environmental Response (MER) Administrative Orders Tactics, Techniques, and Procedures (TTP), CGTTP 3-75.3
- (qq) Captain of the Port Orders Tactics, Techniques, and Procedures (TTP), CGTTP 3-71.3
- (rr) USCG Oil Sample Handling & Transmittal Guide, January 2013
- (ss) Public Information, Agency Rules, Opinions, Orders, Records, and Proceedings, 5 U.S.C. § 552
- (tt) Commandant; General Powers, 14 U.S.C. § 93

(uu) Penalty Adjustment Table, 33 CFR § 27.3

1. PURPOSE. This publication provides standardized tactics, techniques, and procedures (TTP) to a pollution responder (PR) on conducting a standardized, thorough pollution response and ensuring effective cleanup procedures to protect human health and the environment.
2. ACTION. This CGTTP publication applies to sectors, marine safety units (MSUs), marine safety detachments (MSDs), and applicable detached units in properly responding to reports of pollution incidents involving navigable waterways of the United States (U.S.) and its territories. Internet release authorized.
3. TTP AFFECTED. None.
4. DISCUSSION. In an average year, the U.S. Coast Guard (USCG) responds to approximately 4,500 pollution incidents. When a pollution incident occurs, a PR is expected to assess the situation, conduct a preliminary investigation via information gathering, and, take necessary actions to ensure appropriate measures are considered for effective cleanup and enforcement.

This publication provides pollution responders the necessary pollution response information, recommended considerations, and best practices for performing the Marine Environmental Protection mission. More specifically, it provides information for responding to and investigating pollution incidents such as oil discharges and/or release of hazardous substances.

This TTP publication was authored and validated by accomplished performers and subject matter experts in the field. TTP publications adhere to a lifecycle maintenance periodicity unless triggered by other revision requirements.

5. DISTRIBUTION. FORCECOM TTP Division posts an electronic version of this TTP publication to the CGTTP Library on CGPortal. In CGPortal, navigate to the CGTTP Library by selecting **References > TACTICS, TECHNIQUES, AND PROCEDURES LIBRARY**. FORCECOM TTP Division does not provide paper distribution of this publication.
6. USCG FORMS. The USCG electronic forms referenced in this publication are available on the [CGPortal](#) website.

7. REQUEST FOR CHANGES. Submit recommendations for TTP improvements or corrections through the TTP Request webpage on CGPortal. In CGPortal, navigate to the TTP Request webpage by selecting **References > FORCECOM - TTP Requests**.

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By Direction of Commander,
Force Readiness Command

Table of Contents

Table of Contents.....	i
Table of Tables.....	ii
Chapter 1: Introduction	1-1
Section A: Introduction	1-2
Section B: Notes, Cautions, and Warnings.....	1-4
Chapter 2: Roles and Responsibilities of a Pollution Responder	2-1
Section A: Authorities and Jurisdictions	2-2
Section B: Roles and Responsibilities	2-6
Section C: Qualifications	2-8
Chapter 3: Preliminary Assessment	3-1
Section A: Identify Harmful Quantity and Reportable Quantity	3-2
Section B: Identify Potential Hazards and Actions	3-3
Section C: Determine Level of Investigation	3-12
Section D: Response Plans	3-15
Section E: Mission Hierarchy	3-16
Section F: Identify External and Internal Notifications	3-17
Section G: Identify the Responsible Party	3-18
Section H: Identify Spill Category	3-19
Chapter 4: Response and Investigation Efforts	4-1
Section A: Response Efforts	4-2
Section B: Investigation Efforts	4-11
Appendix A: Acronyms	A-1
Appendix B: Sample Auxiliary Assistant PR Qualification Letter	B-1
Appendix C: MER Response and Investigation Checklist	C-1
Appendix D: Enforcement Actions	D-1

Appendix E: Sample Witness/PR Statement Form	E-1
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Table of Tables

Table 3-1 Determining amount of oil remaining by appearance	3-21
Table 3-2 Classification and actions of a spill	3-22

Chapter 1: Introduction

Introduction This chapter gives an overview of the contents of this tactics, techniques, and procedures (TTP) publication. It also defines the use of notes, cautions, and warnings in TTP publications.

In This Chapter This chapter contains the following sections:

Section	Title	Page
A	Introduction	1-2
B	Notes, Cautions, and Warnings	1-4

Section A: Introduction

A.1. Introduction

In an average year, the U.S. Coast Guard (USCG) responds to approximately 4,500 pollution incidents. When a pollution incident occurs, a pollution responder (PR):

- Assesses the situation.
- Conducts a preliminary investigation via information gathering.
- Takes necessary actions to ensure use of appropriate measures for effective cleanup and enforcement.

This publication provides standardized TTP to a PR on conducting a standardized, thorough pollution response and ensuring effective cleanup procedures to protect human health and the environment.

A.2. Audience and Scope

This TTP publication aids sectors, marine safety units (MSUs), marine safety detachments (MSDs), and applicable detached units in properly responding to reports of pollution incidents involving navigable waterways of the United States (U.S.) and its territories.

It also provides PRs the necessary pollution response information, recommended considerations, and best practices for performing the marine environmental protection mission. More specifically, it provides information for responding to and investigating pollution incidents such as discharges of oil or releases of hazardous substances, pollutants, or contaminants.

The pollution response and investigation process begins with discovery or notification of a pollution event, usually made through the National Response Center (NRC), which relays information to the appropriate USCG unit. However, direct third party reports or discovery through USCG harbor patrols can also initiate responses and investigations. The process concludes following investigation and cleanup procedures and any enforcement action and cost recovery, when necessary.

A.3. Commonly Cited References

The following references are commonly cited references within this publication. As such, they will be referred to by the short title.

- Reference (a), Federal Water Pollution Control Act (FWPCA), 33 U.S.C. § 1321, as amended by the Oil Pollution Act (OPA) of 1990, 33 U.S.C. §§ 2701-2762.
 - Short title: FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762.

- Reference (b), The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9607.
 - Short title: CERCLA, 42 U.S.C. § 9607.
 - Reference (c), USCG Marine Safety Manual, Volume I, Administration and Management, COMDTINST M16000.6 (series).
 - Short title: MSM, Volume I, COMDTINST 16000.6 (series).
 - Reference (d), USCG Marine Safety Manual, Volume V, Investigations and Enforcement, COMDTINST M16000.10 (series).
 - Short title: MSM, Volume V, COMDTINST M16000.10 (series).
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Section B: Notes, Cautions, and Warnings

B.1. Overview The following definitions apply to notes, cautions, and warnings found in TTP publications.

NOTE: **An emphasized statement, procedure, or technique.**

CAUTION: **A procedure, technique, or action that, if not followed, carries the risk of equipment damage.**

WARNING: *A procedure, technique, or action that, if not followed, carries the risk of personnel injury or death.*

Chapter 2: Roles and Responsibilities of a Pollution Responder

Introduction This chapter discusses in detail the PR's roles, responsibilities, authorities, jurisdictions, and qualifications.

In This Chapter This chapter contains the following sections:

Section	Title	Page
A	Authorities and Jurisdictions	2-2
B	Roles and Responsibilities	2-6
C	Qualifications	2-8

Section A: Authorities and Jurisdictions

A.1. Pollution Responder Authorities

The Coast Guard’s marine environmental protection activities contribute to a broad range of environmental interests. The USCG receives authority to perform these activities from a variety of laws and acts.

To meet the statutory objectives, the Coast Guard may take necessary actions to protect U.S. navigable waters and resources in navigable waters from harm associated with vessel damage, destruction, or loss.

In exercising this authority, the Coast Guard:

- Directs pollution mitigation efforts for actual discharges or release of pollution as well as the potential threats of discharges or releases.
- Removes or arranges the removal of hazardous substance releases or oil discharges.
- Issues orders to protect the public health and welfare and the environment.
- Directs vessel movement.

Coast Guard regulations implementing the Ports and Waterways Safety Act (PWSA) are codified per:

- Reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300.
- Reference (f), Ports and Waterways Safety – General, 33 CFR Part 160.
- Reference (g), Marine Casualties and Investigations, 46 CFR Part 4.

A.1.a. Federal Water Pollution Control Act

Laws in reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762, provides the basic statutory authority for Coast Guard pollution prevention, contingency planning, and response activities within the 200 mile Exclusive Economic Zone (EEZ) for oil and hazardous substances.

A.1.b. Comprehensive Environmental Response, Compensation, and Liability Act

Reference (b), CERCLA, 42 U.S.C. § 9607, also known as the “Superfund,” extends response provisions per reference (a) to include a wide range of chemical pollutants and hazardous substances.

Per Definitions, Section 1471 of reference (h), Navigation and Navigable Waters, 33 U.S.C., the Intervention of the High Seas Act authorizes the Coast Guard to take actions to prevent or eliminate danger to the United States coast line from pollution due to a casualty on the high seas, including the authority to destroy a vessel and/or its cargo.

A.1.c. Marine Pollution 73/78	<p>Per Regulations for the Prevention of Pollution by Oil, Annex I; Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk, Annex II; and Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form, Annex III of reference (i), MARPOL (series), Marine Pollution (MARPOL) 73/78 is one of the most important marine environmental conventions. The International Maritime Organization (IMO) developed MARPOL to protect the marine environment from pollution arising from routine operation or accidental releases of oil and other harmful substances.</p>
A.1.d. Ports and Waterways Safety Act	<p>Per Ports and Waterways Safety Program, Chapter 25 of reference (h), Navigation and Navigable Waters, 33 U.S.C., the PWSA of 1972 provides basis for Coast Guard regulatory actions and general management of waterways to minimize environmental damage.</p>
A.1.e. Act to Prevent Pollution from Ships	<p>Per Prevention of Pollution from Ships, Section 1901 of reference (h), and per reference (j), Vessels Carrying Oil, Noxious Liquid Substances, Garbage, Municipal or Commercial Waste, and Ballast Water, 33 CFR Part 151, the Act to Prevent Pollution from Ships (APPS) implements MARPOL conventions. Annex I covers discharges of petroleum, Annex II regulates discharges of noxious liquid substances, and Annex V prohibits dumping of plastic trash anywhere in the ocean or in navigable waters of the U.S.</p>
A.2. Pollution Responder Jurisdictions	<p>Per Response Operations, Subsection 135(b) of reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, PRs should be aware of the federal on-scene coordinator's (FOSC) jurisdictional boundaries. These boundaries are generally distinguishable between the Coast Guard and the Environmental Protection Agency (EPA) by whether the incident is coastal or inland.</p> <ul style="list-style-type: none"> • Some units may have a memorandum of agreement (MOA) with the EPA that provides specific clarity as to the jurisdictional boundary between the two agencies, granting one agency primary responsibility for investigating while limiting the scope of the response to the other agency. • It is also important to delineate the MOA's on-scene coordinator (OSC) authorities to the USCG and ensure both the Coast Guard and EPA fully understand gaps or limitations in the MOA (i.e., enforcement action). <p>The National Contingency Plan (NCP) allows the Coast Guard to respond to any incident as the "first federal official," but the Coast Guard must coordinate thereafter with the designated OSC for any action beyond the initial response.</p>

The term “coastal zone” defines an area of federal responsibility for response action. The EPA and Coast Guard agreements determine and identify precise boundaries in federal regional contingency plans.

The term coastal zone, for the purpose of the NCP, is all U.S. water that is:

- Subject to the tide.
- Part of the Great Lakes.
- In specified ports and harbors on inland rivers.
- In the contiguous zone.
- Any other waters of the high seas subject to the NCP and the land surface or substrata, ground waters, and ambient air proximal to those waters.

Reference (k), CERCLA Response Authority and Associated Coast Guard Policies, COMDTINST M16465.29 (series), breaks down specific circumstances for when the USCG retains certain authorities for CERCLA cases in the coastal zone. Per On-scene Coordinators and Remedial Project Managers: General Responsibilities, Subsection 120 of reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300:

“The USCG shall provide OSCs for oil discharges, including discharges from facilities and vessels under the jurisdiction of another federal agency, within or threatening the coastal zone. The USCG shall also provide OSCs for the removal of releases of hazardous substances, pollutants, or contaminants into or threatening the coastal zone, except as provided in paragraph (b) of this section. The USCG shall not provide predesignated OSCs for discharges or releases from hazardous waste management facilities or in similarly chronic incidents. The USCG shall provide an initial response to discharges or releases from hazardous waste management facilities within the coastal zone in accordance with Department of Transportation (DOT)/EPA Instrument of Delegation (May 27, 1988) except as provided by paragraph (b) of this section. The USCG OSC shall contact the cognizant Remedial Project Manager (RPM) as soon as it is evident that a removal may require a follow-up remedial action, to ensure that the required planning can be initiated and an orderly transition to an EPA or state lead can occur.”

**A.3. On-Scene
Coordinator
Responsibilities**

The OSC's primary responsibility is to guarantee rapid, efficient mitigation of actual or threatened pollution releases and discharges.

Additionally, the OSC ensures that timely and effective response actions occur to control and remove oil discharges and hazardous substance releases, including substantial threats of discharges and releases into the coastal zone.

The OSC makes timely determination of the:

- Nature, amount, and location of the discharge.
- Potential impact on public health and welfare or on the environment.
- Countermeasures necessary to adequately contain, control, or remove the discharge.

NOTE:

The Incident Management Division (IMD), which consists of qualified PRs and a federal on-scene coordinator representative (FOSCR), perform the OSC responsibilities only by the direction of the OSC at the unit level.

**A.3.a. PR
Responsibilities**

The PR's role is to provide on-scene assessment, when safe to do so, to help the OSC determine the classification of a discharge or release and recommend removal actions.

Section B: Roles and Responsibilities

B.1. Roles and Responsibilities Overview

The PR is a duty within the IMD, working under the direction of the division chief.

Per reference (l), U.S. Coast Guard Sector Organization Manual, COMDTINST M5401.6 (series), the PR's primary responsibilities are:

- Investigate pollution cases to determine if a law violation occurred.
 - Complete proper documentation and initiate appropriate enforcement action if a violation occurred.
- Respond to pollution incidents.
- Oversee pollution cleanup and removal.

B.2. Engagement with the Command Center

The Sector Command Center (SCC) serves as an operations integration and coordination function.

Per reference (m), U.S. Coast Guard Command Center Manual (CCM), COMDTINST M3120.20 (series), the SCC:

- Coordinates diverse, multi-mission operations within the sector area of responsibility (AOR).
- Provides command and control of sector assets and coordinates with port authority; the industry stakeholder; and federal, state, and local government assets as they execute operations at the port level.
- Interacts with external organizations through routine relationships or the execution of memorandums of understanding (MOU) and MOAs between agencies.
- Works with the PR to collect crucial incident information and develop a preliminary assessment before dispatch.
- Maintains command and control, situational awareness, and information sharing for all operations within the sector.
- Can assist the PR via Marine Information for Safety and Law Enforcement (MISLE) initial actions, such as opening cases, documenting phone calls, and resource sorties.
 - It is critical for PRs to develop and maintain a strong working relationship with the SCC to ensure effective communications and risk mitigation measures when dispatched on a response.

Typically, a notification directly to the respective SCC or via a NRC report initiates a response.

**B.3. Team
Construct and
Staffing**

The pollution response team comprises a minimum of two people, one of whom is a qualified PR. Depending on the complexity of the incident, it may be necessary to involve other duty positions. It's common for a FOSCR to assist during a response, especially those needing Coast Guard funding or warranting a higher level of experience. See [Chapter 2: Roles and Responsibilities of a Pollution Responder, Section C.1.: PR Qualification](#), for further information on PR qualifications.

Situations that could involve other duty positions include:

- Responding to a spill from a commercial vessel as a result of a marine casualty. The PR can jointly respond with the duty marine inspector and/or duty marine casualty investigator.
- Discharge or release warranting a cleanup action or vessel removal with no responsible party or the owner is unwilling to fund the response.
- Cases involving media interest that warrant public affairs expertise.

Coordinating across departments can prevent duplication of efforts and lead to a more effective response in support of the marine environmental protection mission.

**B.4. Critical
Incident
Communications**

The Commandant established required notifications to the National Command Center in response to a critical incident, as defined in reference (n), Critical Incident Communications, COMDTINST 3100.8 (series). Units should develop thresholds (e.g., spill size) and pre-established procedures to make notifications both within the sector staff and external to applicable partners.

Section C: Qualifications

C.1. PR Qualification

A PR qualification allows active duty/reserve and enlisted/officer members to respond to and investigate pollution incidents.

The PR qualification ensures members have a proficient knowledge base of the USCG authority, jurisdiction, response techniques, and investigative expectations. To achieve the qualification, members complete the PR personnel qualification standard (PQS) to include attending the Pollution Incident Responder “C” School (502010) and unit oral board. Upon completion, the member receives a qualification letter.

Members are encouraged to continue with professional development by working toward the FOSCR qualification. FOSCR qualification enhances incident management expertise and allows for further response alternatives than those authorized by PRs.

C.1.a. Auxiliary Assistant PR Qualification

An Auxiliary Assistant PR qualification is available for Auxiliary workforce wishing to assist qualified PRs with duties.

Follow these steps to access the “U.S. Coast Guard Sector Auxiliary Assistant Pollution Responder Performance Qualification Standard”:

1. Go to the [U.S. Department of Homeland Security United States Coast Guard Auxiliary](#) website.
2. Navigate to the **Directorates** tab and select the **Prevention** link.
3. Select the **MS PQS** link on the left side of the page.
4. Select the “**Auxiliary Assistant Pollution Responder (AUX-ED)**” link on that page.

A sample qualification letter is in [Appendix B: Sample Auxiliary Assistant PR Qualification Letter](#).

NOTE:

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), Auxiliary members cannot independently exercise Coast Guard authority and may become personally liable for actions taken outside of prescribed directives. Do not allow an Auxiliarist to be placed in a position that compromises the limitations on the member’s authority.

C.2. PR Training Per reference (p), Assignment and Performance of Duties, 14 U.S.C. § 831, all personnel performing the marine environmental response mission must complete first responder awareness (FRA) and first responder operations (FRO) hazardous waste operators training.

NOTE:

Members can complete FRO training through the same methods as FRA as long as there is a unit specific hands-on portion of the training that is specific to the member's AOR and unit equipment.

C.2.a. Coast Guard "C" School Courses The Coast Guard also encourages PRs to complete the following Coast Guard "C" School courses:

- FOSCR (course 502272).
- Oil Spill Response Technician (course 501393).
- Oil Spill Control (course 400475).
- Hazardous Material Incident Responder (course 242100).

C.2.b. Additional Courses and Training Additional courses and training opportunities taught outside of the Coast Guard include:

- National Oceanic and Atmospheric Administration's (NOAA) Science of Oil Spill course.
 - NOAA's Science of Chemical Release course.
 - NOAA's Shoreline Cleanup Assessment technique.
 - Industry Spill Management Team exercises.
 - International Oil Spill Conference.
 - Clean Gulf and Clean Pacific Conference.
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Chapter 3: Preliminary Assessment

Introduction

This chapter discusses the steps a PR takes during the preliminary assessment of a pollution investigation.

In This Chapter

This chapter contains the following sections:

Section	Title	Page
A	Identify Harmful Quantity and Reportable Quantity	3-2
B	Identify Potential Hazards and Actions	3-3
C	Determine Level of Investigation	3-12
D	Response Plans	3-15
E	Mission Hierarchy	3-16
F	Identify External and Internal Notifications	3-17
G	Identify the Responsible Party	3-18
H	Identify Spill Category	3-19

Section A: Identify Harmful Quantity and Reportable Quantity

A.1. Identifying Harmful Quantity (Oil)

Per reference (q), Discharge of Oil, 40 CFR § 110.3, and per Oil and Hazardous Substance Liability, Section 1321 of reference (h), Navigation and Navigable Waters, 33 U.S.C., all discharges of oil that violate and are deemed “may be harmful” are those that:

- Violate applicable water quality standards;
- Cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; or;
- Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

A.2. Identifying Reportable Quantity (Hazardous Substances)

Per reference (r), Demonstration Projects, 40 CFR §117.14, and reference (s), Designation, Reportable Quantities, and Notification, 40 CFR Part 302, reportable quantities of hazardous substances are the trigger point for notifications to the NRC established by reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762 and reference (b), CERCLA, 42 U.S.C. § 9607.

Per reference (t), Determination of Reportable Quantities, 40 CFR §302.5 and reference (u), Notification Requirements, 40 CFR §302.6, if a release exceeds the final reportable quantity (RQ) in a 24-hour period, it must be reported to the NRC.

Additional guidelines:

- Per Unlisted Hazardous Substances, Part (b) of reference (t), unlisted hazardous substances have a reportable quantity of 100 pounds.
 - Per Notification Requirements, Section (b)(1)(i) of reference (u), for mixtures in which the quantities of all constituents are KNOWN: notification is required where an RQ of any constituent is released.
 - Per Notification Requirements, Section (b)(1)(ii) of reference (u), for mixtures in which the quantities of all constituents are UNKNOWN: notification is required when the total amount of the mixture or solution equals or exceeds the RQ for the constituent with the lowest RQ.
-

Section B: Identify Potential Hazards and Actions

B.1. Introduction Give great consideration to all hazards associated with incidents. Many pollution incidents have varying degrees of complexity, which often change over time. Per reference (v), Safety and Environmental Health Manual, COMDTINST M5100.47 (series), members responding to incidents will complete Hazardous Waste Operations and Emergency Response (HAZWOPER) FRO training.

During the preliminary assessment, evaluate all hazards and recommend a response through the chain of command.

NOTE:

When making the decision to respond, consider any weather conditions affecting drivability. A PR often drives to the incident location. If severe weather is in the forecast the probability for hazards increases in an already dangerous situation.

NOTE:

Field use best practice suggests the PR requests a specific safety data sheet (SDS) from the vessel or facility identifying the exact product(s). This information prevents confusion when identifying potential hazards for the pollution incident.

PRs typically give consideration to chemical and flammable hazards, while tending to overlook other environments which pose specific threats. Consider the following:

- Does the risk and reward for responding to the event balance out?
 - Document use of risk assessment tools and methodologies to properly quantify the event risk.
- Is the proper personal protective equipment (PPE) available for the response?

WARNING:

Be careful when naming chemicals. Many chemical names sound similar but carry different characteristics and different safety considerations.

**B.2.
Atmospheric
Hazards**

Typical hazards associated with pollution cases often involve atmospheric hazards. Atmospheric hazards are further broken down as:

- Oxygen deficiency.
- Explosion hazards in confined spaces.
- Toxic gases/vapors.

Oxygen deficient spaces are any space with a concentration below 19.5 percent oxygen. These spaces could be deficient due to the presence of other gases such as inert gases, welding gases, or evaporating liquids. Chemical reactions, such as rusting metal (e.g., scrap iron or tank walls) or organic decay (e.g., rotting fruit, molasses, or edible oils), can also consume oxygen.

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), all PRs shall carry gas meters in order to detect such atmospheric hazards. If an oxygen deficient space is identified during a response and access is needed, ensure the command is notified and proper safety protocol is followed in order to enter the space (i.e., Marine Chemist Certificate).

**B.2.a.
Flammable
Hazards**

Flammable and combustible cargoes or fuels present a very serious safety hazard due to a potentially explosive atmosphere. Be aware of the increased danger of explosions in spaces with oxygen enriched atmospheres. The maximum acceptable concentration of oxygen is 22 percent by volume.

**B.2.b. Toxic
Gases and Vapors**

Be familiar with three terms when referring to toxic gases and vapors:

- Immediately Dangerous to Life or Health (IDLH): The IDLH is the chemical exposure limit set by Occupational Safety and Health Administration (OSHA) and is the amount of exposure that is likely to cause death or immediate or delayed permanent health complications.
- Permissible Exposure Limit (PEL): The PEL is the chemical exposure limit set by OSHA as allowable for safe exposure of workers.
- Threshold Limit Value (TLV): The TLV is the chemical exposure concentration set by the American Conference of Governmental Industrial Hygienists (ACGIH), and is similar in nature to the PEL.

By definition, the PEL and TLV-time-weighted-average (TLV-TWA) are the concentrations of a substance to which a worker can be exposed in an average eight hour workday and 40 hour work week without adverse health effects.

B.2.c. Physical
Health and Safety
Hazards

Physical health and safety hazards include:

- Excessive levels of nonionizing and ionizing radiations.
- Noise.
- Vibration.
- Extreme temperatures.
- Extreme pressures.

In addition, the following are also physical hazards encountered in the PR field:

- Slips.
- Trips and/or falls.
- Pinching, crushing, entanglement, etc.

B.2.d. Chemical
Health and Safety
Hazards

Chemical health and safety hazards arise from excessive airborne concentrations of mists, vapors, gases, or solids in the form of dusts or fumes such as cargo hazards or decomposition hazards. In addition to the hazard of inhalation, some of these materials could act as skin irritants or be toxic by absorption through the skin.

B.2.e. Biological
Health and Safety
Hazards

Biological health and safety hazards are any living organism or its properties, such as viruses or bacteria, which can cause an adverse response in humans. These hazards can be part of the total environment or associated with a particular occupation.

There are widespread reports of work related illnesses due to biological agents, but many workplaces don't recognize the presence of such agents or the resultant illness. Estimates indicate that the population at risk for occupational biohazards is several hundred million workers worldwide.

WARNING:

“Personnel shall not enter any confined or enclosed spaces that are likely to have atmospheric hazards – oxygen depletion, flammable gases, or toxic contaminants – until they have been certified safe for entry by a designated competent person, such as a certified marine chemist, or gas free engineer (GFE),” per:

♦ *Reference (c), MSM, Volume I, COMDTINST M16000.6 (series).*

♦ *Reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series).*

♦ *Reference (v), Safety and Environmental Health Manual, COMDTINST M5100.47 (series).*

♦ *Reference (w), Naval Engineering Manual, COMDTINST M9000.6 (series).*

♦ *Reference (x), Naval Ships’ Technical Manual, Chapter 074, Volume 3 - Gas Free Engineering, S9086-CH-STM-030; August 1, 2011.*

♦ *Reference (y), Occupational Safety and Health Standards for Shipyard Employment, 29 CFR Part 1915.*

♦ *Reference (z), NFPA 306: Standard for the Control of Gas Hazards on Vessels, 2014 Edition.*

♦ *Reference (aa), U.S. Coast Guard Maritime Law Enforcement Manual (MLEM), COMDTINST M16247.1 (series).*

B.3. Control Strategies

To minimize or eliminate potential field hazards, engineering controls engineer out the hazard either by initial design specifications or by applying methods of substitution, isolation, or ventilation. Insulation to reduce noise and machinery guards are examples of engineering controls.

Administrative controls manage personnel by scheduling reduced work times in contaminate areas, implementing good work practices, employee training that includes hazard recognition, and work practices specific to the employee’s job that can help reduce exposures. Hazard communications (i.e., a sign that reads, “High noise area. Wear hearing protection”) and safe work practices are examples of administrative controls.

PPE reduces the risk of work place hazards. Hearing protection, hard hat, steel toed boots, atmospheric measuring devices, and respirators are examples of PPE.

B.4. Personal Protective Equipment

PPE helps protect members from serious workplace injuries or illnesses resulting from contact or exposure with the following hazards:

- Environmental.
- Chemical.
- Radiological.
- Physical.
- Electrical.
- Mechanical.
- Other workplace hazards.

CAUTION:

Per the following references, PRs shall not conduct operations in an environment that requires Level A, B, or C PPE. Information addressing PPE and the associated levels is in the following:

- ♦ **Reference (c), MSM, Volume I, COMDTINST M16000.6 (series).**
- ♦ **Reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series).**
- ♦ **Reference (v), Safety and Environmental Health Manual, COMDTINST M5100.47 (series).**
- ♦ **Reference (bb), Occupational Safety and Health Standards, 29 CFR § 1910.**

See [Chapter 4: Response and Investigation Efforts, Section A.8.: Site/Safety Hazards](#), for information on site safety hazards identification and controls.

B.4.a. Uses for Personal Protective Equipment

Per reference (c), MSM, Volume I, COMDTINST M16000.6 (series), chemical splash equipment consists of safety goggles and chemical protective safety boots and is required for:

- Areas around cargo manifolds.
- Pump room entries.
- Areas under fixed product lines.
- Areas around flexible hoses carrying product.
- Any place where open liquid surfaces present a potential splash hazard.
- Entering cargo holds.
- Deck areas where puddles or residues pose contact hazards.

NOTE:

Refer to reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), and reference (bb), Occupational Safety and Health Standards, 29 CFR § 1910, for further requirements and instructions regarding PPE.

**B.4.b. Types of
Required Personal
Protective
Equipment**

PPE includes a variety of devices and garments. Per reference (c), MSM, Volume I, COMDTINST M16000.6 (series), the list of PPE below is REQUIRED in the following situations:

- Level D PPE is primarily a work uniform providing minimal protection and used for nuisance contamination only. Level D consists of:
 - Operational dress uniforms (ODUs) or coveralls.
 - Boots (composite, shank, and toe).
 - Hard hat.
 - Safety glasses.
- In addition to Level D PPE, operations that involve exposure to abrasion hazards or high sun exposure need basic skin protection such as:
 - Leather gloves, except when taking oil samples.
 - Sunscreen.

The following PPE is required in these situations:

- Safety glasses.
 - Shipyard operations.
 - Any area where flying objects pose a hazard.
- Hard hats.
 - Shipyard operations.
 - Waterfront facilities.
 - Any areas where falling objects or low fixtures present a head injury hazard.

- Safety shoes.
 - Shipyard operations.
 - Waterfront facilities.
 - Vessels.
 - Off-shore facilities.
 - Any areas with fall objects or debris hazards.
- Hearing protection.
 - Single protection, such as plugs or muffs, is required in areas where the noise level exceeds 84 decibels.
 - Double protection, which is a combination of plugs and ear muffs, is required in areas where the noise level exceeds 104 decibels.
- Personal flotation devices (PFDs).
 - Underway vessel boardings.
 - Small boat activities.
 - Barge boardings.
 - Working near or above open water.

WARNING:

Contract vessels are normally used to effect clean up. PRs may need to go aboard these vessels to monitor operations. Follow the safety protocols established for the asset(s) in which embarked upon.

- Emergency escape breathing devices (EEBDs).
 - Per reference (c), MSM, Volume I, COMDTINST M16000.6 (series), carrying the EEBD is required during initial pollution response activities or other emergency response activities.

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), PRs are also required to carry the following:

- Gas meters: Capable of sensing oxygen, carbon monoxide, hydrogen sulfide (H₂S), and lower explosive limit (LEL). Refer to Confined Space Entry Policy Questions and Answers in the appendix of reference (c) for information on acceptable 4 gas levels for atmospheric hazards.
- Radiation detection equipment: Alerts personnel to the presence of radiation and detects both gamma and neutron emissions.

CAUTION:

If the radiation detector alerts, follow the approved radiation detection alarm resolution procedures and notification requirements per reference (n), Critical Incident Communications, COMDTINST M3100.8 (series) and Enclosures 3 and 4 per reference (cc), Maritime Radiation Detection Policy, COMDTINST M16600.2 (series).

**B.4.c. Additional
Personal
Protective
Equipment**

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), PPE also includes:

- Goggles.
- Long sleeve coveralls.
- Gloves.
- High visibility safety vests.
- Respirators.

NOTE:

See the “Use of Respirators by Marine Safety Personnel for Protection From Benzene” guidelines in the appendix of reference (c), MSM, Volume I, COMDTINST M16000.6 (series), when at risk of Benzene exposure.

NOTE:

Reference (c) also outlines when Coast Guard marine safety personnel use respirators in confined spaces.

B.4.d. Pollution
Responder Cold
Weather Personal
Protective
Equipment

Consider use of the following during cold weather:

- Watchcap.
 - Balaclava.
 - Inner/outer gloves.
 - Cold weather socks.
 - Base layer.
 - Insulated coveralls.
-

Section C: Determine Level of Investigation

C.1. Determine Level of Investigation

Pollution investigations mitigate damage to the environment and navigable waters of the United States. There are four levels of investigation, which require varying amounts of effort. Document these in MISLE throughout the investigation stages. Below is a list of the levels in increasing order:

- Preliminary Investigations: Per Definitions, Subsection 300.5 of reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, an initial pollution investigation is required to identify the source, magnitude, and jurisdiction of the incident.
- Data Collection Activities: Further investigation, resulting from the preliminary investigation, with a known violation per reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762, or requiring a Coast Guard response. It typically does not require significant investigative effort and consists only of collecting basic factual information for future reference and analysis.
- Informal Investigations: More exhaustive investigative efforts that are often related to a reportable marine casualty and therefore marine casualty investigation.
- Formal Investigations: Highest level of investigation that is also generally related to a reportable marine casualty and therefore marine casualty investigation.

C.1.a. Joint Marine Casualty Investigations

Per Marine Casualty or Accident, Subsection 4.03-1(b)(2)(xii) of reference (g), Marine Casualties and Investigations, 46 CFR Part 4, any occurrence involving a vessel that involves significant harm to the environment meets the definition of a marine casualty. Further, per Notice of Marine Casualty, Subsection 4.05-1(a)(8) of reference (g), the marine casualty is reportable and, with the exception of the reporting exclusions found in Reporting Exclusion, Subsection 4.01-3 of reference (g), requires submission of a Report of Marine Casualty, Commercial Diving Casualty, or Outer Continental Shelf (OCS)-Related Casualty, Form CG-2692. This is in addition to the previously existing reporting requirements per Reporting Requirements, Section 151.15 of reference (j), Vessels Carrying Oil, Noxious Liquid Substances, Garbage, Municipal or Commercial Waste, and Ballast Water, 33 CFR Part 151.

Per reference (d), MSM, Volume V, COMDTINST M16000.10 (series), when a pollution incident results from, contributes to, or qualifies as reportable marine casualty; both the investigating officer (IO) and PR shall conduct joint investigations and document them both in a single Incident Investigation Activity (IIA) within the MISLE database system.

Per reference (d), MSM, Volume V, COMDTINST M16000.10 (series), when pollution incidents involve credentialed merchant mariners, a PR shall immediately follow the chain of command to notify the unit's IOs. When there is a combined investigation, best practice is for IOs and PRs to arrange a division of responsibilities early in the investigation to avoid duplicating efforts.

C.2. Civil Investigation

Civil and/or criminal penalties may occur when the Coast Guard enforces violations of statutes, laws, and/or regulations against the responsible party. However, PRs do not conduct investigations solely to determine civil or criminal liability.

Per reference (d), appropriate action shall be taken after identifying the five elements of a violation. The five elements are explained in [Chapter 4: Response and Investigation Efforts, Section B.1.a.: Determine if the Five Elements Exist.](#)

PRs determine and recommend the civil penalty enforcement action and penalty amount after:

- Collecting the supporting evidence.
- Identifying violation history.
- Reviewing applicable laws, regulations, and orders.
- Considering all factors.

PRs can initiate the following five primary civil enforcement actions:

- Letter of warning (LOW).
- Notice of violation (NOV).
- Class I administrative penalty.
- Class II administrative penalty.
- Judicial civil penalty.

NOTE:

Civil penalty enforcement, regardless of type, is not punitive in nature. Enforcement actions correct deficiencies, deter future non-compliance, and minimize risks to persons, property, and the marine environment.

C.3. Criminal Investigation

The PR submits a criminal referral to the IO for any discharge that is intentional in nature or has egregiously aggravating factors.

Prosecution occurs in the federal court system for criminal violations. The Department of Justice (DOJ) determines the final disposition and decides whether or not, and under what conditions, to prosecute or to abandon prosecution.

Except in cases where the approval of the Commandant is required, as defined by reference (dd), Criminal Penalties, 33 CFR §1.07-90, area and district commanders are authorized to refer the case to the United States Attorney's Office for criminal prosecution per reference (ee), Civil Penalty Enforcement (CPE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.7, and reference (d), MSM, Volume V, COMDTINST M16000.10 (series).

Section D: Response Plans

D.1. Geographical Response Strategies

A geographical response strategy (GRS) is a planning document and response tool that guides response personnel in the first 24-48 hours of a spill. GRSs are part of the area contingency plan (ACP) that each coastal zone sector maintains.

GRSs provide detailed geographic information on shoreline types, sensitive natural resources, and cultural resources. The PR uses this information and the list below to develop a more effective and coordinated initial response:

- Estimates of response equipment requirements.
- Staging locations.
- Pre-identified deployment strategies for protecting sensitive environmental areas.

To ensure the use of pre-established and approved methods during the proposed response and cleanup strategies, review the following before deploying to a spill:

- ACP.
- Applicable GRSs.
- NOAA Environmental Sensitivity Index (ESI).

D.2. Facility and Vessel Response Plans

The CWA requires USCG approved facility response plans (FRP) and vessel response plans (VRP) for specific facilities and vessels. Both plans describe notification procedures and address the response to the maximum extent in a worst case scenario of discharge of hazardous substances or substantial threat of such discharge. Ensure response plans are consistent with applicable ACPs.

When a spill or release occurs from a facility or vessel requiring a VRP or FRP, it is critical that the responsible party properly activates the applicable plan. FRPs and VRPs have required actions. Some instances involve activating an Oil Spill Removal Organization (OSRO) under a pre-existing contract.

When notified of a spill or release the PR first identifies if a FRP or VRP exists and if so, communicates with the qualified individual or plan holder representative to activate it. Ideally, the SCC executes this action as part of the initial actions and/or external notifications.

Section E: Mission Hierarchy

E.1. Mission Hierarchy

Each response to a pollution incident is unique because many external factors exist. The primary goal of a PR is to ensure protection of the marine environment but sometimes, other Coast Guard missions take precedence.

For example, following the collision of two recreational vessels the primary response focus is ensuring the safety of the public. While a significant threat to the environment from ruptured fuel tanks might exist, the actions of the PR become secondary to the rescue of the individuals involved.

PRs do the following:

- Consider mission hierarchy when conducting an initial assessment and formulating a response plan.

NOTE:

It is challenging to address pollution concerns for an incident when the responsible party is unavailable for questioning (subject of a rescue, injured, etc.).

- Establish routine communication procedures with the SCC throughout the incident to maintain situational awareness.
-

Section F: Identify External and Internal Notifications

F.1. Notifications Incident notifications can come from many different sources including a NRC report, a command center notification, or even a direct phone call to the unit. It is the PR's job to verify and relay all pertinent information gathered during the notification to the proper personnel. This could include briefing external stakeholders as well as following the internal briefing thresholds.

Best practice is to create a unit specific briefing threshold for NRC reports. Understanding who is responsible for conducting the notifications is also extremely important. Consider these questions when developing the thresholds:

- Who provides stakeholder notifications, the SCC or the PR?
- Who briefs the chain of command? Remember, time spent making phone calls takes away from the PR's ability to investigate efficiently.

F.1.a. External Notifications

Do not rely solely on the NRC to notify other agencies of a spill. Many times NRC notifications to other government agencies (OGAs) transmit to satellite offices or fax machines and emails that do not have 24 hour staffing. As a PR, know the local stakeholders and, at minimum, make a courtesy phone call to those stakeholders. This additional effort strengthens relationships with port partners and also promotes a unity of effort.

F.1.b. Internal Notifications

Per Notice of Marine Casualty, Subsection 4.05-1(a)(8) of reference (g), Marine Casualties and Investigations, 46 CFR Part 4, PRs shall:

- Use the proper chain of command to immediately notify the investigations division when:
 - A pollution incident results from, or is classified as marine casualty.
 - A pollution incident directly involves a credentialed merchant mariner.
- Notify the vessel inspections division for follow up if during the course of the investigation there appears to be any sort of mechanical failure involving the vessel.

Additionally, PRs and IOs shall:

- Conduct a thorough investigation.
 - Document a single IIA in MISLE.
-

Section G: Identify the Responsible Party

G.1. Identify the Responsible Party

Using the investigation techniques in [Chapter 3: Preliminary Assessment, Section C: Determine Level of Investigation](#), identify the responsible party. Collecting evidence and using investigative techniques go hand in hand with identifying the responsible party.

Per reference (d), MSM, Volume V, COMDTINST M16000.10 (series), to properly establish that a possible source is the violating vessel or facility with a known responsible party, the source must meet one of the following sets of criteria:

Optimal Direct Evidence Case:

1. The path of the responsible party's source oil to the water; and,
2. The responsible party admits to being the source.

OR

3. Pictures and/or video showing the path from the source to the water; or,
4. The PR witnesses the discharge.

Minimal Direct Evidence Case:

1. The path of the responsible party's source oil to the water; and,
2. A witness to the discharge stating the source.

Circumstantial Evidence Case:

1. The path of the responsible party's source oil to the water; and,
2. A conclusive match between the slick and the responsible party's source oil.

OR

1. A conclusive match between the slick and the responsible party's source oil; and,
2. Conclusive non-matches between all other possible sources and the slick.

NOTE:

If the investigation results in no responsible party, or if the responsible party is unable to adequately fund the required clean-up actions, the PR can request the assistance of a FOSCR to access funding sources to ensure an adequate response.

Section H: Identify Spill Category

H.1. Introduction

The size of an actual or potential discharge or release plays a key role in determining the resources needed and notifications required during a pollution incident. Often, accurate discharge or release amounts are not available until well into a response. Therefore, a well-informed estimate is essential to taking appropriate actions early in a pollution response.

NOTE:

Field validation of initial information is crucial since amounts of material spilled and/or discharged is often under or misreported.

H.2. Determine Potential Spill Amount

When determining the potential amount of a discharge, err on the side of overestimation until determined otherwise. It is better to mobilize more responders and resources initially and then reduce the response if needed than to underestimate the spill and have to catch up.

For example: A tank vessel runs aground during a storm. The PR operates under the assumption that all oil products aboard are a potential discharge until determining that the situation is stable, confirming the number of tanks breached, etc.

H.2.a. Facility Tank Capacity

Per reference (ff), Facilities Transferring Oil or Hazardous Material in Bulk, 33 CFR Part 154, Coast Guard regulated facilities must have operational FRPs that include:

- List of products handled at each facility.
- Emergency procedures for average, most probable, maximum most probable, and worst case discharges.
- List of qualified individuals who can implement cleanup actions.

Work with the facility's qualified individuals and operators to determine discharge potential from a tank.

H.2.b. Vessel Capacity

The amount of information available to help responders estimate the size of an actual or potential discharge involving vessels varies greatly depending on the type of vessel involved.

- Vessels with VRP: Per reference (gg), Oil or Hazardous Material Pollution Prevention Regulations for Vessels, 33 CFR Part 155, vessels requiring VRPs will have information readily available on capacity of the vessel and qualified individuals capable of taking response actions.

- Other commercial vessels: Look for fuel capacity recorded in Vessel Critical Profiles located in MISLE.
- Recreational vessels: Communicate with the owner to obtain the maximum amount of fuel aboard.
 - Fishing vessels can modify tanks and fuel capacities to meet voyage requirements.
 - Ensure drawings and charts match what's currently aboard the vessel.
 - If concerns exist, consider requesting marine inspector support.
- Boat manufacturer websites: Review for information on maximum fuel capacity.

H.2.c. Tank Sounding and Strapping

Perform tank sounding and strapping to determine the volume of liquid in a tank. Compare this amount to the amount loaded before the incident to estimate the discharge amount.

NOTE:

Measurements are sometimes misleading so use with caution.

For example, damage to a tank vessel could cause product to flow internally between tanks, into the double hull void, or discharge into the water. In this case, sounding tanks may not produce an accurate amount for discharged product.

H.2.d. Pipelines

There are many variables to estimating the volume of discharge from pipelines. For guidance see reference (hh), Worst Case Discharge, 49 CFR § 194.105. The DOT's Pipeline and Hazardous Material Agency (PHMSA) maintains federal jurisdiction over land based pipelines. Jurisdiction for subsea pipelines falls under PHMSA and/or the Department of Interior's Bureau of Safety Environmental Enforcement (BSEE) depending on the function and location of the pipeline. Consult the appropriate agency when it's determined a spill is from a pipeline.

H.2.e. Discharge Amount Tools

The following can complicate estimating the amount of discharge based on area and color of a slick:

- Complexity of the slick.
- Weather conditions.
- Type of product.
- Observer's experience level.

Consult the “Oil Thickness Estimations” section of Table 3-1 and also reference (ii), U.S. Coast Guard Incident Management Handbook, COMDTPUB P3120.17 (series), for guidance.

CONVERSIONS AND EQUIVALENTS

AREA s=statute, n=nautical			
Multiply	by	to derive	
meters ²	10.76	feet ²	
feet ²	0.0929	meters ²	
kilometers ²	0.386	s. miles ²	
s. miles ²	2.59	kilometers ²	
s. miles ²	0.7548	n. miles ²	
n. miles ²	1.325	s. miles ²	
kilometers ²	0.2916	n. miles ²	
n. miles ²	3.43	kilometers ²	

TEMPERATURE	
Calculate	To derive
5/9(°F-32°)	°C
9/5°C+32°	°F

VOLUME		
Multiply	by	to derive
barrels	42	gallons
barrels	5.615	feet ³
barrels	158.9	liters
barrels	0.1589	meters ³
feet ³	7.481	gallons
gallons	3.785	liters

WEIGHT		
Multiply	by	to derive
kilograms	2.205	pounds
metric tons	0.984	long tons
metric tons	1,000	kilograms
metric tons	2,205	pounds
long tons	1,016	kilograms
long tons	2,240	pounds
short tons	907.2	kilograms
short tons	2,000	pounds

DENSITY ESTIMATIONS

	Barrels/Long Ton	
	Range	Average
Crude Oils	6.7 - 8.1	7.4
Aviation Gasolines	8.3 - 9.2	8.8
Motor Gasolines	8.2 - 9.1	8.7
Kerosenes	7.7 - 8.3	8.0
Gas Oils	7.2 - 7.9	7.6
Diesel Oils	7.0 - 7.9	7.5
Lubricating Oils	6.8 - 7.6	7.2
Fuel Oils	6.6 - 7.0	6.8
Asphaltic Bitumens	5.9 - 6.5	6.2

Notes:

- 1 Long Ton equals 2,240 pounds
- As a general approximation, use 7 barrels (300 U.S. gallons) per metric ton of oil.
- 6.4 barrels/long ton is neutrally buoyant in fresh water.
- 6.21-6.25 barrels/long ton range is generally neutrally buoyant in open ocean.

Specific Gravity of 1 or an API of 10 equals the density of fresh water.

Specific Gravity < 1 or an API > 10 indicates product is lighter than fresh water.

API Gravity = (141.5/Specific Gravity) - 131.5

Weight of Fresh Water: 8.3 pounds/gallon

Weight of Sea Water: 8.5 pounds/gallon

Note: Exact weight depends upon temperature and salinity.

OIL THICKNESS ESTIMATIONS

Standard Terminology	Approx. Oil Thickness microns		Approx. Volume of Oil US gallons per square mile	
	Low	High	Low	High
Sheen (S)	0.04	0.3	27	205
Rainbow (R)	0.3	5	205	3421
Metallic (M)	5	50	3421	34210
Transitional Dark (or True) (T)	50	200	34210	136840
Dark (or True) (D)	>200		>136840,495	
Emulsified (E)	Thickness range is very similar to dark oil			

For calculating volume: (Length) x (width) x (% distribution) x (% of standard term) x (thickness value)

For calculating total volume, add together volumes for each standard term

OIL WEATHERING PROCESS CONVERSION

Weathering Process	Conversion/ Information	Time Scale
Evaporation	Evaporation at 59°F: Gasoline:100% Diesel:80% Lt crude:40% Heavy crude:20% Bunker C:5-10%	2-5 days
Emulsification	Increases pollutant volume by 2-4 times. Slows other processes.	Rapidly w/wave action; onset can be delayed.
Dispersion	Moves oil from surface to water column.	<5 days
Dissolution	Most water-soluble oil components are toxic.	<5 days
Biodegradation	Rate depends on oil type & amount, temperature, nutrients, & oxygen. Consult NOAA.	Weeks - Months
Tarball formation	Tarballs are hard to detect, so slick only appears to go away.	Days - Weeks

COMMONLY-USED EQUATIONS

CIRCLE	CYLINDER/PIPE/TANK
Area = 3.14 x radius ²	Volume = 3.14 x radius ² x length
Circumference = 3.14 x diameter	RECTANGLE/SQUARE
SPHERE/TANK	Area = length x width
Area = 4 x 3.14 x radius ²	CUBE/BLOCK/TANK
Volume = 1.33 x 3.14 x radius ³	Volume = length x width x height

Table 3-1 Determining amount of oil remaining by appearance

Another resource for determining the amount of oil in the water is NOAA's job aid, reference (jj), National Oceanic and Atmospheric Administration Open Water Oil Identification Job Aid for Aerial Observation, Version 2, July 2012.

H.3. Oil Size Classes

Per Definitions, Section 5 of reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, oil spills are classified based on the amount discharged and if it is an inland or coastal release.

Additionally, General Pattern of Response, Section 320 of reference (e), prescribes the appropriate OSC actions to conduct for each spill category. See Table 3-2 for more information.

	Minor	Medium	Major
Inland	<1,000 gal / ~240 BBL	1,000-10,000 gal	>10,000 gal / ~2,400 BBL
Coastal	<10,000 gal / ~2,400 BBL	10,000 – 100,000 gal	>100,000 gal / 24,000 BBL
OSC Action:	Monitor the situation to ensure that proper removal action is being taken.	Recommend activation of the RRT, if appropriate.	Immediately notify the RRT and the NRT.

Table 3-2 Classification and actions of a spill

NOTE:

Any oil discharge that poses a substantial threat to public health or the environment, results in significant concern, or involves high media coverage can be classified as a major discharge, regardless of the quantitative amounts.

H.4. Hazardous Substance Release

Per Removal Site Evaluation, Section 410 of reference (e), hazardous substance releases are classified based on the level of threat to public health or welfare of the United States, determined by the OSC.

Factors to consider when determining the classification of the release include:

- Size of the release.
- Character of the release (e.g., type of substance, rate of release, liquid or gas release, etc.).
- Nature of the threat (e.g., proximity to populated areas, sensitive areas, natural resources, etc.).

H.4.a. Minor Release	A minor release poses minimal threat to public health or welfare of the United States or the environment.
H.4.b. Medium Release	A medium release does not meet the criteria for classification as a minor or major release.
H.4.c. Major Release	A major release poses a substantial threat to public health or welfare of the United States or the environment or results in significant public concern.

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Chapter 4: Response and Investigation Efforts

Introduction This chapter discusses in detail PR response and investigation efforts during a pollution incident.

In This Chapter This chapter contains the following sections:

Section	Title	Page
A	Response Efforts	4-2
B	Investigation Efforts	4-11

Section A: Response Efforts

A.1. Response Efforts

All reports of pollution incidents warrant some type of response effort, though the level of required action varies depending on the event. The following section provides steps for conducting the pollution response including when USCG involvement ceases.

A.2. Verify Preliminary Effort

Preliminary reports can vary and come from many different reporting parties. These can include federal, state, and local responders as well as citizens with little or no incident reporting experience. It is the PR's responsibility to verify the validity of the report, regardless of who reports it.

Best practice recommends the PR use the checklist in [Appendix C: MER Response and Investigation Checklist](#) during the initial information gathering part of an investigation.

Verify the incident location after receiving the initial report. Determine if the location is in the applicable AOR and that jurisdiction exists, either via regulations or MOA. Make contact with the reporting party if the response to both is **YES**.

Make contact with the reporting party first. This is the person who has the who, what, when, where, why, and how information about the incident and can "paint a picture" of what is potentially happening. Also attempt to interview someone on scene instead of a compliance or environmental safety and health person at the corporate office.

It is important to understand that a report can come from an anonymous source. Anonymous reports make the investigation more difficult as the PR now needs to use other resources to verify the report. These resources could be local marina point of contacts, boat operators, state or local stakeholders, or even the USCG Auxiliary.

The PR uses information from the initial report to determine if an on-scene response is necessary. Use the chain of command to route the incident findings through the response department. Provide the problem (i.e., the incident in question) and a solution (i.e., response strategy, no response required, etc.).

NOTE:

Refer to the checklist in [Appendix C: MER Response and Investigation Checklist](#) for preliminary investigations.

**A.2.a. Review
and Document
Weather/Tides/
Currents**

Weather, tides, and currents are critical components to successfully identifying the source for mystery spills and implementing a response strategy. Weather can also be a contributing factor to the incident itself.

As part of the investigation, PRs gather these critical pieces of information that are ultimately documented in MISLE. Understand that these components are ever changing and could be drastically different from the initial report or the PR's current location.

Weather can hurt, halt, or help response efforts.

For example, a response effort in February in Maine has drastically different weather conditions than a response effort in February in Louisiana.

With today's technology, USCG units can potentially use tablets or phones to determine weather conditions, tides, currents, or river levels. There are several free tide, weather, and current apps in the market to pre-load onto tablets or phones.

Best practice is to review data for current weather conditions and a 24 hour forecast for the incident, as well as understanding the tides, currents, and river heights.

**A.3. Brief
Command**

Briefing thresholds are developed locally with input from applicable departments. Some incidents require low-level involvement from a command prospective, but others need immediate notification directly to the sector commander. Commands define briefing expectations. Consider incorporating this guidance into the PR qualification process or in-briefing checklist.

PRs investigate the report to determine pertinent information such as:

- Threat posed to public, health, or welfare of the United States or the environment.
- Type and quantity of polluting material.
- Source of the discharge and status (e.g., secured or unsecured).

PRs also:

- Classify the size of the discharge (e.g., minor, medium, or major).
- Classify the type of discharge (e.g., substantial threat to the public health or welfare of the U.S., worst case discharge).
- Determine the course of action to ensure effective and immediate removal, mitigation, or prevention of the discharge.

A.4. Media Response

Public information is a critical factor in a response because it is how taxpayers and elected officials judge how well the USCG is responding to the incident. Often public perception of response efforts do not align with the reality of the incident, so managing communication is a consideration at all stages of a pollution response.

Public communication efforts focus on:

- Providing timely, accurate information on the status of the cleanup.
- Educating the public on USCG roles and authority.
- Working with other agencies and the responsible party to accomplish the response priorities.

A.4.a. USCG Public Affairs Policy 101

Per reference (kk), Coast Guard External Affairs Manual, COMDTINST M5700.13 (series), PRs use the following guidelines during a response:

WHO: If the PR performs an action, or is responsible for one, the PR may talk about it. If not, refer inquiries to the appropriate person. Consider a member's experience and comfort level with media interviews when deciding on the appropriate spokesperson.

WHAT: Release information with maximum disclosure and minimum delay. PR releases as much information as possible and as quickly as possible, provided that it passes the security, accuracy, policy, and propriety (SAPP) test:

- Security: Would this information violate operational security, information security, personal security, etc.?
- Accuracy: Is the information accurate?
 - DO NOT speculate.
- Policy: Does releasing this information violate any USCG policies (search and rescue [SAR] policy, ongoing investigation, personal identifiable information, etc.)?
 - Consider consulting the servicing public affairs office, or Public Information Assistance Team (PIAT) for guidance.
- Propriety: Is it proper to release this information? Is it the Coast Guard's information to release?
 - Refrain from discussing details of injuries, using profanity, etc.

HOW: Media interviews can be challenging for the inexperienced. Use these guidelines when talking to the media:

- Do not say, “No comment.” It creates the perception that the USCG is hiding something. Refer the reporter to the correct source for the information.
- Do not speculate. If you do not know an answer, say so. Tell the media someone will get back to them with the answer. Then follow through!
- Always be professional. There is no such thing as “off the record.”
- Provide information and a “command message.” Answer the question and link it to a response priority. Think, “This is what we are doing and this is why it’s important.”

WHY: USCG public affairs policy is based on the public’s right to know. Per reference (kk) Coast Guard External Affairs Manual, COMDTINST M5700.13 (series), as a government agency, the USCG is accountable to the public they ultimately serve.

A.4.b.
Media
Considerations

Consider the following in situations requiring media coverage:

- Local sensibilities/sensitivity to pollution incidents.
- Location of the spill (e.g., high traffic waterfront, remote area, resources at risk, etc.).
- Engage with IOs for ongoing investigations. Some information may not be releasable.
- Don’t forget to engage through social media. Use public affairs specialist or PIAT.
- Gainfully employ volunteers.
- Empathize with the public. We live and work in the community and their concerns are our concerns.

A.4.c. Media
Resources

Best practice is to train personnel of each media resource officer before an incident at the unit.

- Sector Public Affairs Officer: Usually a collateral duty junior officer with basic training on media relations and policies.
- Servicing Public Affairs Officers: The local subject matter experts on media engagement, imagery collection and/or release, and crisis communications.
- PIAT: Available to deploy and assist in all facets of public affairs, specializing in pollution response communications.

For more information on media resources, refer to reference (kk), Coast Guard External Affairs Manual, COMDTINST M5700.13 (series), and reference (ll), External Affairs Tactics, Techniques and Procedures, CGTTP 1-04.1.

A.5. Determine if Further Assistance is Needed

It is important for PRs to recognize when assistance is needed. For example, it is crucial to communicate the need for assistance to the FOSCR if:

- Incidents are of a large-scale nature.
- Require financial assistance or funding by the Oil Spill Liability Trust Fund (OSLTF) and/or CERCLA fund.

In addition, if the incident is of a large-scale nature, high complexity, or has high media interest, then request additional assistance from the District Response Advisory Team (DRAT) and/or Incident Management Assistance Team (IMAT), etc.

A.6. Incident Command System (ICS) 201 and 209 Forms

Though not required for every pollution incident, the Incident Command System (ICS) Incident Briefing, Form ICS-201-CG, is a helpful briefing tool for complex, long duration, or high visibility incidents. To locate Form ICS-201-CG, navigate to [CGPortal](#). Type the form number into the “Find a Form” search box. Select **ICS-201-CG** when it appears in the search box. Select **Search**. This form can be completed in the Incident Management Software System (IMSS).

The four page standardized form is useful for providing a brief description of the incident for dissemination to various parties. If needed, the form can be a starting point for further ICS forms and potentially migrated into a full incident action plan. Upload the completed Form ICS-201-CG, or any other ICS forms, into MISLE for case documentation.

Also useful is the Incident Status Summary, Form ICS-209-CG, which the PR uses to brief the chain of command. Form ICS-209-CG is a great resource if a spill has a high potential to evolve into a larger incident. It works in conjunction with Form ICS-201-CG as a more detailed incident brief.

Form ICS-201-CG typically works as an incident action plan in the initial reactive phase of a response, whereas Form ICS-209-CG allows for a better and more detailed summary of the incident.

A.6.a. Situation Reports – Pollution (SITREP-POL)	<p>Situation Reports – Pollution (SITREP-POL) help with the dissemination of pertinent incident information to a wide Coast Guard audience. The SITREP-POL documents actions and decision making processes to reduce the burden of excessive briefs to various Coast Guard parties.</p> <p>PRs release a SITREP-POL for any of the following circumstances:</p> <ul style="list-style-type: none"> • Use of the OSLTF, CERCLA fund (Superfund), or Robert T. Stafford Relief and Emergency Assistance Act (Stafford Act) funding for oil or hazardous substance incidents. • Actual or potential medium and major oil spills. • Spills that garner significant media, public, or political interests. • Any time the FOSC deems necessary. <p>See reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), for more information and the process for releasing a SITREP-POL.</p>
A.7. Trajectory	<p>To appropriately respond to an oil discharge, PRs complete a trajectory.</p> <p>For minor discharges, a simple trajectory can be completed using the General NOAA Operational Modeling Environment (GNOME) program, reference (mm), National Oceanic and Atmospheric Administration Trajectory Analysis Handbook, January 2002, or reference (nn), Boat Crew Seamanship Manual, COMDTINST M16114.5 (series).</p> <p>For larger discharges, rely on experts to gain a more robust trajectory. Specifically, request assistance from state personnel or NOAA scientific support coordinators (SSCs) as they are often highly experienced with various trajectory programs and willing to assist the USCG with critical information for responses.</p>
A.8. Site/Safety Hazards	<p>Pollution incidents often involve health and safety hazards. These are categorized as:</p> <ul style="list-style-type: none"> • Physical. • Chemical. • Biological. • Radiological.
A.8.a. Incident Characterization	<p>An incident characterization is another component of the larger health and safety plan for a response. It examines a specific operating site in the response for all hazards using the risk based decision making (RBDM) model. The PR performs a preliminary evaluation of a site's characteristics before site entry to aid in selecting appropriate employee protections methods.</p>

Immediately after initial site entry, a PR evaluates the site to further identify site hazards and selects the appropriate engineering controls and PPE for the upcoming tasks.

The PR uses RBDM to assess the potential risks in the response environment. If the risks exceed the PR's knowledge base, the PR notifies the chain of command and seeks a designated safety professional. Understanding one's own limitations is critical at this point in the response. By not deferring to a safety professional, PRs are potentially putting themselves at risk.

A.9. Secure Source

Securing the source of a discharge or release is one of the first priorities when responding to an incident. For facilities and vessels with a response plan, activation of the plan is a vital step in securing the source. For sources without a response plan, work with the responsible party to identify the safest and most effective method to secure the source.

WARNING:

PRs trained only to the HAZWOPER FRO level are only to act in a defensive manner. Seek additional guidance via the chain of command if in any doubt about safely securing the source.

Source control accounts for the type of product, especially if responding to an ongoing discharge of a flammable material. If booming is the only option to control the source, consider air quality and flammable/explosion hazards associated with the product.

At times it is necessary to access private property to carry out response or investigation activities. Per reference (oo), Marine Safety Manual, Volume VI, Ports and Waterways Activities, COMDTINST M16000.11, it is vital to exercise common sense and judgment in these instances to preserve constitutional protection from unreasonable searches and seizures. When in doubt, consult with the duty FOSCR, chain of command, and the servicing legal office.

Before entering private property, consider if it is an emergency situation.

Per General, Subsection (d) of reference (e), National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, in emergency conditions:

- The OSC generally has the authority to enter private property without a warrant, but seek the owner's permission before entry.

- If the situation is urgent and entry is made without the owner's permission, consider the following recommendations:
 - Request that local law enforcement is present.
 - Photograph the condition of the property before entry.
 - Continue attempting to contact the owner.
- If the owner refuses entry, seek assistance from district legal to obtain court orders.
- Use of force:
 - Permissible if the urgency of the situation warrants the action.
 - Exhaust all reasonable alternatives first.
 - Should NOT cause a breach of the peace or cause personal injury.

Non-emergency conditions:

Entry to private property is permissible with the owner's consent, but do not enter in the owner's absence or without the owner's permission before contacting the servicing district legal office for advice and assistance.

A.10. Notice of Federal Interest

The Notice of Federal Interest (NOFI), Form CG-5549, informs potential RPs of the federal liabilities. In addition to describing the requirement for appropriate actions, it also defines the potential repercussions if the responsible party's actions are not satisfactory to the FOSC. To locate Form CG-5549, navigate to [CGPortal](#) . Then type the form number into the "Find a Form" search box. Select **CG-5549** when it appears in the search box. Select **Search**.

Issue Form CG-5549 to all parties that could be the responsible party.

A.11. Determine Appropriate Clean up Actions

Determination of appropriate cleanup action is largely dependent on the situation and requires PRs to make a judgment call on how "clean is clean".

- On smaller scale events, determination is when the cleanup starts to cause more harm than good.
- For larger scale events, an agreement is formed between the Coast Guard and trustees.

Cleanup action can be different from region to region. A good source of information for appropriate cleanup action is available in the applicable ACP. Closely monitor cleanup actions to ensure the correct and most effective equipment/resources are used.

**A.12. Marine
Environmental
Response-
Administrative
Order**

Administrative Orders are issued by the FOSC under the authority granted in reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762, and reference (b) CERCLA, 42 U.S.C. § 9607, as appropriate. Also refer to reference (pp), Marine Environmental Response (MER) Administrative Orders Tactics, Techniques, and Procedures (TTP), CGTTP 3-75.3, for further guidance.

The FOSC typically uses Administrative Orders to direct the responsible party to take appropriate action in the cleanup.

**A.13. Captain of
the Port Orders**

The captain of the port (COTP) issues Captain of the Port Orders (COTP Orders) under reference (f), Ports and Waterways Safety – General, 33 CFR § 160, to ensure the safety of vessels and waterfront facilities and the protection of the navigable waters and resources.

The orders allow the COTP the ability to apply specific requirements within the COTP zone to vessels, facilities, or persons. The COTP's authority is broad and allows the COTP flexibility to define the requirements based on each situation.

For example, if a vessel discharges oil into the water, a COTP Order can be issued to the vessel to prevent it from moving from its berth so that the investigation or response efforts can be completed.

See reference (qq), Captain of the Port Orders Tactics, Techniques, and Procedures (TTP), CGTTP 3-71.3, and reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), for more information.

Section B: Investigation Efforts

B.1. Evidence Collection Efforts

PRs participate in pollution incident response, investigation, and enforcement activities of numerous federal regulations. Proper evidence collection, handling, and storage are crucial elements for case documentation, prosecution, and enforcement.

Use of various types of evidence can prove a case. It is important to note that the quality of the evidence collected is more important than the quantity of evidence collected.

B.1.a. Determine if the Five Elements Exist

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), in order to prosecute a violation, these five elements must exist:

- Discharge of oil or release of hazardous substance.
- Discharge or release occurred from a known source.
- Oil discharge or hazardous substance release must be in a harmful quantity or meet the RQ.
- Discharge or release must have a responsible party.
- Discharge or release into a navigable waterway of the United States.

B.1.b. Physical

Physical evidence is an item(s) found at the incident and presented to support enforcement and prove a fact(s) in the case. Items can include:

- Statements (both PR and responsible party).
- Pictures.
- Oil samples.
- Physical items (i.e., pipes, flanges, hoses, etc.).
- Physical logs (i.e., oil record book).
- Ship documents.
- Computers.
- Cell phones.

B.1.c. Photographs

Photographs are valuable pieces of evidence because they help visualize the scene. Visualizing the scene helps to provide a snapshot documentation of the product involved in the incident and can potentially identify the pollution source.

When taking photos at the incident it is important to capture both long-range and close-range photographs.

- Long-range photos capture the “big picture” view of the incident.
- Close range photos show evidence in greater detail.
- Capturing scale and orientation in the photos and including any landmarks of the area help to identify the location where the incident occurred.

NOTE:

Capturing photos of oil sheen on water can be challenging. Try taking pictures from various angles to reduce glare from the sun.

Label photographs with the case and photograph number and insert in a file for case documentation. List pertinent descriptive information in the document.

NOTE:

Since photos and the camera used to take the photos can be subpoenaed as evidence, it is best to use an official camera (unit owned) instead of personal and phone cameras.

B.1.d. Sampling

PRs obtain a sample of the product for evidence. Chain of custody procedures are a vital piece of evidence to support enforcement. Specific guidelines for collecting product samples and the chain of custody are found in [Appendix E: Enforcement Actions](#) and the Marine Environmental Response (MER) Oil Sampling Tactics, Techniques, and Procedures (TTP), CGTTP 3-75.5, once published. Additional information is located in reference (rr), USCG Oil Sample Handling & Transmittal Guide, January 2013.

B.2. Collection of Written Statements

Once the situation is stable and the immediate threat to property is mitigated, the PR ensures all available witnesses prepare a written witness statement. The witness statement is a formal document containing a witness’s account of the facts relating to the incident. Encourage witnesses to limit information in the statement to facts and keep comments or speculations based on opinion to a bare minimum.

As required by Subsection (e)(3) of reference (ss), Public Information; Agency Rules, Opinions, Orders, Records, and Proceedings, 5 U.S.C. §552, the PR informs the witness of the:

- PR's authority to collect this information.
- Primary purpose of this information.
- Principal purpose and Privacy Act, which informs the witness of the PR's authority to collect personal information.

For example, tell the witness, "The statement you provide is used to determine the cause of this pollution incident and establish the identity of the discharge. Private information collected is necessary to allow us to contact you if more information is needed or to clarify information already given. Your identity and contact information is needed in order to use your statement at the civil and sometimes criminal proceedings, which may result from this investigation. There are no other uses intended for your private information. Disclosure of the information is strictly voluntary."

Witness statements are used throughout the course of the investigation and are a permanent official record of the witness's testimony.

Sometimes witnesses refuse to provide a written statement. There are no legal requirements for involved persons to provide written witness statements. Also, sometimes witnesses request to wait for their lawyer to arrive and provide guidance.

NOTE:

Under exceptional circumstances, PRs and IOs can document phone conversations with a person making a report and then use the documented conversation in lieu of a written report.

**B.2.a. Authority
of Statement
Collection**

Per Operation and Maintenance of Coast Guard Assets and Facilities, Subsection (e) of reference (tt), Commandant; General Powers, 14 U.S.C. § 93 and per reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762, PRs, as federal law enforcement officers, can request information pursuant to the authority contained in the FWPCA.

B.2.b. Witness Statement Elements	<p>Witness statements are in the individual's own words and as accurate and comprehensive as possible. In addition to information related to the incident, witness statements include the following:</p> <ul style="list-style-type: none">• Full name of witness.• Address.• Contact numbers and/or email address.• Time and location the statement was taken.• Location of the alleged offense, and the subject(s), vessel (s), and/or facility involved.• Detailed summary of events in chronological order of occurrence.• Witness's signature.• A clause at the end of the statement indicating that the witness finds it to be a true representation of his or her testimony.
B.2.c. Letter in Lieu of a Written Statement	<p>Sometimes the PR is unable to obtain access to the witness or obtain a written witness statement while on scene. In such cases, the PR can accept a letter from the witness containing information pertinent to the incident. A sample statement form is in Appendix D: Sample Witness/PR Statement Form.</p>
B.3. Pollution Responder Statements	<p>The PR's written statement can be one of the most valuable tools, so exercise care when developing it. Write in narrative format, which is the most practical way to document the events in a chronological manner.</p>
B.3.a. Pollution Responder Statement Required Elements	<p>The PR writes a statement in his or her own words and as accurately and comprehensively as possible. In addition to information related to the incident, the PR's statement includes the following five elements:</p> <ul style="list-style-type: none">• Name and contact information for PR.• Time and location the statement was prepared.• The location of the alleged offense, and the subject(s), vessel(s), and/or facility involved.• Detailed summary of events in chronological order of occurrence.• PR's signature and date signed. <p>A sample statement form is in Appendix D: Sample Witness/PR Statement Form.</p>

NOTE:

Written statements are part of the record and therefore do not contain opinions or speculation. As a best practice, PRs attempt to identify all five elements in the written statement.

**B.4. MISLE
Case Entry**

It is critical that PRs document the investigative findings correctly in MISLE. A lack of accurate MISLE documentation can lead to a reduced or negated enforcement action and/or incomplete justification for any additional Coast Guard action.

Per reference (o), U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M16000.14 (series), every pollution notification requires the following MISLE documentation (regardless of the level of investigation conducted):

- MISLE case.
- Incident management activity (IMA).
- Preliminary investigation activity (PIA).
- Resource Sortie activity.

For example, a discharge within the EPA's area and outside the USCG jurisdiction may not require any additional investigative effort beyond reviewing the NRC notification and ACP. However, complete all MISLE items once the investigation is finished.

**B.5. Review
Responsible
Party History**

Consider the responsible party's history when determining the correct enforcement action. To assess the responsible party's history, the PR performs a check in MISLE under "Involved Party." Searching the history can be difficult, but is an important step. For best practices, see reference (ee), Civil Penalty Enforcement (CPE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.7.

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Appendix A: Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists.
ACP	Area contingency plan.
ALJ	Administrative law judge.
AOR	Area of responsibility.
APPS	Act to Prevent Pollution from Ships.
AUX-ED	Auxiliary assistant pollution investigator.
BSEE	Bureau of Safety Environmental Enforcement.
CCM	Command Center Manual.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act.
CFR	Code of Federal Regulation.
CGTTP	Coast Guard tactics, techniques, and procedures.
COTP	Captain of the port.
CPE	Civil Penalty Enforcement.
CWA	Clean Water Act.
DOJ	Department of Justice.
DOT	Department of Transportation.
DRAT	District Response Advisory Team.

EEBD	Emergency escape breathing device.
EEZ	Exclusive Economic Zone.
EPA	Environmental Protection Agency.
ESI	Environmental Sensitivity Index.
FC-P	Chief, U.S. Coast Guard Force Readiness Command, Tactics, Techniques, and Procedures (TTP) Division.
FORCECOM	U.S. Coast Guard Force Readiness Command.
FOSC	Federal on-scene coordinator.
FOSCR	Federal on-scene coordinator representative.
FRA	First responder awareness.
FRO	First responder operations.
FRP	Facility response plan.
FWPCA	Federal Water Pollution Control Act.
GFE	Gas free engineer.
GNOME	General NOAA Operational Modeling Environment.
GRS	Geographical response strategy.
H₂S	Hydrogen sulfide.
HAZWOPER	Hazardous Waste Operations and Emergency Response.
ICS	Incident Command System.
IDLH	Immediately dangerous to life or health.

IIA	Incident investigation activity.
IMA	Incident management activity.
IMAT	Incident Management Assistance Team.
IMD	Incident Management Division.
IMO	International Maritime Organization.
IMSS	Incident Management Software System.
IMT	Incident management team.
IO	Investigating officer.
LEL	Lower explosive limit.
LOW	Letter of warning.
MARPOL	Marine Pollution.
MER	Marine Environmental Response.
MISLE	Marine Information for Safety and Law Enforcement.
MLEM	Maritime Law Enforcement Manual.
MM	Mile marker.
MOA	Memorandum of agreement.
MOU	Memorandum of understanding.
MSD	Marine safety detachment.
MSM	Marine Safety Manual.

MSU	Marine safety unit.
NCP	National Contingency Plan.
NFPA	National Fire Protection Association.
NOAA	National Oceanic and Atmospheric Administration.
NOFI	Notice of Federal Interest.
NOV	Notice of violation.
NPDES	National Pollutant Discharge Elimination System.
NRC	National Response Center.
NRT	National Response Team.
OCS	Outer continental shelf.
ODU	Operational dress uniform.
OGA	Other government agencies.
OPA	Oil Pollution Act.
OSC	On-scene coordinator.
OSHA	Occupational Safety and Health Administration.
OSLTF	Oil Spill Liability Trust Fund.
OSRO	Oil Spill Removal Organization.
PEL	Permissible exposure limit.
PFD	Personal flotation device.

PHMSA	Pipeline and Hazardous Material Agency.
PIA	Preliminary investigation activity.
PIAT	Public Information Assistance Team.
PPE	Personal protective equipment.
PQS	Personnel qualification standard.
PR	Pollution responder.
PWSA	Ports and Waterways Safety Act.
RBDM	Risk based decision making.
RPM	Remedial project manager.
RQ	Reportable quantity.
RRT	Regional response team.
SAPP	Security, accuracy, policy, and propriety.
SAR	Search and rescue.
SCC	Sector Command Center.
SDS	Safety data sheet.
SITREP-POL	Situation Reports – Pollution.
SSC	Scientific support coordinator.
TLV	Threshold limit value.
TLV-TWA	TLV- time-weighted-average.

TTP	Tactics, techniques, and procedures.
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U.S.	United States.
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U.S.C.	United States Code.
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USCG	United States Coast Guard.
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VRP	Vessel response plan.
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Appendix B: Sample Auxiliary Assistant PR Qualification Letter

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

400 Sand Island Parkway
Hiatusport, DE 90819
Phone: (555) 555-5555

1601
Date

MEMORANDUM

From: Name, Rank
Unit's Name

Reply to
Attn of:

To: Name, USCG Auxiliary

Subj: QUALIFICATION AS AUXILIARY ASSISTANT POLLUTION RESPONDER

Ref: Auxiliary Assistant Pollution Responder Performance Qualification Standard Workbook

1. Congratulations! You have completed all requirements necessary to perform the duties of an Auxiliary Assistant Pollution Responder. You are authorized to carry out the responsibilities of an Auxiliary Assistant Pollution Responder within the scope of your qualifications. This is a significant milestone in your professional development and I commend your accomplishments.
2. This Letter of Qualification should be retained as part of your personal Training Record and you will be assigned the Pollution Responder's Qualification Code "AUX-ED".

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Appendix C: MER Response and Investigation Checklist

Pollution Response and Investigation Checklist

Part I Complete for notifications	
<i>Discharge / Release Details</i> PR Name: _____ Date/Time: _____ Source: _____ Location: _____ Material/RQ: _____ Quantity/Max Potential: _____ Latitude/Longitude/MM: _____	Body of Water: _____ Reporting Party Name/Contact # _____ _____ Cause of discharge/release: _____ Does the incident meet a data entry exemption? ____ (Y/N) Exemptions: Outside jurisdiction, erroneous report, mystery spill, unmet RQ, NPDES discharge/release (If no, proceed to Part II)

Part II Complete when the preliminary investigation data entry exceptions are not met	
<i>Preliminary Assessment & Initiation of Action</i> <ul style="list-style-type: none"> <input type="checkbox"/> Consult with ACP and Annexes (GRPs) <input type="checkbox"/> Ensure activation of FRP/VRP <input type="checkbox"/> Identify Hazards/PPE <input type="checkbox"/> Identify RP <input type="checkbox"/> Determine maximum potential <input type="checkbox"/> Classify the spill category (Minor, Medium, Major) <input type="checkbox"/> Ensure the NRC is called (1-800-424-8802) <input type="checkbox"/> Identify and coordinate internal/external notifications <input type="checkbox"/> Notify IO shop (commercial vessels & credentialed mariners) <input type="checkbox"/> Determine level of investigation (Civil/Criminal) <input type="checkbox"/> Is incident part of a multi-mission case (i.e. SAR)? 	<i>Investigation and Response Efforts</i> <ul style="list-style-type: none"> <input type="checkbox"/> Conduct initial assessment on scene, identify hazards, verify pollution report details & ensure source secured <input type="checkbox"/> Issue NOFI <input type="checkbox"/> Obtain on-scene data (weather, tides, etc.) <input type="checkbox"/> Brief command and provide a recommended course of action <input type="checkbox"/> Determine if further assistance is needed: (FOSCR/DRAT/IMT/District Legal/Other Agencies) <input type="checkbox"/> Consider potential media interest (coordinate with Public Affairs) <input type="checkbox"/> Determine appropriate response actions <ul style="list-style-type: none"> <input type="checkbox"/> Physical containment <input type="checkbox"/> Product recovery <input type="checkbox"/> Determine if a Site Safety Plan is necessary <input type="checkbox"/> Determine if Dive Plan/Salvage Plan is necessary <input type="checkbox"/> Determine if a shoreline cleanup assessment is necessary <input type="checkbox"/> Complete a 201 & SITREP/POL <input type="checkbox"/> Collect evidence (documentation, physical, oil samples, photos) to support five elements <input type="checkbox"/> Interview witnesses <input type="checkbox"/> Consider other USCG tools (Admin Orders, COTP Orders) <input type="checkbox"/> Forecast the product trajectory (consult w/NOAA SSC) <i>MISLE Casework</i> <ul style="list-style-type: none"> <input type="checkbox"/> Complete MISLE Case: PIA, IMA, Resource Sortie, and IIA/Enforcement (as necessary) <input type="checkbox"/> Review RP history

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Appendix D: Enforcement Actions

D.1. Introduction

Below are the enforcement actions that the pollution responder (PR) can take against the responsible party during pollution responses and investigations.

For further information regarding enforcement actions, how to issue them, and the determinations please see reference (ee), Civil Penalty Enforcement (CPE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.7.

D.2. Letter of Warning

A letter of warning (LOW) is a formal written notice of an alleged violation where no monetary or other sanction is appropriate. The LOW becomes part of the case violation history for use in future activities.

Use LOWs to deter against further violations and to educate the public about federal laws.

D.3. Notice of Violation

A notice of violation (NOV) is a citation that immediately notifies the responsible party of the alleged violation(s) and the government's proposed penalty. This allows the responsible party the option to accept the proposed penalty and make a direct payment to the treasury.

Responsible parties have the right to accept or decline a NOV. All declined NOVs are referred to the Coast Guard hearing officer in the form of a Class I administrative civil penalty.

D.4. Class I Administrative Penalty

The Coast Guard hearing officer administers Class I administrative civil penalties. Unit participation in the process is generally limited, and typically consists of submission of a written case file package to the hearing officer. The process is an opportunity for the responsible party to present his or her side of the case.

When formulating the final assessed penalty amount, the Coast Guard hearing officer considers the recommended penalty amount, supporting enforcement evidence, charged party's evidence, applicable laws and regulations, and authoritative agency policies or interpretations of law.

D.5. Class II Administrative Penalty

Pursuance of Class II administrative civil penalties occurs when the offense is egregious or willful. These penalties are ONLY for violations of the Federal Water Pollution Control Act (FWPCA) per reference (a), FWPCA, 33 U.S.C. § 1321, as amended by the OPA of 1990, 33 U.S.C. §§ 2701-2762; and the CERCLA, per reference (b), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9607.

An administrative law judge (ALJ) adjudicates Class II administrative civil penalties. The Docketing Center administratively maintains the findings.

**D.6. Judicial
Civil Penalty**

A judicial civil penalty occurs when the Department of Justice (DOJ) presents a civil litigation case in the U.S. district court. After hearing all facts and evidence, federal district court judges adjudicate judicial civil penalties. Follow the chain of command for recommending judicial civil penalties.

NOTE:

When preparing NOVs and/or civil penalties, consult reference (uu), Penalty Adjustment Table, 33 CFR § 27.3, which identifies the maximum penalty authorized as adjusted for inflation. This table is updated and adjusted annually.



Witness Name: _____ Employer Name: _____
 Street Address: _____ Employer Address: _____
 City/State/Zip: _____ City/State/Zip: _____
 Phone No: _____ Phone No: _____
 Position: _____ License/Doc. # _____

[illegible]

DATE _____

[illegible]

The investigator of this incident wishes to obtain your name, address, telephone number, and place of employment. In order for the investigator to collect this private information, the Privacy Act (5 U.S.C. 552a(e)(3)) requires that you be informed concerning the authority of the investigator to collect this information; the primary purpose for which the Coast Guard will use this information; any secondary purpose for the information; and whether your disclosure of this information is voluntary or required by law.

2. Principal Purposes for this information. The statement which you provide the investigator will be used to determine the cause of this incident. Your name, address, and other personal information is needed to enable the investigator to contact you if more information is needed or to clarify aspects of your statement. Your identity and contact information is needed to use your statement at proceedings which may result from this investigation. The investigations of marine casualties and accidents and the determinations made are for the purpose of taking appropriate measures for promoting safety of life and property at sea, and are not intended to fix civil or criminal responsibility.

4. The disclosure of your personal information (name, address and phone number) is voluntary.

Page 2 of 2

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