

**ATTACHMENT 48 – *DRAFT VOLPE CENTER REPORT ON OFFICE OF PIPELINE SAFETY BUSINESS
PROCESS REVIEW***



Pipeline and Hazardous Materials Safety Administration
(PHMSA)

Oil Spill Response Plan (OSRP)
Business Process Review

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Attachment 1
DRAFT - Volpe Comparative Study of Response Plan Review

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Executive Summary

The objective of the project was to characterize, outline and analyze PHMSA's current process for reviewing Oil Spill Response Plans (OSRP) required by 49 CFR Part 194, and provide PHMSA with a current snapshot, gap identification and findings by identifying elements of OSRP programs among the four plan approval agencies.

The Volpe Center conducted background research and interviews with staff assigned to Facility, Vessel, and /or Oil Spill Response Plans collection, review and approval processes within PHMSA, the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

The research and interviews concentrated on the following key areas:

- Identifying the regulations governing each agency
- Classifying OSRP management approach (Regionalized, Centralized)
- Correlating resources assigned and number of plans per group
- Distinguishing Spill Plan media (electronic, hard copy paper, storage practices)
- Discerning practices for conducting on-site audits, reviews and drills
- Assessing information system support available to the program
- Identifying performance metrics and reporting
- Addressing Freedom of Information Act (FOIA) requests and
- Determining the processes used by agencies to disapprove plans and review appeals from operators

The findings emphasize similarities among the programs, and illustrate differences in practices. These findings may assist PHMSA in implementing changes to their current Oil Spill Response Plan review process.

Introduction

The Oil Pollution Act of 1990 (OPA90) was signed into law in August 1990 partly in response to rising public concern following the *Exxon Valdez* incident in Alaska. OPA90 requires industry to have a plan to prevent spills from occurring and responding to spills that do occur.

The Office of Pipeline Safety (OPS) has responsibility for implementing provisions of OPA90 as it applies to onshore oil pipelines, under its regulations in 49 CFR Part 194 and in conjunction with section 311 of the Federal Water Pollution Control Act implemented under Executive Orders 12777 and 13286. The OPS collects, reviews, and approves response plans from the operators of transportation-related onshore facilities with the goal of reducing the environmental impact of oil discharged from on-shore oil pipelines. Each plan contains a statement to indicate which sections of the pipeline are at risk of causing significant or substantial harm to the environment in the event of a discharge into navigable waters or adjoining shorelines. Operators determine the worst case discharge in each response zone, and detail response methods that will be used to mitigate the impacts of the spill. Response plan requirements are outlined in 49 CFR 194.107, 194.113 and 194.115.

In April 2010 the *Deepwater Horizon* oil drilling platform exploded, injuring seventeen and killing eleven and subsequently spilling nearly 206 million gallons of crude oil into the Gulf of Mexico.

In July 2010 a 30 inch pipeline owned and operated by Enbridge Energy Partners LLP (Enbridge) ruptured near Marshall, MI. Approximately 819,000 gallons of oil entered the Talmadge Creek and flowed into the Kalamazoo River.

At a senior staff meeting in the summer of 2010, Transportation Secretary Ray LaHood requested that PHMSA work with the Research and Innovative Technology Administration (RITA) to ensure the safety of pipelines. RITA Administrator Peter Appel, met with PHMSA Administrator, Cynthia Quarterman, to discuss follow-on activities, and the Volpe Center was asked to prepare an outline of activities to conduct research and analysis on Federal agency Response Plan programs.

Project Objective

The objectives of this project were to:

- outline and analyze PHMSA's current business process for reviewing Oil Spill Response Plans (in accordance with 49 CFR Part 194)
- identify common elements of Oil Spill Response Plan (OSRP) programs in four Federal plan approval agencies
- identify best practices used by one or more agencies in reviewing and approving OSRPs

The Volpe Center, through background research, interviews with appropriate staff and other agencies with similar processes, was tasked to benchmark PHMSA's current OSRP program, identify gaps between the PHMSA process and the requirements of 49 CFR Part 194, and ascertain best practices of other agency processes and deliver these findings to PHMSA.

Approach

Two analysts from the Volpe Center team conducted background research and interviews with PHMSA staff and staff from the three other federal agencies responsible for response plan management: Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), United State Coast Guard (USCG) and the Environmental Protection Agency (EPA). On-site audit shadowing with the USCG was originally a planned activity, however weather and holiday periods prevented this from being accomplished within the timeline of the project.

Overall Assessment of PHMSA's Baseline Process

There is one PHMSA GS-13 staff member whose primary duties are to collect and review Facility Oil Spill Response Plans (OSRP). The PHMSA Emergency Support and Security Division Director devotes about ½ staff year to managing the OSRP activities for PHMSA. OSRPs are generally submitted electronically to PHMSA and, until recently, accompanied by the Operator-generated Facility Response Plan Review Questionnaire (Appendix A). The questionnaire is organized according to the corresponding sections of 49 CFR Part 194 (for example, section 194.107(c) (1) which outlines ten items which the core plan must include.) The PHMSA staff member reviewed the checklist and the plan to determine compliance with the requirements outlined in 49 CFR Part 194 (subsections 105, 107, 113, 115, 117, and 121). If there were any discrepancies or questions, the PHMSA staff member engages in communications with the operator for resolution. Once the plan is judged to satisfy the requirements of the regulations, an approval was emailed to the operator. PHMSA Regional offices are not involved in the review process.

Currently, PHMSA does not have an information system to support plan collection, review correspondence, or inventory management. Pipeline OSRPs are stored on a PHMSA shared network drive in a variety of formats (i.e., PDF, Word, XML), and the inventory management of the document is done as a list in Microsoft Word. The implications of this are that the collection of OSRPs is not easily searchable, and due to a change in assignment of sequence numbers in 2007, the process of locating the appropriate plan takes a bit of time.

Gap identification: 49 CFR Part 194 to current process:

Regulation sections not referenced/reviewed by the Questionnaire:

- 194.101 – Operators Required to submit plans.(Is any verification done on operators who don't submit a plan?)
- 194.103 – Significant and Substantial Harm; operators statement.(Is this information verified?)
- 194.109 Submission of State Response Plans. (Should this be addressed?)
- 194.111 – Response Plan Retention. (Is this verified?)
- 194.117 – Training. The questionnaire specifically asks about a training program for “response” personnel (13.1) but not “all” or “reporting” personnel as described in 194.117(a)(1) and (a)(2).
- Question 5.2 – there are two areas within the three tier times, but there is no indication on the questionnaire whether the area is a “high volume area” or an “all other areas”.

Best Practices for checklists at other Agencies:

- Include a field to record who reviewed the questionnaire.
- Include a field to record approval of the plan, by whom and on what date.
- Include a field to indicate if this is an updated plan to an already approved plan.
- The questionnaire might be better organized in direct order the regulation is written.

Findings In Key Areas

The following describes the submission requirements for oil spill response plans:

- Oil tanker operators and mobile and fixed facility operators are required to submit oil spill response plans to the USCG
- Non-Transportation Onshore Facilities (e.g., Refinery operators) are required to submit plans to the EPA
- Offshore facility operators (e.g., Outer Continental Shelf (OCS) facilities owners/operators) submit plans to the BOEMRE (formerly Minerals Management Service)
- Transportation related onshore facilities (e.g., pipelines) submit plans to PHMSA

The contents of the agency specific plans can differ based on differing mission focus (e.g. safety vs. security) and location (e.g. offshore, floating, fixed). Each agency has regulatory requirements for plan content, but all are similar in requiring that plans discuss a ‘worst case discharge’ scenario. In cases where a facility/operator would be subject to multiple agency regulations (i.e., a complex facility), a common format (i.e., One Plan) meet all the requirements rather than requiring the operator to submit separate plans to fit the requirements of each agency.

OSRP Management Approach

The USCG and EPA have structured approaches to conducting reviews and approvals of Facility Response Plans (FRP) at the Regional level. (The USCG is organized into nine Districts while the EPA is divided into ten Regional Offices). BOEMRE is in the process of modifying their check-list, but like the EPA and USCG, their reviews are conducted in the three regional offices. PHMSA has a centralized OSRP management process with collection, review and approval of plans taking place at the HQ level (PHMSA has five regional offices). The main difference between the PHMSA OSRP management process and that of the USCG, EPA and BOEMRE are that the USCG, EPA and BOEMRE collect, review and approve plans at the Regional level. (One exception is the USCG Vessel Response Plan (VRP) process, which is centralized). While the HQ components of the other agencies do not review/approve plans, they provide support and oversight to the regional components by developing and maintaining checklists, procedures and policies.

Resources vs. Number of Plans

- The USCG Sector Boston group oversees plans for approximately 45 facilities with a staff of four (4) qualified inspectors and 3-4 trainees. The HQ component of the USCG response plan program is staffed by 3 members
- The USCG VRP has a staff of 18 (6 active duty/federal and 12 contract analysts) to manage 3000 plans
- EPA Region 6 (which has four times as many plans as any other EPA region) has approximately 1700 plans that are overseen by a dedicated staff of two (2) federal inspectors and three (3) contractors (this region has 22 On Scene Coordinators (OSC) who can be delegated to authorize FRP approvals as a collateral duty)
- EPA Region 5 has approximately 500 plans overseen by 1 FTE (FRP Coordinator) and 33-38 On Scene Coordinators (OSCs) who provide FRP approval
- BOEMRE has three regions, each with 1 or 2 staff, managing a total of 190 plans
- PHMSA has a current staff of 1.5 federal employees overseeing approximately 450 plans

On average it appears that a minimum of 4-8 hours is needed for the initial completeness review of a new plan (typically a junior staff member or contract analyst uses the checklist to ensure all required elements of the plan are present), and then perhaps an hour to review any updates that were submitted (this would be dependent on facility type, for example). The USCG also performs on-site inspections, and therefore spends time preparing for unannounced drills in addition to reviewing plans, spending approximately 4-8 hours in preparation activities (several per month). The USCG VRP program (closest comparison to PHMSA business model) by law has 60 days to review/approve a new plan and 30 days to review/approve changes to an existing plan. In the fall of 2010 the VRP program was experiencing a 10 day turnaround; more typically an initial review of a new plan takes 4-5 hours, and a review/approval of changes takes an hour. PHMSA is not required by any regulation to review and/or approve a submitted plan within a specific timeframe.

Review and Approval

Each agency has plan review checklists (see Appendices) that mirror the CFR Parts as applicable to their agency, some of which are in-depth with regards to specific information which the plan must contain. The regulatory requirements for plan contents for PHMSA OSRPs are less prescriptive than the other agencies, for example the USCG requires a worst case discharge section to also include a list of all fish and wildlife and sensitive environments that were identified in the Area Contingency Plan (ACP), the EPA plan content requirements include examples of formulas that could be used to calculate worst case discharges.

Separation of review and approval duties is common at the other agencies where mostly junior staff or contractors are performing the initial review for completeness. Once the completeness review is conducted and the checklist filled out, the plan is forwarded to a more senior level approval authority. In the USCG, EPA and BOEMRE review processes, a second level review is conducted by a more senior staff member prior to submitting a recommendation for approval to the approving authority. In BOEMRE the second level review includes verifying the location of equipment bases (there are 30 national locations), and checks the validity of the effective contracts of the indicated Oil Spill Removal Organizations (OSROs).

- EPA Region 5 has a plan coordinator who collects and does the completeness review before handing off the plan to an On-Scene Coordinator for approval. Region 6 has a small team of contract staff who do the lower level review, and one senior On-Scene Coordinator who is the approving reviewer. The approving official for the EPA is each Regional Administrator.
- At the USCG Sector Boston unit, a junior petty officer will perform the initial review, then the plan is passed to a more senior petty officer for final review before being forwarded for approval. Response plan approval authority lies with each Captain of the Port (COTP) (Captain of the Port duties involve enforcing, within their respective areas, port safety and security and marine environmental protection regulations, including regulations for the protection and security of vessels, harbors, and waterfront facilities; anchorages; security zones; safety zones; regulated navigation areas; deepwater ports; water pollution; and ports and waterways safety).
- BOEMRE has 1 FTE in the Pacific, 1 FTE in the Alaska region, and 2 FTE in the Gulf of Mexico region. Junior staff perform a completeness review, then a senior staff member reviews the worst case scenario. The approving authority lies with the Regional Supervisor.
- PHMSA has a 1.5 FTE dedicated to the program. Collection and review are done by the GS-13 staff member. Up until June 2010 the same individual approved plans. That authority now lies with the Associate Administrator for Pipeline Safety. PHMSA does not currently have multiple tiers of reviews.

Spill Plan Media

Plans are being received in electronic and paper format by all four agencies; those that are received in paper are scanned and made electronic. There are a few major companies that

specialize in writing Response Plans; thus these are electronic, searchable Adobe PDF documents and are more consistently formatted.

- The USCG has mostly paper plans that are submitted to the regions and these are secured in locked file cabinets as appropriate to the type of plan (safety vs. security plans); the Vessel Response Plans are frequently comprised of multiple three-ring binders
- EPA Region 6 estimates that close to 50% of the plans they receive are in electronic format
- EPA Region 5 has mostly paper. The paper copies are secured in locked areas where only authorized personnel are granted access
- In the BOEMRE Gulf of Mexico region, all plans are submitted electronically and loaded into their internal Technical Information Management System (TIMS). Plans from the other regions are typically paper copies and stored securely
- PHMSA plans are almost all in electronic format and stored on a shared network drive

On-Site Audits, Reviews

- On-site audits/review of the plans are conducted by both the USCG and EPA Region 6 after initial review and approval of the submitted plan or significant modifications (such as new facility construction or additions) to the existing plan on file
- The USCG and BOEMRE do unannounced exercises to test plans
- BOEMRE aims to conduct approximately 14 unannounced exercises per year
- USCG does several inspections per month and table top exercises during the year (latest was completed in December 2010)
- An EPA Region 5 performance metric is to conduct an exercise of a facilities response plan once every 3 years
- EPA Region 5 and 6 do unannounced exercises infrequently (more for facilities that are not forthcoming on their plans, etc.) however, they also often do announced visits
- PHMSA does not perform on-site audits or unannounced drills for operators who submit plans for review/approval

Information System Support

The USCG and EPA have information systems that also serve other missions.

- The USCG Facility Response Plan program uses an Internet portal called Maritime Information Exchange (MIX) and their internal application is the Marine Information for Safety and Law Enforcement (MISLE). The MIX portal requires one to know the MISLE tracking number. While the plans themselves are not a part of the information system, performance data on inspections/compliance are entered into MISLE
- The USCG VRP program uses the CGHOMEPORNT portal (secure login/password required) where they are working on implementing an online system for both submission

and management of plans (currently ~15% of the VRP are online in VRPEXpress on CGHOMEPORT)

- The EPA uses OSCEPA.net, a resource for EPA On Scene Coordinators (OSCs), to access, track and share information with OSCs throughout the country. While there is a desire to have response plans available on this secure site, currently each region tracks their own plans as there is a mix of electronic and hard copy inventory
- BOEMRE is beta-testing an internal system called TIMS
- PHMSA does not have an information technology system to support its OSRP program

Performance Reporting

- The USCG and EPA report statistics to their HQ offices on a number of plans, number of compliances, and number of inspections
- BOEMRE is in the process of establishing metrics and reporting criteria
- PHMSA has not currently implemented performance metrics for its FRP program

FOIA Requests

- Any FOIA requests to the USCG Sector Boston office are directed to the District Legal office
- The EPA Region 5 estimates they have 1 FOIA request filed every few years
- BOEMRE has a FOIA office for the few requests that are submitted each year
- PHMSA works closely with the PHMSA Office of Chief Counsel on FOIA matters

Appeals Process

- The USCG has an appeals process prescribed in 3 CFR 154.1075 whereby an owner or operator may make an appeal of a decision first to the COTP, then to the District Commander, and then to the Commandant
- The EPA has procedures in place in 40 CFR 112.20 for a request for consideration directly to the EPA Regional Administrator, and then upon denial may appeal to the EPA Administrator
- BOEMRE has an official appeals process outlined in 30 CFR 290
- PHMSA has a procedure in 49 CFR 194.119 whereby the operator may petition PHMSA for reconsideration of a PHMSA determination

Conclusions

All the Agencies tasked with Response Plan management are similar in their goal of promoting the safe operation of oil-handling and transportation facilities, and ensuring that oil spill response plans guide the most effective practices and most appropriate technologies for protecting the environment. PHMSA has an excellent working relationship with the USCG, EPA and BOEMRE; the interviewees and the PHMSA staff communicate with each other regularly in addition to their joint participation in the National Preparedness for Response Exercise Program (PREP) and initiatives to establish working groups to focus on specific protection concerns.

A summary of the key findings for each agency can be found in Table 1.

	PHMSA	EPA	USCG	BOEMRE
Centralized collection of plans	✓		✓ VRP	
Regional collection of plans		✓	✓	✓
Digitized inventory		✓	✓ 15%	
Information system support		✓	✓	
Number of plans	450	Region 6 - 1500 Region 5 - 500	3000 VRP, 100's FRP (fixed and mobile)	190
Number of staff involved in plan review	1.5	68 Total (5 HQ) Region 5 - 35 Region 6 - 5	21 HQ (18 VRP, 3 FRP) + 100's in the field	5
Completeness review conducted	✓	✓	✓	✓
Second level review conducted		✓	✓	✓
Unannounced or announced drills or exercises to verify plans		✓	✓	✓

TABLE 1. Summary of Findings