

Spill Response Planning in the Philippines: 3-Tier Interaction between Government and Industry

Heather A. Parker¹

Principal Consultant, Sound Enterprises and Associates LLC,
PO Box 10478, Bainbridge Island, WA, U.S.A,
+1 206-331-2748. heather@soundenterprises.org

Richard T. Teubner

Director Government Services Division
O'Brien's Response Management, Inc., Houston, TX. U.S.A.
government@obriensrm.com

Jonathon C. Sawicki

Project Specialist, O'Brien's Response Management, Inc., Houston, TX. U.S.A.

Abstract

The Philippines Coast Guard (PCG) recently recognized the need to reorganize response activities within the country at all levels and consequently revised the Philippines National Oil Spill Contingency Plan (NOSCP). This comprehensive plan outlines government management for a 3-tiered system of response. For Tier 1 spills each facility or vessel is expected to implement their internal response plan, with potential for some government oversight from the PCG. For Tier 2 spills, the facility or vessel will implement their response plan and the local PCG District will in most cases assume a direct management role of the response, and utilize their government equipment. For Tier 3 spills, the PCG would likely manage the spill on a national level, while executing international cooperative agreements and conventions as needed. A key objective of the reorganization was to ensure compatibility between government agencies and the oil industry, including the national oil company, Petron Corporation, which is the largest oil refining and marketing company in the country. At the same time, industry also recognized the need to revise and improve oil spill planning standards and in 2007 Petron initiated the development of a comprehensive, corporate-wide oil spill contingency plan. This Corporate Emergency Response Plan met the PCG government requirements to demonstrate the ability for Petron to respond to Tier 1 spills at each facility, and also exceeded compliance standards by demonstrating Petron's ability to respond to Tier 2 and Tier 3 incidents. Petron's Corporate Emergency Response Plan is modeled after the Incident Command System utilized in many parts of the world. This comprehensive plan allows for seamless internal integration between the corporate incident management structure and the oil spill response team and external integration with the government management systems at the Tier 2 and Tier 3 levels, as outlined in the NOSCP. Sensitive resource information and a detailed economic analysis of the costs to increase Petron's readiness through supplementing response equipment stores and improved personnel training were also key factors in the development of Petron's oil spill response plan.

¹Current address: U.S. Coast Guard Regional Response Team Coordinator, 915 Second Avenue, Room 3506, Seattle, WA 98174, U.S.A. +1 206-220-7215. heather.a.parker@uscg.mil

Introduction

In the wake of the M/V *Solar I* oil spill in the Philippines in August 2006, the Philippines Coast Guard (PCG) recognized the need to reorganize response activities within the country at all levels. This was achieved by a revision of the Philippines National Oil Spill Contingency Plan (NOSCP) which was completed in 2008. This comprehensive plan outlines government management for a 3-tiered system of response. A key objective of the reorganization was to ensure compatibility between government agencies and the oil industry, in particular with the national oil company, Petron Corporation, the largest oil refining and marketing company in the Philippines which has a complex marine transport system and multiple coastal transfer and storage facilities throughout the country.

Industry also recognized the need to revise and improve oil spill planning standards after the 2006 incident and, in 2007, Petron, through a U.S. Trade and Development Agency grant, engaged in the development of a comprehensive, corporate-wide oil spill contingency plan that exceeded the PCG planning standards.

Currently the Philippine archipelago, with more than 7000 islands, relies on a fleet of 200 tanker vessels to carry fuel oil from Luzon Island, where the country's two refineries are located, to outlying islands. The Philippines as an archipelago has twice the coastline of the United States, yet has much fewer Coast Guard assets and resources than those of the United States Coast Guard. The Philippines are home to a rich and diverse array of sensitive biological resources; a robust and comprehensive response readiness system must be in place in order to ensure adequate protection and recovery of these resources from oil spills.

The National Plan

The Philippines National Oil Spill Contingency Plan NOSCP is centered on a 3-Tier system of response (ITOPF, 2000), similar to that utilized in many countries (Figure 1 and Table 1).

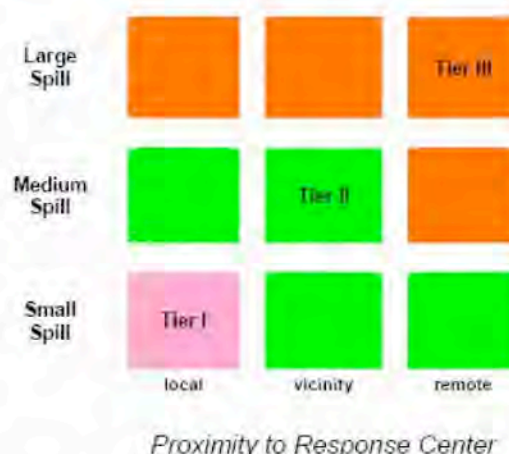


Figure 1. Graphic description of Tier 1, Tier 2 and Tier 3 oil spill response categories (*source PCG, 2008*).

A Tier 1 response is defined in the NOSCP as 10 m³ or less of oil spilled. For this classification of incident each facility or vessel is expected to implement their internal response plan and, by law, to operate their own, pre-designated Tier 1 emergency response equipment. At this level of oil spill, the Philippines Coast Guard (PCG) has the potential to participate in a government oversight role. For Tier 2 spills, the facility or vessel is expected to implement their response plan and the local PCG District would, in most cases, assume a direct management role of the response and deploy locally available government response equipment. For Tier 3 spills, the PCG would likely manage the spill on a national level, while executing international cooperative agreements and conventions as needed.

Tier Classification

| Tier | Volume | Response |
|-------------|--|--|
| I | Up to 10,000 liters (10 m ³) | Facility/Onboard Capability |
| II | Up to 1,000,000 liters (1000 m ³) | Tier I response including the capabilities of other industries, OSRO and government agencies |
| III | More than 1,000,000 liters (>1000 m ³) | Total national resources and foreign resources |

Table 1. Volumetric description of oil spill tier classifications (*source PCG, 2008*).

Petron's Corporate Response Plan

In 2007, the United States Trade and Development Agency sponsored a grant for Petron Corporation to utilize a private contractor to develop their internal Corporate Emergency Response Plan (CERP). The Petron CERP was developed specifically for responses to Tier 2 and Tier 3 oil spills involving cooperation with the PCG. Plans for response to Tier 1 incidents at individual Petron facilities are included within each facility's Emergency Response Plan and Emergency Management Plan.

The key element in developing Petron's CERP centered on the core document itself and its response management system around the National Incident Management System's (NIMS) Incident Command System (ICS), the response management system utilized in the United States for managing responses to all hazards (FEMA, 2008). The design concept behind the Petron CERP was also influenced heavily by the Area Contingency Plan (ACP) format followed throughout the United States (USCG, 2000).

The CERP was organized into sections corresponding to those found in most ACPs (NWAC, 2008), as shown in Table 2.

Petron's new CERP was designed to integrate with and become an extension of their already extant Petron Corporation Corporate Incident Management Plan (CIMP). Activation of the Petron CIMP, and in the case of oil spills, the Petron CERP for Tier 2 and 3 oil spills, is initiated at the lowest level (i.e. the affected facility or asset) and escalates vertically within the corporation as needed. The responsibility to respond and control emergencies within Petron lies within the Petron facility directly and immediately affected. The nature of the severity and scope of the

incident determines whether the affected Petron facility will need resources additional to its internal capabilities to augment the response.

| Petron Corporate Emergency Response Plan Section | Title |
|---|------------------------|
| Section 1000 | Introduction |
| Section 2000 | Command |
| Section 3000 | Operations |
| Section 4000 | Planning |
| Section 5000 | Logistics |
| Section 6000 | Finance/Administration |
| Section 7000 | Intelligence |
| Section 8000 | Marine Firefighting |
| Section 9000 | Planning Documentation |

Table 2. Description of sections from the Petron Corporate Emergency Response Plan for Tier 2 and 3 oil spills.

Tier 2 level responses will supplement the capabilities of the affected Petron facility through local and national level government resources as well as via cooperatives with other regional industry entities. The larger Tier 3 level incidents will likely trigger the need to activate international response resources through established international cooperation agreements (Table 3).

| International Cooperation Agreement | Description |
|--|---|
| <i>ASEAN² Council on Petroleum (ASCOPE)</i> | Oil industry's mutual agreement for oil spill response in ASEAN region |
| <i>ASEAN Oil Spill Response Action Plan (OSRAP)</i> | Plan for regional cooperation on oil spill response among ASEAN members |
| <i>Sulu-Sulawesi Sea Oil Spill Response Network</i> | Cooperative network for oil spill countermeasures in the Lombok/Makassar Straits and Sulawesi Sea between the Philippines, Malaysia and Indonesia |
| <i>Memorandum of Agreement (Thailand)</i> | Between Philippines and Thailand for oil spill response |
| <i>Memorandum of Agreement (Indonesia)</i> | Between Philippines and Indonesia for oil spill response |

Table 3. Description of International Cooperation Agreements for the Republic of the Philippines.

Government and Industry Integration

The PCG is the lead agency responsible for the prevention and control of pollution in the territorial waters of the Republic of the Philippines, including their Exclusive Economic Zone (PCG, 2008). The PCG operates its oil spill response program

² ASEAN - Association of South East Asian Nations Oil Spill Response Action Plan

through its Marine Environmental Protection (MEP) Command, headquartered at the National Operation Center for Oil Pollution (NOCOP).

The PCG states in its NOSCP that for Tier 1 oil spills the spiller is expected to lead the response through implementation of their individual facility or vessel response plan, utilizing their local assets and resources. Response to a Tier 1 oil spill would also likely trigger the implementation of a local Area Contingency Plan, such as the Manila Bay Oil Spill Contingency Plan (PEMSEA, 2006). Figure 2 describes graphically how this type of local Area Contingency Plan integrates with other levels of oil spill response plans.



Figure 2. Relationship between the Manila Bay local Area Contingency Plan with other response plans (*source PEMSEA, 2006*).

For a Tier 2 class spill, if the facility is unable to respond adequately the PCG has a series of CG District Command Oil Spill Contingency Plans which cover the area of responsibility for each of the PCG's 10 Districts. Tier 3 oil spills automatically trigger the implementation of the NOSCP (PCG, 2008).

For both Tier 2 and Tier 3 oil spills, the local PCG District Commander, or an individual designated by the PCG Commandant, will act as the On-Scene Commander (PCG, 2008).

The PCG MEP Memorandum Circular No. 01-2005 dated October 7, 2005 (Revised Rules on Prevention, Containment, Abatement, and Control of Oil Marine Pollution) outlines compliance requirements for all oil refineries, terminals and depots, in addition to all shipping and oil production companies to produce and maintain their own internal oil spill contingency plans which integrate with the PCG's corresponding oil spill response plans, based upon the Tier 1, 2, and 3 classification system (Figure 3).

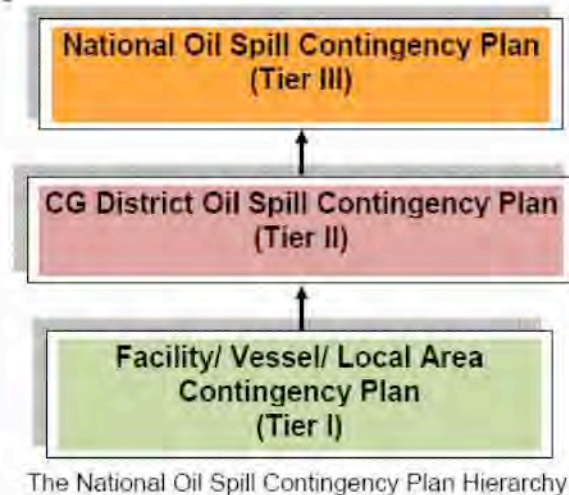


Figure 3. Hierarchy of oil spill response plans in the Republic of the Philippines, based on the Tier 1, 2, 3 classification system (*source PCG, 2008*).

Discussion

During the design phase of the Petron CERP for Tier 2 and 3 oil spills, a potential challenge emerged regarding the integration of the PCG's response system. Specifically this concern centered on how best to integrate the response system utilized by the PCG in their District and NOSCP plans, with the Incident Command System, newly adopted by the Petron Corporation for response management. The NOSCP describes an Incident Organization Structure which has a number of parallels to ICS (Figure 4).

PCG's response system as described in the 2008 NOSCP shares a number of critical elements similar to those of the Incident Command System, newly adopted by Petron in their CERP for Tier 2 and 3 oil spills:

- Management by Objectives
- Unified presence of the Spiller and other key agencies/stakeholders within organizational units
- Development and implementation of an Incident Action Plan

The adoption of such key elements which drive the success of the Incident Command System during response management is the path that is most likely to succeed in ensuring a smooth transition and integration of an industry and government tiered response system in the Philippines between Petron and the PCG.

Integration for Petron's oil spill response management then occurs on two dimensions, in the vertical sense as well as on a horizontal level. The new Petron CERP for Tier 2 and 3 oil spills is designed to integrate seamlessly within the existing Petron Corporation system for response management (the CIMP) and with the NOSCP.

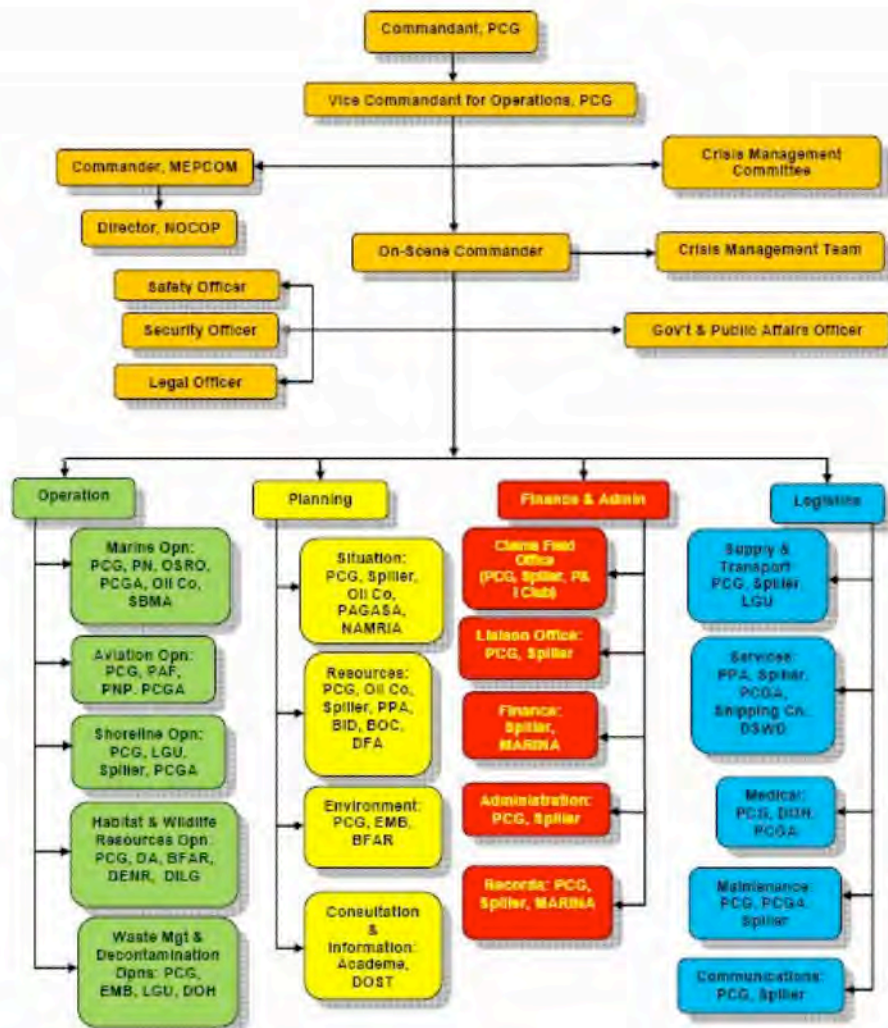


Figure 4. Incident Organizational Structure for oil spill response from the NOSCP.

In the vertical dimension, Petron has developed an internal corporate integration through its Incident Management Team (IMT) Director. The individual in this position does not direct the response at the affected facility, that task is the responsibility of the on-scene commander (a Petron facility representative during Tier 1 responses). Rather, Petron's IMT Director acts as the vertical management conduit for the on-scene commander to provide reach-back capability for Petron's assets and resources throughout the corporation. The IMT Director will activate and deploy as many Petron resources as needed for the incident, to support the on-site response manager.

Petron satisfies the need for horizontal integration on an external level through the development of its new CERP for Tier 2 and 3 oil spills. At the core of this comprehensive response structure is the Incident Command System, designed to ensure representation throughout the organization of the spiller as well as key agencies and stakeholders, in partnership with the principal national level government competent authority. Both the Petron CERP for Tier 2 and 3 oil spills and the NOSCP are built on the foundation of these concepts and will allow for

critical integration of both industry and government response plans and systems during the time of a major incident.

Conclusions

The magnitude of impacts and challenges associated with the response to a recent, major Tier 3 oil spill in the Philippines prompted Petron, as the largest oil company in the republic, to recognize the importance of rapid, integrated spill management and review their readiness posture. Petron took a positive, forward-thinking approach to advance the state of readiness along with the PCG in order to evolve and improve its overall response capability to a major oil release incident. The result is a CERP designed specifically for Tier 2 and Tier 3 responses that expands upon the Petron CIMP to focus solely on oil spill response, and outline improved capabilities. The new Petron CERP for Tier 2 and 3 oil spills provides the critical link up between the CIMP, bridging the gap between the Petron's all hazards response system by fine-tuning their response management with the Incident Command System used by the PCG to successfully manage oil spills.

Petron also went beyond redesigning its oil spill planning and response document and system by supplementing the CERP for Tier 2 and 3 oil spills with detailed descriptions of sensitive resources which could be impacted by releases from their facilities. Petron also conducted a detailed economic analysis of the costs to increase Petron's readiness through supplementing response equipment stores and improved personnel.

Although no formal processes or checklists currently exist in the international community to assess spill response readiness and spill plan adequacy against a set of accepted standards (IOSC 2008), both the NOSCP and Petron's efforts to integrate with the national plan represent a "best practices" approach and are in keeping with a number of key elements defined as essential to the success of a spill response plan (IPIECA, 2000; NRT, 2003; Owens *et al*, 2007; Owens and Taylor, 2007; USCG *et al*, 1996).

The critical design element of the Petron oil spill response plan was to develop a management system that incorporated seamless internal integration, between the CIMP and the CERP for Tier 2 and 3 oil spills, and external integration with the PCG's NOSCP. This three-way integration is crucial when the government is an active participant in Tier 2 and Tier 3 response management and when the response activities involve both industry and government personnel and equipment. This process represents a significant evolution in the overall response capabilities and readiness posture of the Republic of the Philippines to manage a response to a major oil spill.

Disclaimer

Ms Parker was a Principal Consultant for Sound Enterprises and Associates, LLC during the preparation of the Petron Corporate Emergency Response Plan. She is now the Regional Response Team 10 Coordinator with the United States Coast Guard and any opinions, interpretations and recommendations expressed in this paper do not represent those of the U.S. Coast Guard.

References

Federal Emergency Management Agency (FEMA), 2008. National Incident Management System. www.fema.gov/pdf/emergency/nims/NIMS_core.pdf

International Oil Spill Conference Technical Committee (IOSC), 2008. Assessment of Oil Spill Response Capabilities: A Proposed International Guide for Oil Spill Response Planning and Readiness Assessments. Technical Report IOSC-009. 70 pp. www.iosc.org

International Petroleum Industry Environmental Conservation Association (IPIECA), 2000. A Guide to Contingency Planning for Oil Spills on Water. IPIECA Report Series, Volume 2. London, 28 pp.
http://www.ipieca.org/activities/oilspill/downloads/publications/reports/english/Vol2_ContingencyPlanning.pdf

International Tanker Owners Pollution Federation (ITOPF), 2001. Philippines Country Profile. www.philippines.canurb.com/projectsunrise/files/pdf/philippines.pdf

National Response Team (NRT), 2003. The National Response Team's Integrated Contingency Plan Guidance.
[www.nrt.org/production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A26IntegratedContingencyPlan\(ICPorOnePlan\)Guidance/%24File/NRT%2520ICPG.pdf](http://www.nrt.org/production/NRT/NRTWeb.nsf/AllAttachmentsByTitle/A26IntegratedContingencyPlan(ICPorOnePlan)Guidance/%24File/NRT%2520ICPG.pdf)

Northwest Area Committee (NWAC), 2008. The Northwest Area Contingency Plan.
<http://www.rtt10nwac.com/NWACP/Default.aspx>

Owens, E.H., and Taylor, E., 2007. Guidelines to evaluate oil spill contingency plan adequacy, response competency, and sustained readiness. Paper presented at SPE Asia Pacific Health, Safety, Security and Environment Conference and Exhibition, Bangkok, Thailand, 10–12 September 2007.

Owens, E.H., Taylor, E., and Dickens, D.F., 2007. Defining Best International Practices for Oil Spill Response Planning. Proceedings Annual Symposium Petroleum Association of Japan, Tokyo, 11 pp.

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), 2006. Manila Bay Oil Spill Contingency Plan. http://www.pemsea.org/pdf-documents/mb_oilspill_plan.pdf/view

Philippines Coast Guard (PCG), 2008. National Oil Spill Contingency Plan.

United States Coast Guard (USCG), 2000. COMMANDANT INSTRUCTION 16471.3, Area Contingency Plan Organization, Content, Revision Cycle, and Distribution. www.uscg.mil/d1/response/acp/ACP_COMDTINST.doc

USCG/EPA/DOT/MMS/OSHA, 1996. United States ICP - Integrated Contingency Plan ("One Plan") Guidance agreed by five US federal agencies: USCG/EPA/DOT/MMS/OSHA. <http://www.nrt.org>