Spill prevention: Vital part of SRF-JRMC mission

By Jonathan Hookand, SRF-JRMC Environmental Office

The Navy is charged with being good environmental stewards while carrying out its mission. Protection of the environment and compliance with environmental laws and regulations are critical to maintaining operational flexibility required for mission accomplishment. The prevention of oil spills must be one of our top priorities to be successful. As ambassadors and guests in our host nation of Japan this is even more vitally important.

At Ship Repair Facility and Japan regional Maintenance Center (SRF-JRMC), the Navy uses large quantities of petroleum products and chemicals to accomplish our mission to keep the 7th Fleet operationally ready. Petroleum products are used to operate vehicles and vessels and to lubricate machinery. Chemicals are used for many purposes, including painting and various cleaning operations. Ships use machines and equipment that require the use of fuels and oils which frequently generate oily wastewater. This wastewater must be contained and transferred to holding facilities.

With so much potential for hazardous substance spills, spill prevention is a top priority. Factors most cited for spills were personnel errors attributed to a lack of training. Other contributors include: failure of personnel to follow established procedures; hose handling errors; tank monitoring errors by personnel; valve misalignments; valve and piping system failures; hose failures and tank level indicator failures.

All spills are preventable! A majority of spills occur because of operational deficiencies such as improper storage procedures, unattended draining of tank water, operators overfilling tanks, trucks and barges. Other major causes of spills include improper maintenance of equipment, instrumentation and controls and improper operations of quick-connect coupling. Lastly, the biggest single reason for spills is operator error.

The results of inadvertent spills are costly. Economic impacts relate primarily to direct dollar costs of spill cleanup, and product and property loss. However, depending on the severity of the spill, economic impacts also include secondary costs such as injuries related to the spill events and possible damage to natural resources areas.

Oil spill prevention is a high priority for SRF-JRMC and the Installation Environmental Office. When spills do occur, we apply maximum resources to contain and clean them up. To prevent spills, SRF-JRMC follows strict criteria of compliance enforcement which includes spill prevention education. One item that helps all Navy assets plan for potential spills is called the Spill Prevention Control and Countermeasures (SPCC) plan.

The SPCC plan provides for the prevention, control and reporting of all spills of petroleum, oils lubricants and hazardous substances. The plan describes the procedures, methods and equipment to prevent or minimize the occurrence and impact of an oil hazardous substance release. Spill prevention also includes compliance of safety standards, high quality of workmanship, following detailed work flow processes such as maintenance work orders and maintaining verbatim compliance.

Regulations are there for a purpose. For shipboard use it's essential that Sailors who are involved in fueling operations or oily waste transfers be trained and become familiar with requirements in applicable shipboard instructions such as Chief of Naval Operations instruction 5090.1C, Chapter 22 Environmental Compliance Afloat, Naval Ships' Technical Manual Chapter 593 Pollution Control, and Operational Sequencing Systems procedures such as EOSS and CSOOS. Personnel need to maintain a strict adherence to technical directives which includes knowing and adhering to requirements as set forth by Commander Naval Surface Forces (COMNAVSURFOR) November 2004 message "Standing COMNAVSURFOR Oil Spill Prevention and Response Guidance," local installation command directives and host nation regulations.

The goal is zero oil spills. On ships and on shore every person plays a vital role in this effort. You may be the one person who spots a problem, whether on the main deck, flight deck, pump room, road, street, trash container or parking lot. In virtually every spill incident, as in most mishaps, a series of mistakes occur that eventually lead to the spill. Often, if any one of these were caught and corrected, the spill would have been avoided. Be alert to what's going on around you. If something seems incorrect, notify someone right away. A minor delay to investigate a possible problem is infinitely better than the potential results of any oil spill.

A contractor helps Sailors of *USS Lassen* (DDG 82) safely connect a fuel hose during the refilling operations of her fuel while members of SRF-JRMC Environmental Office look on.

Photo by Hitoshi Nikaidou

SRF-JRMC環境室の従業員が見守る中、業者が燃料補給作業の為燃料ホースを安全に取り付けるUSSラッセンの乗組員を手伝う。

写真・二階堂仁、SRF-JRMC環境室

流出防止、ＳＲＦ－ＪＲＭＣの任務に不可欠なもの

文・ジョナサン・フック、SRF-JRMC環境室

使命を遂行する上で米海軍は模範となる環境保護者である任務を帯びている。環境保護、環境法令・規則の遵守は使命達成に求められる柔軟な業務運営のために重要なものだ。油漏れの防止は優先順位の高い事項の１つだ。我われを受け入れている日本に対して大使もしくはゲストとしての役割を果たす上で油漏れの防止はとても重要だ。

艦船修理廠及び日本地区造修統括本部(SRF-JRMC)では、「第７艦隊の艦船を常に機能できる状態に保つ」という使命達成のために多大な量の石油製品や化学物質を使用している。石油製品は車両の運転や大型の船の操船、機械類の潤滑用に使用され、化学物質は塗装・清掃業務を含む、多目的に使用されている。艦船では頻繁に油混じりの廃水を生じる燃料や油が必要な機械や器材を使用している。廃水は貯められ保管施設に移送される。

油や有害物質の流出は生じる可能性が高いので、その防止対策の優先順位は高い。流出の大きな要因は、正確な手順とトレーニングの欠如を含む人為的ミスだ。他の要因には、既存の手順に対する不実行、不適切・不正確なトレーニング、ホース取り扱いの不手際、タンク監視ミス、バルブの不調整、バルブと配管システム、ホース、タンク容量計の不都合などが挙げられる。

どんな流出でも予防可能で、それらの大半は不適切な貯蔵手順、タンク内の水抜きの放置、タンク、トラック、バージに燃料の入れ過ぎなど業務上の不注意から生じています。その他の主な原因は装置、制御機器、制御装置の不適切なメンテナンス、連結装置・機器の不適な作業があります。中でも一番大きな原因は人為的ミスと不注意な行動です。

不注意から起きる流出は、結果としてお金が掛かります。清掃、製品や財産の損失などとお金が掛かることに直結するからです。更に、度合いによりますが流出への対処に起きたケガや天然資源に対するダメージにもお金が掛かるのです。

油漏れ防止はSRF-JRMCと基地環境対策室では高い優先順位です。起きた場合には、流出の拡大防止と清掃に最大限の努力を注ぎます。漏れ防止の為に、SRF-JRMCでは漏れ防止教育を含んだ遵守実施の厳しい基準に従っています。可能性ある漏れに対し米海軍資産保護計画の補助となる漏れ防止管理・対策(SPCC)プランがあります。

SPCCプランは石油、油、潤滑油、油性有害物資など全ての漏れを防止、管理、報告の手順を提供します。プランには油性有害物資の廃棄に伴う影響の防止や最小限にする手順、方法、器材が記載されています。漏れ防止には安全基準の遵守、作業指示書、プロセス指示書、一貫性の保持などの詳細な業務プロセスに沿った高品質な仕事振りも含まれています。

目的によって漏れ防止規則も変わります。艦船では油性廃水に移送や燃料補給作業に携わる乗組員はトレーニングを受け、海軍作戦本部長本部指示書に慣れ親しむことが必須です。

ゴールは油漏れが起きないことです。艦船であろうとなかろうと個人１人１人が漏れ防止に関わっています。主甲板、飛行デッキ、ポンプ室、道路、道端、ゴミ箱、駐車場だろうと、あなたが問題点を指摘できるでしょう。実質的にどの漏れも災難のように、ミスの連続の発生が漏れを生じさせるのです。ミスの連続を止め改正できれば、漏れは防げたでしょう。皆さんの周りで起きていることに注意をしましょう。何か不確かだと思えたら、誰かに知らせてください。問題点をチェックすることによって起こる遅れは、どんな油漏れ事故より明らかに重要です。

(Left) Engineering technician Kenichi Kashima from SRF-JRMC Environmental Office listens and writes down what the lead crew member of the *USS Lassen* (DDG 82) says during a safety brief for her refueling operations.

Photo by Hitoshi Nikaidou

SRF-JRMC環境室環境専門職の鹿島謙一さんは、USSラッセンの乗組員が説明する燃料補給作業の安全確認事項をメモし、適切な作業手順に沿っているかを確認する。

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