

NAVSUP FLEET LOGISTIC CENTER PUGET SOUND– THE FUEL JEWEL OF THE NORTHWEST

INTRODUCTION

NAVSUP Fleet Logistics Center (FLC), Puget Sound Manchester Fuel Department (MFD) of the is the largest CONUS underground fuel storage facilities, storing product in 44 bulk fuel tanks (34 USTs) on 234 acres. The facility is also a Defense Fuel Support Point (DFSP Puget) for the Defense Logistics Agency - Energy (DLA-E). The Department's primary mission is to provide bulk fuel and lubricants to military and government vessels and activities including:

- US Naval Vessels
- MSC Tankers
- USCG Cutters, Icebreakers & Facilities
- US Air Force Activities
- US Army Activities
- National Oceanic and Atmospheric Administration (NOAA) Research Vessels
- University Research Vessels
- Foreign Military Vessels & Installations

Additionally, MFD supports DLA-E activities by providing fuel and war reserve storage. MFD is a location for drilling reservists (Fuel & Supply Companies) and a site for Army petroleum mobilization exercises (Americas Contingency Energy Solutions (ACES)).

MFD is located in unincorporated Kitsap County, on the Puget Sound, approximately 7 miles (by water) west of Seattle, Washington. The small, unincorporated village of Manchester, with an approximate population of 1,500, lies to the South and West. Former Navy property to the North is the home of a National Marine Fisheries Service research facility, the United States

Environmental Protection Agency (USEPA) Region X marine laboratory and a state park. The remaining neighbors are mostly low density rural properties.

The facility sits on approximately two miles of Puget Sound shoreline and is made up of two distinct areas separated by a 26-acre tidal lagoon (Little Clam Bay) and a county road. The property also contains a perennial stream (Beaver Creek) which runs through the north end of the facility and various man-made spill containment ponds (Franco Pond, North Dike, South Dike) which have converted over time to wetland habitat.

Personnel at MFD provide a full range of operations, maintenance, inventory control and administrative services in support of their customers. The staffing at MFD consists of 2 military and 33 full-time civilians, 1 full-time contract staff and 2 part-time clerical staff.

BACKGROUND

The MFD Environmental Management System (EMS) was developed in 2005 to meet the requirements of Executive Order 13148. While not an "appropriate facility" as defined in the executive order, MFD determined that an EMS would complement and enhance existing management system elements currently in use. Additionally, the EMS has been incorporated into the Facility Operations Manual, which contains the standard operating procedures for all activities conducted at MFD. MFD completed the six Department of Defense (DOD) metrics (Gap Analysis, Signed Policy, Aspects Ranking, Implementation Plan,

Management Review, Training of Personnel) and is continuing to work on further implementation of the EMS.

FLC Puget Sound employs a full time environmental & engineering director and a full time deputy environmental director. The environmental director is in charge of the full range of environmental compliance programs at MFD. In addition to the two environmental positions on staff, environmental work is accomplished through a combination of other facility personnel, local Navy resources (Naval Facilities Command, Navy Region Northwest, etc) and contractors. The environmental director is the EMS manager and is responsible for ensuring implementation of and compliance with the EMS.

MFD has several regulatory plans and permits that must be kept up to date and implemented. The Facility Operations Manual is currently being updated to incorporate lessons learned from a Worst Case Drill and update the training requirements for fuel transfer personnel. The Navy Region Northwest Integrated Contingency Plan (MFD is a part of this umbrella plan) has been updated to incorporate changes to state rules and MFD has led the development of support from local Oil Spill Response Organizations (OSROs) within this program. All storm water and wastewater discharges are regulated under the facility National Pollution Discharge Elimination System (NPDES) Permit, which is currently under review for renewal by the USEPA.

SUMMARY

The MFD environmental management program is designed to comprehensively and effectively sustain all the current and future mission requirements while exceeding all environmental requirements and

performing as a “Good Neighbor” with the resources available. While staffing has been reduced to the absolute minimum to meet our primary mission requirements, MFD continues to be a leader in assertive environmental protection and natural resource infrastructure sustainment. The EMS supports the entire facility and fuel operations incorporated into the Facility Operations Manual (FDINST 10340.3) – a unique approach to the DOD fuel community and Navy shore operations. The EMS provides standard operating procedures (SOPs) which identify specific operational controls, recordkeeping requirements, and safety issues relevant to each SOP. In addition, the SOPs identify environmental impacts, and mitigation for the specific actions.



Figure 1 Manchester Fuel Pier

The EMS incorporates all organizations at the terminal (Operations, Maintenance, Administration, Laboratory, Engineering, Environmental and Management). Using the Aspects and Impacts identified during the aspects ranking process and during the Management Review, the following EMS objectives were developed:

- Zero discharge of contaminants from fuels operations (No Spills)
- Maintain and improve MFD’s spill response capability

- Improve the Oil Water Separator Systems and Storm Water Systems to prevent contaminant discharges
- Ensure sustainability of the field constructed bulk fuel storage tanks
- Improve the natural resource infrastructure through partnerships, assertive effective use of funds, and innovative design/build methodologies
- Aggressively approach recycling, reclamation, and pollution prevention efforts
- Aggressive training to include EMS (Aspects/Impacts, Objectives), spill response and prevention, drill participation, and employee qualification

The MFD EMS, along with the Facility Operations Manual, were reviewed and are currently being improved in order to increase the effectiveness of the environmental management at MFD. Additionally, during FY 12, an independent Environmental Quality Assessment of compliance programs was conducted for the purpose of identifying areas of improvement. Results of this assessment will be incorporated into the environmental management program to further increase program effectiveness.

ACCOMPLISHMENTS

During FY 11/12 MFD had receipts and issues of \$1.287 billion dollars of petroleum products for a wide variety of customers. During this time period, there were a total of 3 releases totaling less than 2 gallons - none of which were caused by MFD personnel during fueling evolutions. One of the 3 releases was the result of heavy rains overwhelming one of the oil water separator systems, which has since been fitted with a monitoring system that will alarm prior to fuel making contact with the waters of Puget Sound. This superb performance is a direct result of the attention to detail MFD

personnel exercise to ensure protection of the environment.

MFD continues to provide exemplary spill response services. MFD successfully converted a former fire house into an Oil Spill Command Post. This was used to successfully conduct the triennial OPA 90 Worst Case Oil Spill Drill on 18 April 2012. The Worst Case Drill involved over 150 personnel from US Navy, US Coast Guard, Washington State Department of Fish and Wildlife and local oil spill response contractors. This drill included a full standup of the Incident Command System including Joint Information Center, Operations, Planning and Logistics sections. MFD personnel provided significant staff in all sections including the Navy Incident Commander for the drill.



Figure 2 RADM Biesel, USN and RADM Taylor, USCG participating in the 2012 Worst Case Oil Spill Drill

In the Puget Sound region, control of stormwater is a significant priority. The MFD has continued to improve the stormwater treatment facilities. During FY 11/12 MFD replaced two open top, coalescing plate separators with new modern, enclosed gravimetric separators and improved the collection of stormwater that fed these two separators. MFD collects the parking lot drains from an MHE repair facility, avoiding contaminated sheet flow and routes that to one of the new gravimetric separators. The

other new separator collects the runoff from a truck loading rack and treats it before discharge. Both separators discharge under the station NPDES permit to estuaries of the Puget Sound, and an estuary of National Significance. During this period, MFD has also installed (and is currently testing) a new detection technology (optical detection system) at the Separator 8 system to give a better early warning of potential releases to allow rapid response to a contaminated release.



Figure 3 New Oil Water Separator 4

NAVSUP FLC Puget Sound continues to make infrastructure and repair improvements to the network of field constructed underground storage tanks. During FY11/12, 9 of the field constructed USTs were cleaned and inspected, and a new coating system (a new flexible system developed by NAVFAC Engineering and Expeditionary Warfare Center) was installed in the tanks. These tanks, along with all of the other USTs at Manchester, were successfully precision leak tested. This allowed MFD to place 5 Diesel Tanks (capacity 105,000,000 gallons) back into service which provided mission capability to meet the needs of the fleet and forces MFD supports.



Figure 4 Tank 21 Coating Repair

Significant improvements are continually be made to the natural resource infrastructure at MFD. During FY11/12 MFD completed the final phase of the Beaver Creek project with the removal of fish passage impediments to allow for free movement of spawning salmon. As part of the final phase of the Beaver Creek project, a new bridge was installed. Prior to installing the bridge, a culvert that limited both water flow and fish movement , was removed. The bridge was installed in place of the culvert ensuring the continued use of the road for facility operations and allowing for free movement of fish throughout Beaver Creek.



Figure 5 Beaver Creek Bridge

MFD also completed a significant deer survey validating the fact that MFD has continued to foster an environment conducive to maintaining substantial wildlife habitat while fulfilling the mission of providing fuel to the customer.



Figure 6 Deer at Manchester Fuel Department

As with any industrial installation, significant spent metals are generated. These metals are reclaimed in the station recycling center. A project has been approved and funded to construct a shelter building in the recycling center in order to prevent metal contamination of storm water. MFD has also set up paper recycling and wood debris recycling so that almost all cellulose materials are sent to recycling centers for reclamation.



Figure 7 Wood Reclamation Collection Receptacle

MFD is a leader in the use of alternative fueled vehicles and equipment at the fuel terminal and at FLC Puget Sound facilities. MFD has acquired hybrid ½ ton pickups to supplement the vehicle fleet and is in the process of acquiring additional electric vehicles to supplement the existing robust fleet of electrical vehicles already in use at the FLC Puget Sound locations of Manchester, Bremerton, and Keyport.

MFD is a leader in conversion to LED lights in the northwest. The operational life of LED lamps is 100,000 hours, over twice that of other bulbs reducing maintenance cost dramatically. LED lighting is reducing lighting power consumption by 50%. MFD has installed LED lighting in the high bays of station facilities, on building exteriors, on fuel piers per USCG requirements, and within office spaces. The replacement LED fixtures have eliminated the source of the fluorescent tube waste stream, resulting in reduced disposal costs, as well as significant maintenance and energy savings. MFD has found that the LED white light is superior compared to the yellow light of metal halides. This is in support of the SECNAV and CNO energy reduction goals and made good business sense to execute.



Figure 8 BLDG. 194 LED lighting (white lights) and metal halide lighting (yellow lights)

MFD supported the “Sail the Green Fleet” initiative. This effort entailed receiving bio fuels produced from cooking oil, algae and camelina seed. This labor-intensive effort required specific handling as the fuel was shipped by truck and intermodal containers to FLC Puget Sound and stored in segregated barges. These fuel receipts occurred during high operational tempo periods with no fuel releases or spills. The bio-fuels were blended 50/50 with normal hydrocarbon stocks until 972,000 gallons of diesel and jet fuel was accumulated. In June 2012, these bio-fuels were issued to the USNS Kaiser which provided this fuel in support of the Rim of the Pacific Exercise 2012 (RIMPAC). The real life war-fighter usage of green fuels was observed by the Secretary of the Navy during RIMPAC 2012. Some allied nation vessels also used these bio-fuels during RIMPAC.



Figure 9 Green Fleet Fuel Transfer Feb 2012 while simultaneously transferring fuel from tanker

Fleet Logistics Center Puget Sound also is actively involved with the community. During FY 11/12, the fuel terminal participated in four Sea Scout Quartermaster projects (Scout service projects) resulting in a trail restoration and picnic shelter restoration. MFD also participates with the Audubon Society in their annual Christmas bird count as well as with the Manchester Citizens Advisory Committee on issues of common interest to the terminal and the community.



Figure 10 Sea Scout Ship Manchester Trail Restoration Crew

FLC Puget Sound, Manchester Fuel Department, has taken its environmental responsibilities seriously and continues to innovate, improve, and model how a small industrial installation can steward environmental leadership. With a very small staff, MFD has done more environmental projects than commands many times its size.

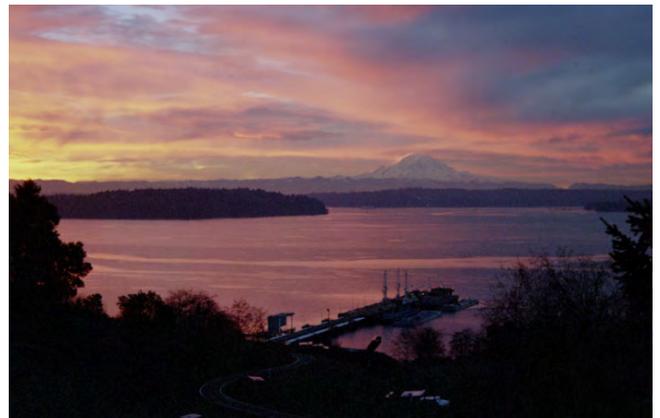


Figure 11 Manchester Fuel Pier at Sunrise