

# Defueling Activities and EPA's Role

## October 2023

### Fact Sheets



#### **Spill Prevention Control and Countermeasure Program**

**What It Is:** The SPCC Program ensures that facilities develop and implement an SPCC Plan to prevent spills from occurring and entering into waters. Facilities must ensure they have proper secondary containment such that if a breach occurs in a tank it is captured by a second-level control structure. Generally, the SPCC program applies to above-ground tanks, however because of unique circumstances surrounding the Red Hill-Joint Base Pearl Harbor complex, the SPCC program applies to much of the Red Hill facility and connecting pipes.

**EPA's Role:** EPA conducted a weeklong SPCC/FRP inspection in March 2022 following the 2021 incidents. EPA finalized an inspection report in August 2022, which included specific repairs and planning recommendations. EPA also made the determination that the Navy was required to expand its SPCC Plan to cover the Red Hill tank piping. The Navy was required to address all findings from the inspection as part of the 2023 Consent Order prior to defueling. In September 2022, the Navy provided an amended SPCC Plan in response to EPA's findings. EPA provided several rounds of comment before the Navy submitted a Final SPCC Plan for review on August 7, 2023.

**Current Status:** On 8/11/23, EPA confirmed the plan was fully certified & ready for implementation.

#### **Facility Response Plan**

**What It Is:** The FRP Program ensures that facilities are prepared to respond in the event of an unexpected release. Large oil storage facilities are required to develop these plans and practice implementing them so that they are prepared for various spill scenarios. Generally, the FRP program applies to above-ground tanks, however because of unique circumstances surrounding the Red Hill-Joint Base Pearl Harbor complex, the FRP program applies to much of the Red Hill facility and connecting pipes.

**EPA's Role:** EPA conducted a weeklong SPCC/FRP inspection in March 2022 following the 2021 incidents. Based on that inspection, EPA made the determination that the Navy's existing Facility Response Plan covering Joint Base Pearl Harbor Hickam needed to be expanded to also cover Red Hill. EPA transmitted its findings on the FRP in June 2022. The Navy was required to address all findings from the inspection as part of the 2023 Consent Order prior to defueling. The Navy provided a new and expanded FRP in September 2022. EPA provided several rounds of comment before the Navy submitted a Final SPCC Plan for review on July 13, 2023.

**Current Status:** On 9/1/23, EPA approved the Navy's Facility Response Plan for Joint Base Pearl Harbor-Hickam, including the Red Hill Amendment.



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#### Source Water Protection Plan

**What It Is:** As part of the 2023 Consent Order, the Navy was required to submit a Source Water Protection Plan to ensure the protection of drinking water quality at all well sites across the base.

**EPA's Role:** The 2023 Consent Order requires the Navy to develop the Source Water Protection Plan in two phases. Phase I of the plan is to "Safeguard Drinking Water Quality in the Red Hill Shaft During Facility Defueling and Closure" and Phase II is to "Safeguard Drinking Water Quality at All JBPHH System Well Sites." Only Phase I of the plan was required to be developed prior to defueling. On June 15, 2023, the Navy submitted their draft plan to EPA. After several rounds of comments, the Navy submitted their final plan on September 22, 2023.

**Current Status:** On 9/25/23, EPA approved Phase I of the Navy's Source Water Protection Plan for the Facility.

#### Defueling Plan

**What It Is:** As part of Hawaii's Emergency Order, the Navy was required to develop a Defueling Plan to outline their timeline and strategy for defueling the Red Hill tanks.

**EPA's Role:** The 2023 Consent Order put EPA into a co-approval role of the Defueling Plan along with Hawaii, and holds the Navy accountable for meeting deadlines in the Defueling Plan. EPA has provided substantive comments relating to multiple aspects of the plan, including: Red Hill shaft protection, spill prevention practices, infrastructure repairs and assessment, operation orders, training, and more. After several rounds of comments, the Navy submitted a Supplement 2 of the Defueling Plan to EPA and Hawaii DOH in May 2023, which demonstrated an overarching strategy for defueling.

**Current Status:** On 6/16/23, EPA issued a conditional approval of the Defueling Plan. The conditional approval outlined additional steps that must be taken prior to defueling that require review and approval by EPA. EPA clarified that the Agency expects the Navy to request approval before each phase of defueling. We anticipate additional supplements to address between 100,000 and 400,000 gallons remaining after gravity defueling concludes.

#### Quality Validation of Repairs

**What It Is:** Hawaii's Emergency Order required completion of a third-party assessment of the Red Hill facility. Based on this report along with other engineering assessments, Navy developed a list of repairs needed to reduce the risk of future releases during defueling. Each repair, after completion, went through a multi-step review process to ensure it was performed to best engineering practices. This included a final review step in which a third-party engineering firm assessed and documented the repair work. This step is referred to as "Quality Validation," and the reports generated are "Quality Validation reports," or, "QV reports."

**EPA's Role:** As part of the conditional approval of defueling, EPA mandated that all QV reports be reviewed and approved by EPA. The QV reports were shared with EPA from February through August 2023 as they were completed. EPA and EPA contractors reviewed every QV report and, when questions or concerns were identified, raised these issues with the Navy.

**Current Status:** On 8/23/23, EPA issued its final unconditional approval. EPA has approved all QV reports submitted, indicating that all repairs had been sufficiently completed. EPA has reviewed and approved a total of 297 QV reports.

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#### **Concept of Operations (CONOPs) and Operational Order (OPORDs)**

What It Is: Navy documents their fuel movement plans in Concepts of Operation and Operation Orders. CONOPS provide an overarching plan for how each defueling phase will be carried out. OPORDS provide specific, step-by-step tasks for operators to follow during daily fuel movement operations.

**EPA's Role:** As part of the conditional approval of the Defueling Plan, EPA required the Navy to submit to EPA for review the CONOPs/OPORDs for each of the primary defueling phases: surge tank drainage, repacking, tank mains defueling, tank bottoms defueling, unpacking, and final removal of residual fuel. EPA reviews and comments on each CONOP and OPORD submitted by the Navy.

**Current Status:** On 8/28/23, EPA stated EPA had no further comments on the CONOPs/OPORDs for the defueling of the tank mains and tank bottoms. EPA awaits submission of CONOPS and OPORDS for unpacking and final removal of residual fuel.

#### **Spill Drills**

What It Is: The Navy has conducted spill response drills consistent with their Facility Response Plan leading up to critical milestones.

**EPA's Role:** EPA On-Scene Coordinators and enforcement staff participated on-site during drills to simulate EPA's involvement and provide oversight over the implementation of their FRP. As a result of each drill, EPA provided feedback on the process to improve spill response and make necessary modifications to their FRP.

**Current Status:** The last spill response exercise with EPA participation was conducted in July 2023 prior to EPA's final approval of the Navy's FRP.

#### **Tank Tightness Testing**

What It Is: Tank tightness testing is an analytical method to verify the integrity of underground storage tanks. This testing occurs on large, field-constructed tanks (like the Red Hill fuel storage tanks) and on smaller sumps and tanks.

**EPA's Role:** Alongside the SPCC/FRP inspection, EPA conducted a week-long Underground Storage Tank inspection in March 2022. One of the recommendations was that the Navy conduct regular tank tightness testing during the time leading up to defueling. EPA required in the 2023 Consent Order that the Navy conduct tank tightness tests on two sumps associated with the Fuel Oil Recovery (FOR) pipeline within the lower access tunnel that connects the Red Hill tanks to the piers: the Zone 7 Sump and the Main Containment Sump FOR. The Navy conducted a tank tightness test on the Main Containment Sump in April 2023 and passed with no detectable leak. Since the findings, the Navy has stated that they are not utilizing the Zone 7 sump for defueling so a tank tightness test is no longer necessary, though they did conduct a passing tightness test on the Zone 7 sump.

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#### Defueling Preparedness Report

**What It Is:** As part of the 2023 Consent Order, Navy is required to submit a report to EPA and DOH certifying they have completed all work required by EPA under the Order and are fully prepared to defuel.

**EPA's Role:** On 8/27/2023, EPA received a final Defueling Preparedness Report. After EPA and DOH approve the plan, the Navy is required to begin defueling within 15 days.

**Current Status:** On 10/3/2023, EPA approved the final Defueling Preparedness Report.

#### Defueling Phases, Oversight, and What Happens if Something Goes Wrong

**What It Is:** In order to make repairs in pipelines connecting the Red Hill Tanks to Pearl Harbor, the Navy had to remove fuel from those lines. This process was known as “unpacking” (October 2022). Once repairs were made, fuel had to be reintroduced into the lines (“repacking,” August 2023). Prior to defueling, nearly half a million gallons of fuel was removed from four underground “surge tanks” (August 2023). Now that these steps are complete, the Navy intends to initiate the bulk of defueling on October 16th by gravity draining the tank mains (“tank mains defueling”) and pumping out the tank bottoms (“tank bottoms defueling”). Once this is complete, the Navy will then need to “unpack” the connecting pipelines (another “unpacking”) and remove all residual fuel.

**EPA's Role:** EPA will have staff onsite to oversee the operation, provide technical assistance, and monitor for any deviations or irregularities in the process. During tank mains defueling, EPA will have staff onsite during all business hours and available on-call when defueling occurs off business hours. Should a problem be identified, the Navy and EPA agreed to a process of timely information-sharing to address that issue and quickly make any necessary revisions to CONOPs, OPORDs, SPCC, and/or FRP plans. Should a major incident occur, EPA is prepared to immediately deploy emergency response personnel.

#### What would happen during a Government Shutdown

In the case of a Federal government shutdown, EPA will continue performing oversight work. All EPA staff supporting Red Hill defueling oversight have been deemed as exempt from furlough and will continue to support and oversee defueling operations.

**Current Status:** EPA is prepared to oversee defueling operations starting on 10/16/23.



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