Red Hill Bulk Fuel Storage Facility, Oahu, Hawaii

Defueling Plan Supplement 3 – November 14, 2023

November 14, 2023 Supplement 3

Contents

Enclosures:

(1) Integrated Master Schedule (IMS)
(2) Red Hill Residual Fuel Concept of Operations (CONOP)

I. Introduction

On June 30, 2022, the Department of Defense (DoD) provided to the Hawaii Department of Health (DOH) and the United States Environmental Protection Agency (EPA) its five-phase plan to defuel the Red Hill Bulk Fuel Storage Facility (RHBFSF). DoD noted in that submission that its planning process was iterative and that DoD would provide supplements to the plan that would include additional details and updated timelines and milestones for the completion of defueling. To date, DoD has submitted three supplements to DOH and EPA: Supplement 1.A on September 7, 2022; Supplement 1.B on September 28, 2022; and Supplement 2 on May 15, 2023.

Supplement 1.A focused on DoD's plan to integrate community engagements into the defueling planning and timeline and outlined a detailed plan to safely unpack the Red Hill pipelines in order to conduct mandatory repairs and enhancements. Supplement 1.B centered on the following: updates to the Fire and Spill Response Plans, updates to the infrastructure repairs and enhancements, updates to Phase 5 planning, an update on DoD's Joint Task Force Red Hill (JTF-RH), and DoD responses to EPA's requests for information (RFIs) dated August 11, 2022. Supplement 2 detailed execution of gravity-based defueling of the 20 underground storage tanks and associated pipelines, as well as the removal of fuel from the four surge tanks. Supplement 2 also disclosed that DoD expects that some residual fuel will remain in the facility following the completion of gravity-based defueling and confirmed that DoD would provide a separate supplement to address the safe and expeditious removal of that residual fuel. JTF-RH received regulatory conditional approval for the Defueling Plan and all Supplements 1A, 1B, and 2 on June 1, 2023.

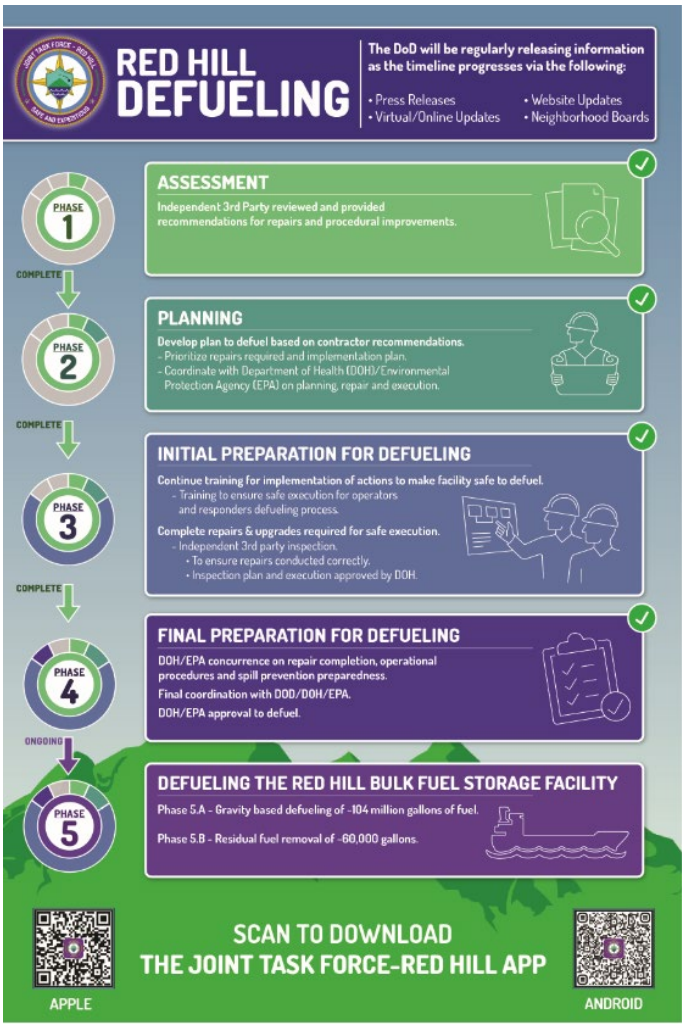


Figure 1- DoD Red Hill Defueling Plan

DoD now submits Defueling Plan Supplement 3, which provides the way ahead and key milestones for removing the residual fuel remaining in RHBFSF after gravity-based defueling is complete. It also defines the transition timeline and responsibilities as JTF-RH stands down and Navy Closure Task Force – Red Hill (NCTF-RH) stands up. Finally, this supplement addresses the communication plan to ensure the community remains informed as the Red Hill mission transitions to NCTF-RH for closure operations.

A. Establishment and Mission of JTF-RH

On September 30, 2022, after submitting Supplement 1.B., DoD established JTF-RH with the mission to safely and expeditiously defuel the RHBFSF and rebuild trust with the state of Hawaii.

Prior to December 6, 2022, all activities at Red Hill not specifically related to defueling preparations, such as facility preventive and corrective maintenance, repair, and environmental remediation, were managed by multiple Navy commands. On December 6, 2022, following a November 29, 2022 Aqueous Film Forming Foam (AFFF) spill at RHBFSF, United States Indo-Pacific Command (USINDOPACOM) directed JTF-RH to expand its mission and centralize management and safety controls at RHBFSF to reduce risk of future mishaps. To adequately execute these expanded responsibilities, DoD added over 100 personnel to the JTF-RH team, and JTF-RH took the following actions:

- JTF-RH established physical control of the RHBFSF. JTF-RH personnel now manage the two RHBFSF access control points (ACPs) and verify that all personnel are on an approved access roster with a clear purpose for accessing the facility.
- JTF-RH now oversees all security screening and badging of any personnel requesting access to RHBFSF.
- JTF-RH now oversees all maintenance, repair, and environmental remediation contractors who enter RHBFSF and require a military escort to remain with these contractors while at RHBFSF. The military escorts have the requisite training and knowledge to provide appropriate oversight of contractor actions.
- JTF-RH has implemented a robust risk management process. In addition to repairs, enhancements, and modifications to set conditions for defueling, all other activities at RHBFSF must be coordinated, de-conflicted, and synchronized. This process occurs during the Red Hill Defueling Coordination and De-Confliction Working Group (RHDCDWG). This body consolidates all activities into a single integrated weekly schedule which is then approved by the JTF-RH Commander. Any activity characterized as "high risk" must be approved by the JTF-RH Commander after he receives a detailed brief covering the procedures, hazards, and mitigations that will be taken to reduce risk. Further, any activity characterized as "significant risk" requires a similar brief to and approval by Commander, USINDOPACOM. Access to RHBFSF is limited to activities listed on the approved schedule.
- JTF-RH has established procedures to maintain real-time visibility of all approved activities in order to have awareness of what organization is taking what action in which location in RHBFSF.
- A single Lock-Out/Tag-Out (LOTO) Program has been established under the purview of JTF-RH. It has been implemented to ensure a safe, methodical, and auditable approach to disabling and energizing systems or equipment necessary for maintenance or repairs.
- JTF-RH has implemented enhanced procedures to protect the health and welfare of first responders and personnel involved in clean-up of hazardous material (HAZMAT) and remediation efforts. These measures include an instruction providing information on the safe handling of AFFF and ensuring that appropriate Personal Protective Equipment

(PPE) is worn prior to entering or doing work at RHBFSF. In addition, JTF-RH has expanded its training program to incorporate additional procedures to ensure all personnel are trained and ready to respond in the event of a HAZMAT spill.

B. JTF-RH Organizational Structure

The initial JTF-RH organizational structure, as provided in Supplement 1.B, defined the six functional focus areas: (1) Planning Directorate, which oversees access control to Red Hill, conducts continuous planning to safely and expeditiously defuel Red Hill, and engages with all stakeholders for discussions prior to executing milestones; (2) Training Directorate, which works to ensure all personnel responsible for defueling operations are both individually and collectively trained and certified; (3) Quality Assurance Directorate, which monitors and evaluates various aspects of a project, service, or facility to ensure the standards of quality are met and enforced; (4) Repair and Maintenance Directorate, which is responsible for coordinating and executing fuel systems and facility repair projects; (5) Operations Directorate, which coordinates with the Defense Logistics Agency (DLA) to plan for the safe removal and transportation of fuel, conducts dry runs of the defueling operations, tank tightness testing and dewatering; and (6) Response Directorate, which coordinates with an Interagency Spill Response Team (ISRT) to develop response plans, conduct drills and rehearsals, and review lessons learned. Supplement 2 provided the revised JTF-RH organizational structure (*see* Figure 2 below) that identified the additional capabilities established to support the expanded mission set to include the Defueling Information Sharing Forum (DISF), which brings together local community leaders, elected representatives, and other stakeholders with different areas of relevant subject matter expertise for discussions and key updates pertaining to RHBFSF defueling line of effort; and the Red Hill Deconfliction and Coordination Working Group (RHDCDWG), which serves as the centralized clearinghouse for any potential conflicts across all activities.

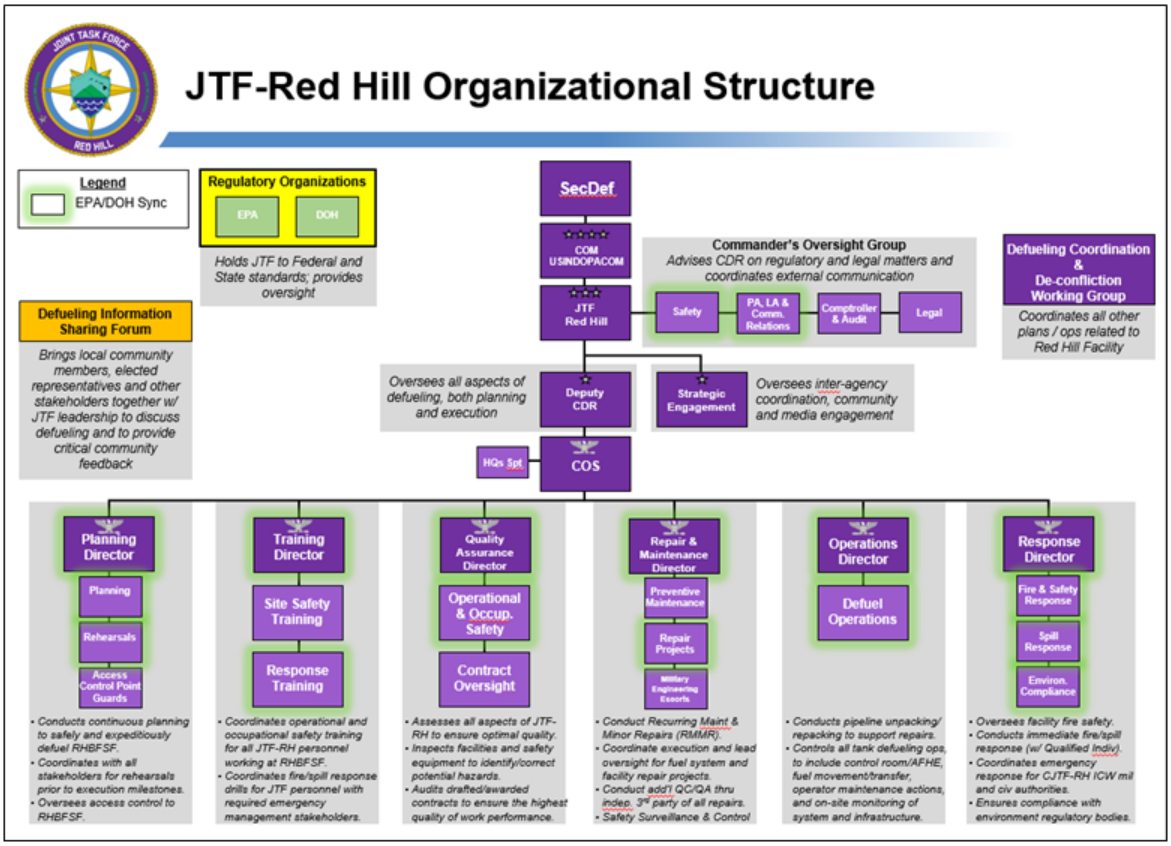


Figure 2 – JTF-RH Organizational Structure

C. JTF-RH Progress

JTF-RH has made significant progress since releasing Supplement 2 on May 15, 2023. Table 1 provides a comprehensive list of major deliverables and events that JTF-RH has completed since May 16, 2023. As shown in Table 1, JTF-RH submitted all deliverables and events required to commence gravity defueling on October 16, 2023. Those events include completing the National Environmental Policy Act (NEPA) Environmental Assessment/ Overseas Environmental Assessment (EA/OEA), successfully draining surge tanks,[1] repacking pipelines, early completion of all required and supplemental infrastructure repairs, and executing numerous safety and spill response drills in preparation for safe and expeditious defueling.

Table 1- Comprehensive List of Submitted Deliverables and Completed Events

DATE	JTF-RH DELIVERABLES AND EVENTS
16 May 23	House Special Committee on Red Hill Information Hearing
17 May 23	Defueling Information Sharing Forum Update

[1] After the release of Supplement 2, JTF-RH determined that the surge tanks were not needed for JTF-RH operations because they functioned as service tanks, which is separate from bulk fuel storage. Accordingly, JTF-RH safely removed approximately 480,000 gallons of fuel from the four surge tanks on July 28, 2023 prior to the start of Phase 5, as it was originally defined.

19 May 23	Main Tank Defuel CONOP to DOH/EPA
19 May 23	Tank Bottom CONOP to DOH/EPA
22 May 23	Surge Tank Draining CONOP to DOH/EPA
31 May 23	Required Repairs Repair Work Complete
31 May 23	Major Program Audit Complete
01 Jun 23	Monthly QV Submission to DOH/EPA
06 Jun 23	Fuel Tank Advisory Committee Update
15 Jun 23	Defueling Risk Assessment IPR
15 Jun 23	Monthly Progress Report to EPA
18 Jun 23	Defueling Supplement Conditional Approval from DOH/EPA
20 Jun 23	Defueling Update to Native Hawaiian Organizations
01 Jul 23	Tanker Decision Point
01 Jul 23	QV Submission to DOH/EPA
01 Jul 23	Third Party QV Reports for Repairs Complete
06 Jul 23	Repacking CONOP to DOH/EPA
14 Jul 23	JTF-RH Response to EPA Comments re Supplement 2
15 Jul 23	Monthly Progress Report to EPA
15 Jul 23	Defueling Risk Assessment IPR
28 Jul 23	Surge Tank Draining Complete
21 Jul 23	JTF-RH Response to DOH Comment re Supplement 2
01 Aug 23	EPA Endorsement for Source Water Protection Plan
15 Aug 23	Defueling Risk Assessment IPR
15 Aug 23	Monthly Progress Report to EPA
15 Aug 23	Defuel Preparedness Report to EPA
16 Aug 23	Roving Security Fire Watch Drill Day 1
17 Aug 23	Roving Security Fire Watch Drill Day 2
22 Aug 23	Defueling Information Sharing Forum Update
24 Aug 23	House Special Committee on Red Hill Information Hearing
27 Aug 23	DOH/EPA Unconditional Approval for Repacking
28 Aug 23	NEPA Finding of No Significant Impact (FONSI) Complete
05 Sep 23	Repacking Complete
15 Sep 23	Monthly Progress Report to EPA
19 Sep 23	Honolulu Department of Emergency Management / Local Emergency Planning Committee Information Brief
28 Sep 23	Main Tank Training Certification
28 Sep 23	Main Tank QA Safety Validation
27 Sep 23	Defueling Preparedness Report to EPA
29 Sep 23	Pre-Defueling Material Assessment (PDMA)
03 Oct 23	EPA Unconditional Approval for Defueling Preparedness Report
03 Oct 23	Defueling Open House
04 Oct 23	EPA Community Representation Initiative Update
09 Oct 23	Defueling Tank Mains Start Notification to EPA
09 Oct 23	Defueling Tank Mains Press Release
10 Oct 23	Defueling Confirmation Brief
10 Oct 23	Defuel Final Walkthrough
11 Oct 23	DOH Final Approval to Commence Defueling Tank Mains
13 Oct 23	Defueling Press Conference
14 Oct 23	Blessing

15 Oct 23	Monthly Progress Report to EPA
16 Oct 23	Defueling Start - Begin Defueling Main Tanks
23 Oct 23	Board of Water Supply, Board of Directors Update
24 Oct 23	Defueling Information Sharing Update
27 Oct 23	House Special Committee on Red Hill Information Hearing
02 Nov 23	Hawaii State Senate Health Committee Update Brief
15 Nov 23	Fuel Tank Advisory Committee Update

II. November 14, 2023 Red Hill Defueling Plan Updates

This Supplement provides key updates on the defueling plan and timelines for JTF-RH and NCTF-RH's remaining work to defuel the RHBFSF and to set the conditions for facility closure by NCTF-RH. It provides Phase 5 defueling progress updates on gravity-based defueling, explains JTF-RH's plan for the removal of residual fuel remaining in RHBFSF, and defines how JTF-RH, upon completing Phase 5, will transition Red Hill operations to NCTF-RH. Defueling Supplement 3 will be the final JTF-RH Defueling Supplement; it provides a transition timeline, explains the conditions for transitioning operations to the Navy for closure, and outlines the communication plan to ensure continued transparency with the public on NCTF-RH efforts. JTF-RH is meticulously working to safely and expeditiously complete defueling and support a deliberate and methodical conditions-based transition. JTF-RH projects that, subject to any unforeseen circumstances, it will begin removing residual fuel immediately after gravity defueling.

A. Phase 5 Update – Defueling RHBFSF

JTF-RH is currently operating in Phase 5 of the defueling plan. DoD has bifurcated Phase 5 of the defueling process into two sub-phases: Phase 5.A. and Phase 5.B. *See Figure 1.* Phase 5.A. defueling consists of gravity-based defueling, which will result in the removal and relocation of approximately 104 million gallons of bulk fuel at RHBFSF. As forecasted in Supplement 2, DoD estimates there will be residual fuel remaining in the facility after Phase 5.A. defueling is complete. Phase 5 B will remove all of the residual fuel that can be removed without demolition of the facility infrastructure.

Following detailed surveys and mission analysis, JTF-RH estimates that the quantity of residual fuel remaining in the facility after gravity-based defueling will be approximately 64,000 gallons. Residual fuel is the fuel that cannot be removed via gravity and requires active measures to remove. Some residual fuel collects in expected locations that the removal contractors can access and defuel without having to conduct destructive work. [2] This work would include pumping fuel to transport it to drains, where it can be removed. Disposal of residual fuel removed from the facility will be conducted by the contractor in accordance with the contract scope of work and in accordance with environmental regulations.

[2] Other residual fuel requires demolition or other destructive work, which requires associated environmental safety measures. The Navy will remove this work as part of permanent closure of the facility.

Accordingly, Phase 5.B. defueling will consist of removing approximately 60,000 gallons of residual fuel located in the Surge Lines and portions of the Tank Gallery through non-destructive means via the existing RMMR contract. JTF-RH will complete its defueling mission upon completing Phase 5.B. defueling, which JTF-RH projects to end no later than March 31, 2024. The remaining residual fuel, which will be approximately 4,000 gallons, can be removed only via demolition contracts and will occur as part of NCTF-RH's closure mission.

This section provides an update on Phase 5.A. defueling and outlines the plan for Phase 5.B. defueling for removal of residual fuel.

1. Phase 5.A. Defueling: Gravity-Based Defueling

Phase 5.A. consists of the gravity-based defueling of RHBFSF (20 underground fuel storage tanks, four surge tanks, and associated pipelines. Phase 5.A. includes three steps: (1) Defuel Tank Mains; (2) Defuel Flowable Tank Bottoms; and (3) Unpack Pipelines.

On September 5, 2023, JTF-RH successfully repacked the pipelines with approximately 380,000 gallons of fuel in preparation to defuel the tank mains. Upon receiving regulatory approval, JTF-RH commenced defueling tank mains on October 16, 2023. JTF-RH anticipates completion of Tank Main defueling on November 18, 2023, completion of Flowable Tank Bottoms defueling on December 15, 2023, and Unpacking the Pipelines on January 19, 2024. Refer to updated Integrated Master Schedule for details (Encl (1)).

2. Phase 5.B. Defueling: Non-destructive Residual Fuel Removal

Phase 5.B. defueling consists of removing all residual fuel that can be removed using non-destructive means, which is estimated at 60,000 gallons. *See Figure 3*.
Enclosure 2 is the residual fuel Concept of Operations (CONOP) for Phase 5.B. defueling prior to the end of Phase 5.A. gravity-based defueling. The sections below provide an overview of the Red Hill Residual Fuel CONOP for Surge Lines and the Tank Gallery.

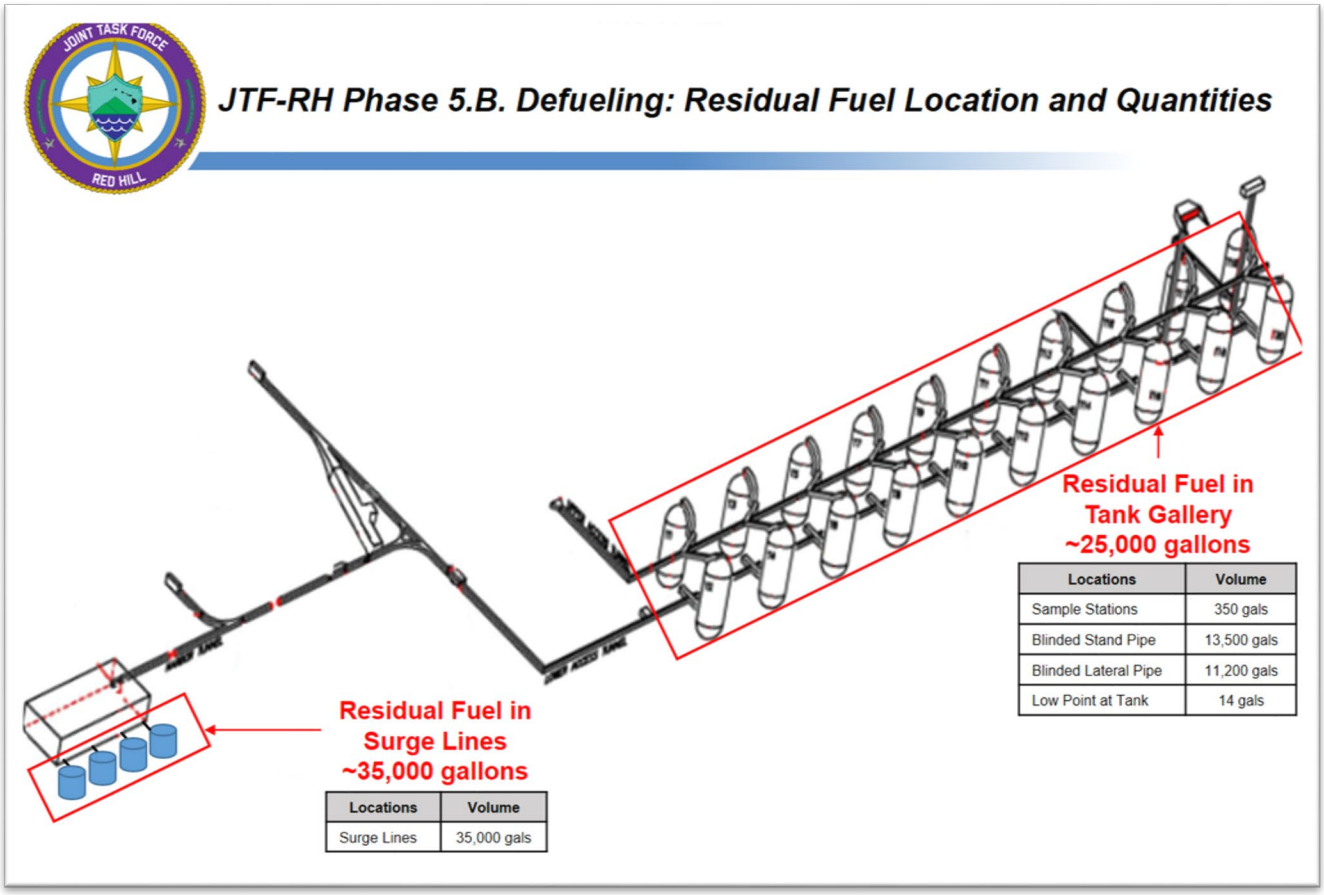


Figure 3 – JTF-RH Phase 5.B. Defueling: Residual Fuel Locations and Quantities

a. Defueling Surge Lines

Upon concurrence and receipt of DOH/EPA approval, JTF-RH will utilize the existing routine maintenance and minor repair (RMMR) contract to commence removal of approximately 35,000 gallons of residual fuel remaining in the surge lines. First, the residual fuel will be pumped using a diaphragm pump from each line through low point drains (LPDs). A flex hose and rigid pipe will run through an access hatch and into a vacuum truck that will be staged above Adit 1. The contractor will be responsible for disposal of the residual fuel in accordance with contract specifications and applicable environmental regulations. *See* Encl (2) for further details and graphical depictions.

b. Defueling Tank Gallery

Upon concurrence and receipt of DOH/EPA approval, JTF-RH will commence removing the approximately 25,000 gallons of residual fuel from the Tank Gallery. JTF-RH will implement a graduated two-part approach to removing residual fuel located in Tank Gallery. Part 1 will be draining the blinded laterals, which are the pipe sections between the Tank and the main line that have a mechanical isolation in place. Part 2 will be draining the stand pipes.

Part 1 entails installing a threaded tee, pressure gauge, and ball valve on the bottom of each lateral low point drain and using a flex hose that runs from the ball valves into the service trees. The fuel will flow though the FOR line where the flow rate can be controlled with the ball valve and/or the low point drain gate valve. The fuel will flow from the FOR line into the main sump and then pumped into Tank 311, which is an above ground tank located near Adit 3.

After the blinded lateral draining is complete, JTF-RH will drain sample stations, LPDs, and remove all the blinds before commencing Part 2, which entails draining the stand pipes. The laterals will be checked and verified as drained and then the skin valve at each tank will be opened, which allows residual fuel in the stand pipes to flow into the laterals. The stand pipes will be drained from the low point drain through the FOR line and into Tank 311. *See* Encl (2) for further details and graphical depictions.

III. Red Hill (RH) Transition

DoD will transition responsibilities at the RHBFSF from defueling operations performed by JTF-RH to closure activities performed by the Department of the Navy (DON). JTF-RH will continue conducting frequent community, local and state, and media engagements to provide status updates on the RH Transition as DON begins initial steps of transition of responsibility with JTF-RH to better understand all JTF-RH processes and procedures. JTF-RH will continue to update its website and mobile application with updates on the RH Transition.

The phasing constructs for JTF-RH's defueling operations and DON's establishment of NCTF-RH are separate and distinct. However, to ensure a fully synchronized and coordinated transition, Figure 4 illustrates how we will align the two phasing constructs to facilitate the RH Transition. This alignment is critically important to ensure unambiguous understanding of milestones, objectives, responsibilities, manning and resourcing requirements, strategic engagements, and conditions to transition between phases.

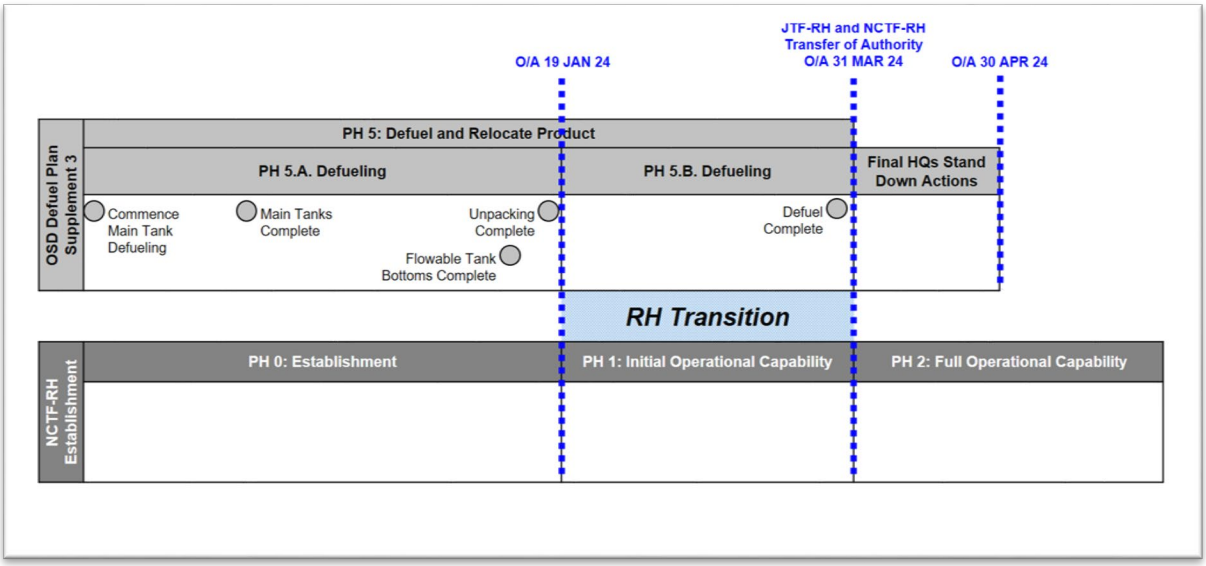


Figure 4 – RH Transition

As depicted above, the movement from Phase 5.A. Defueling (Gravity Based Defueling/NCTF-RH Establishment Phase 0 (Establishment)) to Phase 5.B. Defueling (Residual Fuel Removal)/NCTF-RH Establishment Phase 1 (Initial Operational Capability) initiates the transition period between JTF-RH and NCTF-RH. The RH Transition period will be conditions-based, driven by JTF-RH's defueling timeline. This means that if JTF-RH completes Phase 5.A. Defueling prior to January 19, 2024, the transition to Phase 5.B. Defueling (Residual Fuel Removal)/NCTF-RH Establishment Phase 1 (IOC) will occur simultaneously.

A. Establishment and Mission of NCTF-RH

The mission of the NCTF-RH will be to safely and expeditiously execute the permanent closure of the RHBFSF and continue long-term environmental remediation and aquifer restoration efforts in coordination with state and federal stakeholders in order to protect public health and the environment, while continuing to rebuild trust with the State of Hawaii and the local community of Oahu.

NCTF-RH is responsible for removing approximately 4,000 gallons of inaccessible residual fuel and approximately 28,000 gallons of sludge. *See Figure 5*. This sludge is separate from the residual fuel in the pipelines, and NCTF-RH is responsible for removing all the sludge in the facility in accordance with the DON Tank Closure Plan Supplement 2 dated May 31, 2023, which provides the plan for removing the three fuel pipelines from Tank 20 down to the Underground Pump House (UGPH).

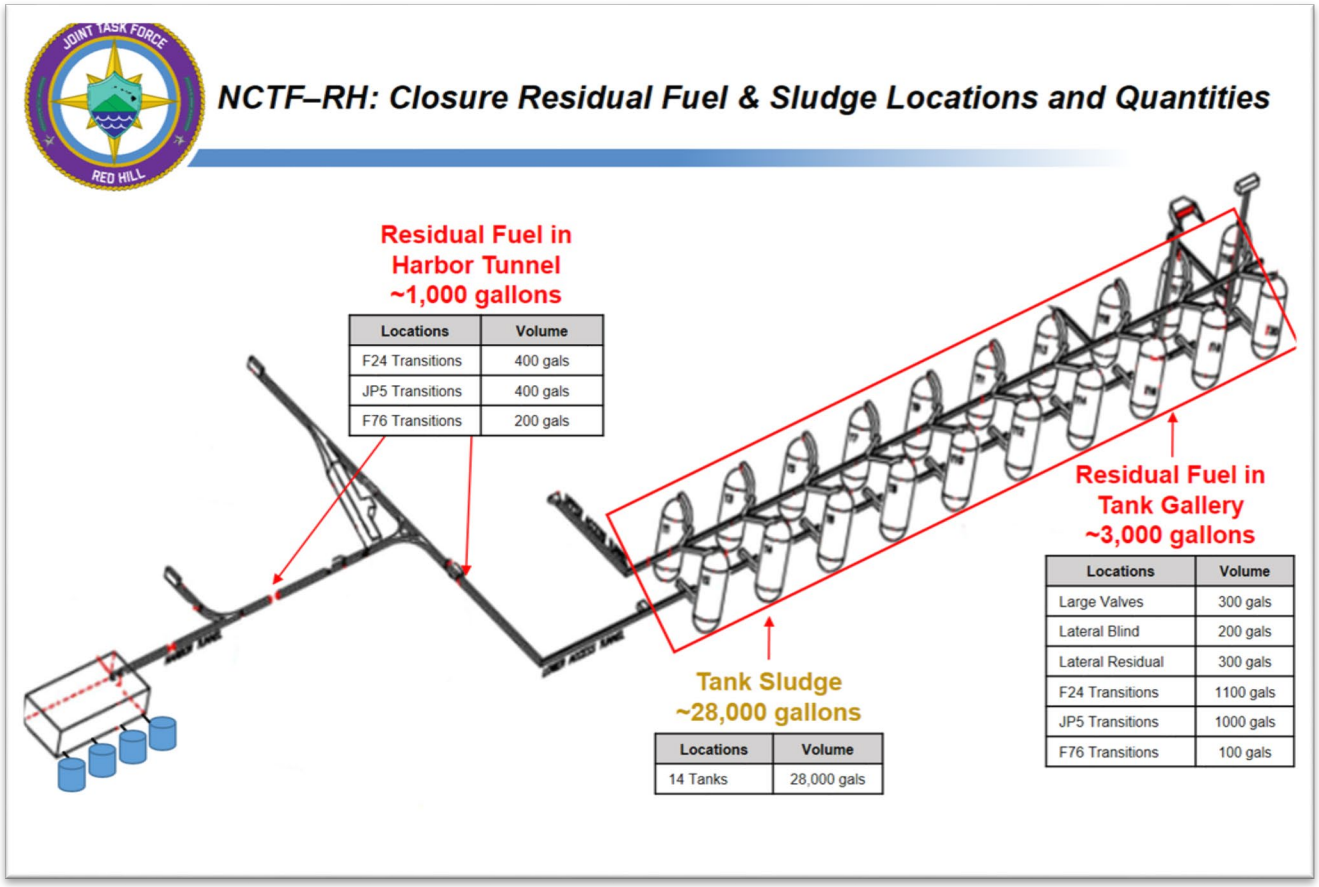


Figure 5 – NCTF-RH: Closure Residual Fuel and Sludge Locations and Quantities

B. NCTF-RH Organizational Structure

The Secretary of Defense approved the NCTF-RH organizational construct, which requires Commander, Pacific Fleet (CPF) to establish NCTF-RH with Commander, Navy Region Hawaii (CNRH) (Navy O-8/2-Star Rear Admiral) dual-hatted as the NRH and NCTF-RH Commander. CNRH will have two Deputy Commanders – a Deputy Commander for Closure and Demolition (Navy O-7/1-Star Rear Admiral) and a Deputy Commander for Remediation and Environment (Navy O-6/Captain).

The dual-hatted CNRH/NCTF-RH Commander will serve as the single DoD entity to synchronize all actions required to execute the closure of RHBFSF and to continue ongoing remediation efforts. Dual-hatting the Commander presents an operational and reputational synergy for the execution of closure and remediation actions, while also leveraging their position in the community to continue the efforts to rebuild trust with the State of Hawaii and the local community of Oahu. The task organization for NCTF-RH is depicted in *Figure 6* below.

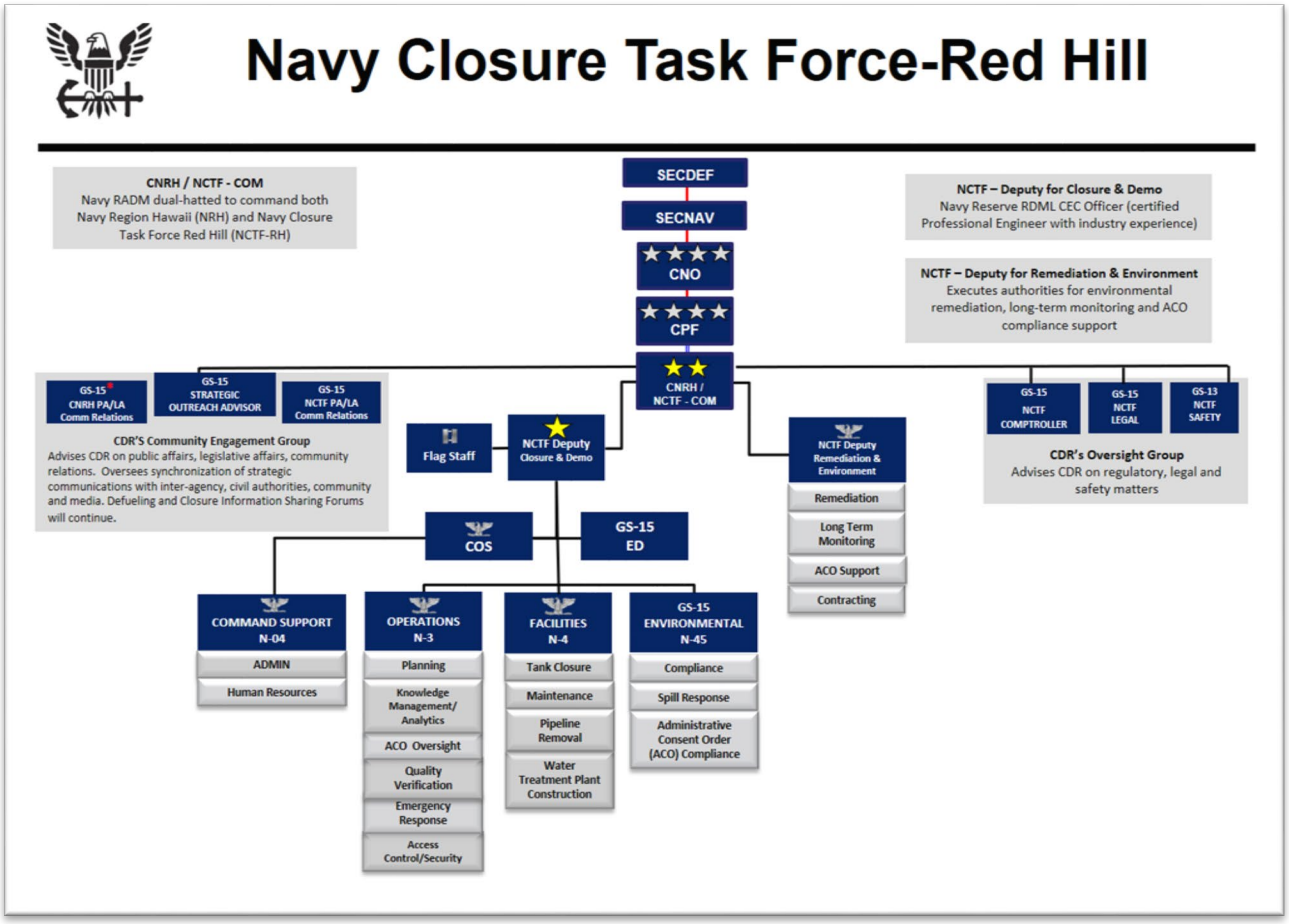


Figure 6 – NCTF-RH Task Organization

C. RH Transition Projected Objectives and Milestones

1. Phase 5.A. defueling (Gravity Based Defueling) / NCTF-RH Phase 0 (Establishment)

JTF-RH Phase 5.A. defueling (Gravity Based Defueling): This phase began when JTF-RH commenced gravity-based defueling of Tank Mains on October 16, 2023. During this phase, JTF-RH will gravity defuel Tank Mains, Flowable Tank Bottoms, and Unpack Pipelines. JTF-RH will retain command and control over the RHBFSF JOA and continue to function as the single DoD entity to synchronize all actions to rebuild DoD trust with Federal, State, and local stakeholders.

NCTF-RH Phase 0 (Establishment): This phase begins when NCTF-RH advanced echelon of personnel (ADVON) arrives. During this phase, NCTF-RH ADVON assumes responsibility for on-boarding staff and building the capability to meet IOC conditions. All Red Hill Closure activities will remain under the command and control of the single-hatted CNRH Commander.

This phase ends when JTF-RH completes Phase 5.A. defueling.

2. Phase 5.B. Defueling (Residual Fuel Removal) / NCTF-RH Phase 1 (IOC)

During Phase 5.B. Defueling (Residual Fuel Removal)/NCTF-RH Establishment Phase 1 (IOC), JTF-RH and NCTF-RH will execute a transition across all relevant Directorates and staff. The transition will be focused on NCTF-RH learning JTF-RH's processes and procedures for safety, security, and engagement to ensure continuity of operations during the next phase. As such, the phase breakdown below highlights this overlap, primarily driven by residual fuel removal in RHBFSF.

Phase 5.B. Defueling (Residual Fuel Removal): This phase begins when JTF-RH commences residual fuel removal at RHBFSF. For approximately the first half of the RH Transition, NCTF-RH will observe JTF-RH's processes for CONOP development and approval, pre-evolution inspections and rehearsals, safety checks, access control, uniformed military escorts, Regulator communication and collaboration, and communications strategy with Federal, State, and local stakeholders. For the second half of the RH Transition, JTF-RH will retain approval authority and command and control of the RHBFSF JOA, but NCTF-RH will assume responsibility for residual fuel CONOP development, obtaining regulatory approval, obtaining JTF-RH Commander approval, and executing the CONOP under JTF-RH oversight. JTF-RH expects that the RH transition phase will end by March 31, 2024, by which time the following conditions will be met:

a. JTF-RH completes removal of approximately 60,000 gallons of residual fuel from RHBFSF

b. JTF-RH has completed all Exit Criteria for JTF-RH to relinquish responsibility as the Main Effort (Defueling) for Red Hill activities

c. NCTF-RH concurs with the Entrance Criteria for NCTF-RH to assume responsibility as the Main Effort (Closure) for Red Hill activities

d. JTF-RH has transferred authority for the RHBFSF JOA to NCTF-RH

D. JTF- RH Defueling Phase Exit Criteria

1. All mandatory repairs identified through the independent assessments have been completed and verified through the 3rd party quality validation process.
2. JTF-RH will perform tank mains defueling from each of the 14 in-service Red Hill tanks (JP-5: 7 tanks, F-76: 2 tanks, F-24: 5 tanks). Tank Mains defueling will defuel the Red Hill tanks down to a level of approximately 10 feet. Tank Mains defueling will be performed by gravity drain method, and tankers at Hotel Pier will serve as the primary initial transfer destination.
3. JTF-RH will conduct Flowable Tank Bottom defueling from each of the 14 in-service Red Hill tanks (JP-5: 7 tanks, F-76: 2 tanks, F-24: 5 tanks). Following Tank Main defueling, approximately 120,000 gallons of fuel will remain in each tank bottom.

This fuel is flowable (below the low suction point on the tank issue/receipt line) when aligned and transferred through the tank's FOR line. The Flowable Tank Bottoms will be drained using each tank's FOR line that goes to the main FOR line and then will be redirected into the JP-5 line to allow for gravity flow down to UGPH/Hotel Pier.

4. JTF-RH will Unpack the two pipelines (F-24 and JP-5 from Red Hill to the UGPH) utilized for defueling the Red Hill tanks. JTF-RH will generally follow the same unpacking procedures that it used in its successful unpacking of the pipelines in October 2022. JTF-RH will remove from the pipelines an estimated 203,000 gallons from the JP-5 pipeline, and an estimated 144,000 gallons from the F-24 pipeline.
5. JTF-RH has drained the four surge tanks with an approximate total of 480,000 gallons of fuel.
6. JTF-RH, working with the NCTF-RH, will drain approximately 60,000 gallons of remaining residual fuel located in the tank gallery via RMRR contract as part of a left-seat/right-seat transition construct. This work is expected to include sample stands, the blind laterals and blind standpipes above the aquifer, and the surge lines.
7. JTF-RH will conduct a pipeline integrity test of the FOR line between main sump and tank 311 prior to transition to closure.
8. JTF-RH will blind-flange the FOR line between surge tanks and UGPH sump prior to transition to closure.
9. JTF-RH will not drain any pipelines within the underground UGPH; the UGPH is a dual use facility for both the RHBFSF and Upper Tank Farm (UTF) and cannot be isolated and drained without impacting daily fuel operations at Joint Base Pearl Harbor Hickam (JBPHH). Segments of the UGPH are required to distribute fuel to other sections of the fuel storage and distribution system and therefore cannot be disestablished until such time as those capabilities are replicated elsewhere. There is a "fire valve" in each product line that connects the Red Hill to the UGPH. Between the fire valve and the UGPH, each product line has a flanged spool piece. JTF-RH will close the fire valves, remove the spool pieces, and blind-flange the pipe ends. This will completely separate the UGPH from the Red Hill pipelines. A 10'-long to 20'-long stub from the UGPH will still project into the Harbor Tunnel, but these lines will be physically "air gapped" from the Red Hill pipelines.
10. JTF-RH will not undertake any environmental or remediation efforts.
11. JTF-RH will not execute any closure related tasks.

E. NCTF-RH Closure Phase Entrance Criteria

1. JTF-RH documentation and records are appropriately archived.
2. JTF-RH has completed defueling Tank Mains, defueling Flowable Tank Bottoms, and Unpacking the pipelines.
3. Residual fuel removed via the Recurring Maintenance, and Minor Repair (RMMR)

contract is complete, and all materials are disposed of properly.

4. Approximately 4,000 gallons of known residual fuel will remain in the system for draining commensurate with pipeline removal.
5. Approximately 900 gallons of AFFF concentrate will remain in the system for draining commensurate with closure.
6. Approximately 28,000 gallons of sludge will remain in the tanks for draining commensurate with closure and tank cleaning.
7. NCTF-RH spill response and contingency planning is complete.

IV. Conclusion

JTF-RH remains focused on safely and expeditiously defueling RHBFSF. Concurrently, JTF-RH is dedicated to the efficient and successful transition to NCTF-RH. Until the formal transfer of authority, JTF-RH will continue as the lead for all activities within the RHBFSF JOA, as well as, for all engagements and community outreach to continue to build trust and confidence with the leaders and communities in Hawaii. The completion of defueling Phase 5.B., currently expected to occur no later than March 31, 2024 will mark the end of the transition phase. On or about April 1, 2024, NCTF-RH will assume C2 for the Red Hill JOA and begin closure and remediation of RHBFSF.

Enclosure (1) to
Red Hill Bulk Fuel Storage Facility, Oahu, Hawaii
November 14, 2023 Supplement 3

Integrated Master Plan (IMS)

JTF-RH Integrated Master Schedule (IMS)

Defuel Start October 2023

10/27/2023

Enclosure (2) to
Red Hill Bulk Fuel Storage Facility, Oahu, Hawaii
November 14, 2023 Supplement 3

Residual Fuel CONOP

(U) Pre-Closure Residual Fuel Draining Plan

Scope of Maintenance

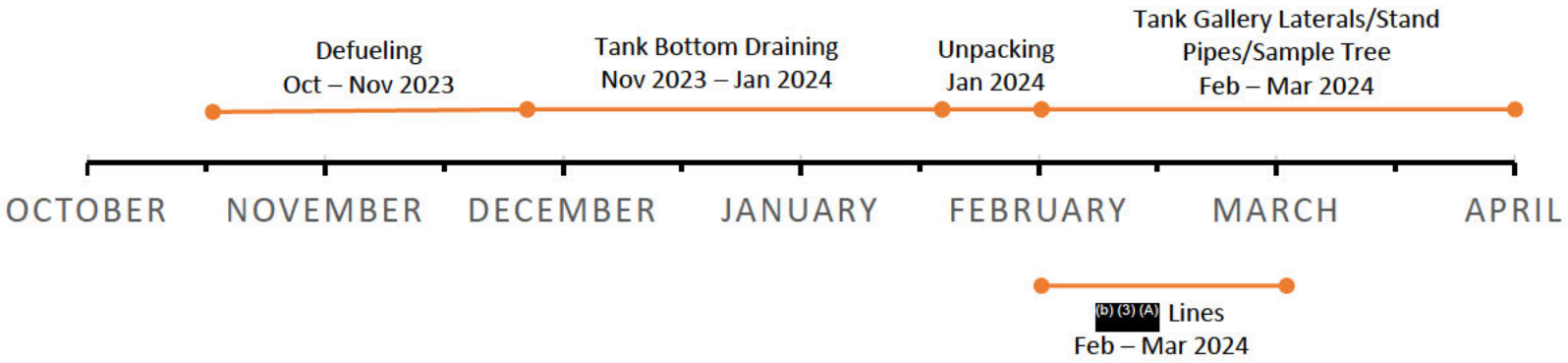
- Remove residual fuel from (b) (3) (A) Lines, Sample Stations, Blinded Laterals and Blinded Standpipes to accompany defuel.
- Contractor: [redacted] Subcontractors: (b) (4) [redacted]
- Government Rep(s): JTF-RH Repair rep, USACE LNO, FLC (b) (4) [redacted]), JBPHH Env't Compliance rep (PRJ42)
- Total Working Days:
  - Blind Lateral/Blinded Stand Pipe/Sample Tree Station Draining: 60 days duration (After unpacking)
  - (b) (3) (A) Line Draining: 30 days duration (After unpacking)

Scheme of Maneuver

- [redacted] (b) (4) JTF-RH Repair rep, JTF RH Response rep, JBPHH Environmental Compliance and Coordination Branch rep, and (b) (4) [redacted] rep will conduct a preparatory meeting to review work plan and activity hazard analysis (AHA).
- Coordinate spill response plan with JBPHH Environmental Compliance and Coordination Branch (PRJ42) and communicate to all parties involved.
- Prior to work commencing, (b) (4) [redacted] will ensure proper mechanical LOTO and issue work authorization permit.
- Residual fuel will be drained from Blinded Laterals, Blinded Standpipes, Sample Stations into (b) (3) (A) [redacted]. Fuel from (b) (3) (A) lines will be drained to vacuum truck.
- Secondary containments will be placed at draining points, storage/ accumulation areas, and vacuum truck transfer point, and spill kits will be on site.

(b) (3) (A)

Defueling and Residual Fuel Timeline



(U) Draining Blinded Laterals

(b) (3) (A)

Scheme of Maneuver

- Blinded Lateral draining takes place after unpacking for approx. 30 days
- Install threaded tee, pressure gauge, & ball valve (b) (3) (A)
- Disconnect each Fuel Dump apparatus from service tree.
- Install a flex hose that will run (b) (3) (A)
- (b) (3) (A)
- Fuel will flow (b) (3) (A)
- Visi-flow on sample tree utilized to verify flow. Blind removed after draining for standpipe

(b) (3) (A)

Disconnect Fuel Dump Apparatus

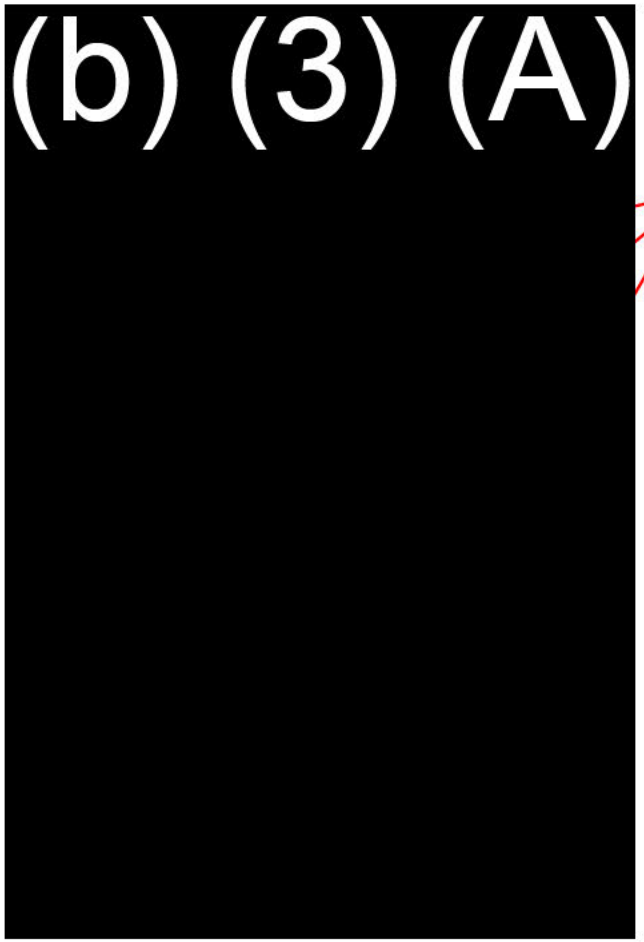
(U) Draining Stand Pipes

Scheme of Maneuver

- Blinded Standpipe Draining takes place after the lateral has been drained.
- Blind to be removed after lateral has been checked and verified drained.
- The Skin Valve at each tank will be opened, (ball valve will be in closed position) allowing residual fuel in the stand pipes to flow into the laterals.
- Stand pipes will be drained in the same manner as slide 4, (b) (3) (A)
- [redacted]

(b) (3) (A)

(U) Draining Sample Stations



Open All valves

Scheme of Maneuver

- Sample station draining takes place after laterals and standpipes have been drained.
- All valves on each service tree will be opened, and (b) (3) (A) [redacted]

*Tank 20 residual will be drained/collected at (b) (3) (A) sump bypass low point drain.

(U) Draining (b) (3) (A) Lines

Scheme of Maneuver

- (b) (3) (A) line draining takes place at the end of unpacking for a duration of approx. 30 days.
- Phase 1: The bulk of the (b) (3) (A) lines will be drained during unpacking, (b) (3) (A) .
- Residual fuel will be trapped in the lines.
- Phase 2: Fuel will be pumped with a diaphragm pump (b) (3) (A) first, then followed by opening flanges (b) (3) (A) Flex hose and rigid pipe will be run (b) (3) (A)
- (b) (3) (A)

(b) (3) (A)

(b) (3) (A)

(b) (3) (A)

(U) Draining (b) (3) (A) Lines

Low Point Drain Locations

(b) (3) (A)

(b) (3) (A)

(b) (3) (A)

(b) (3) (A)

(b) (3) (A)

(U) JP-5 (b) (3) (A) Line Draining

Scheme of Maneuver

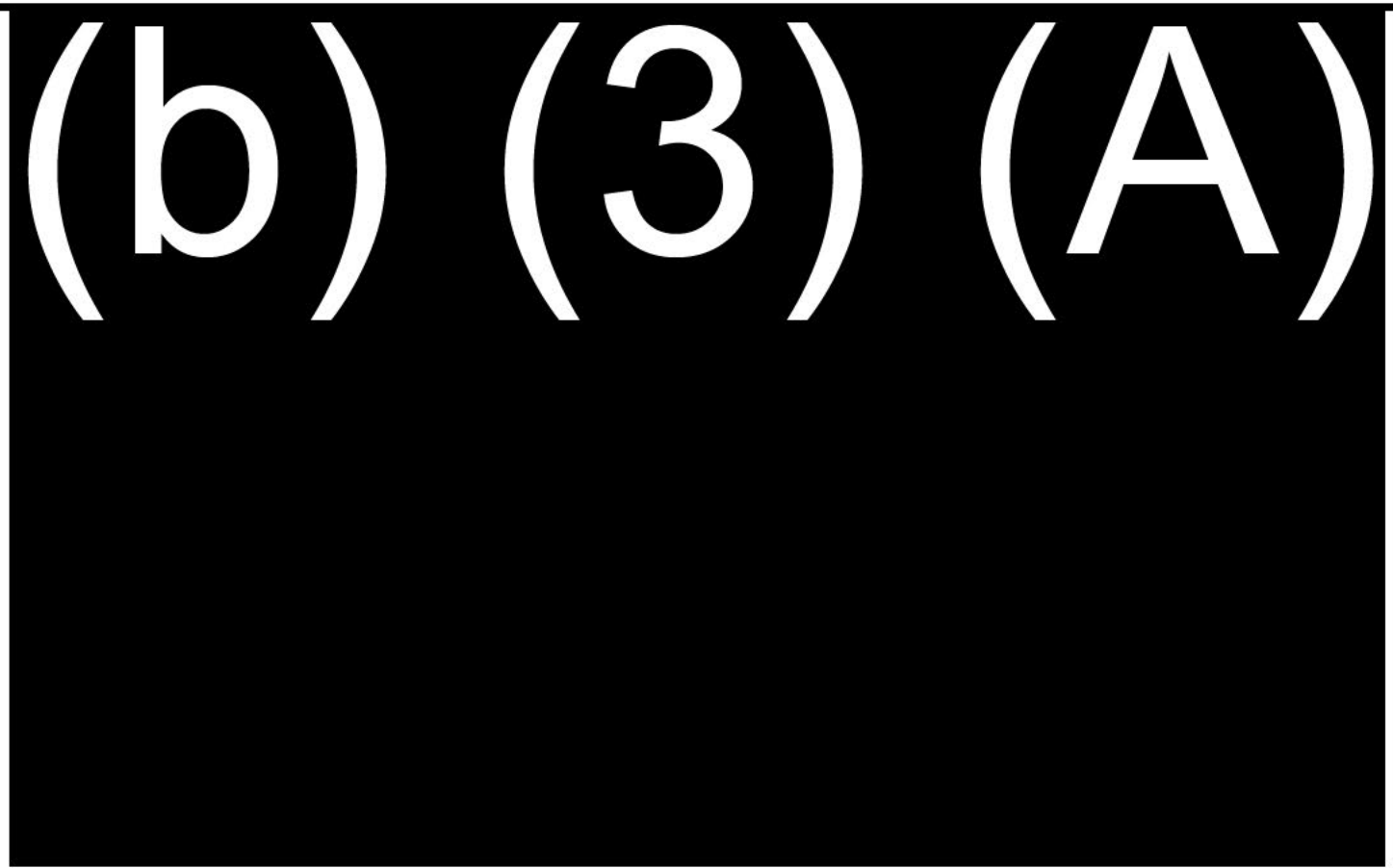
- After (b) (3) (A) has been drained completely, there will still be fuel (~30 gal) in the JP-5 line (b) (3) (A) .
- The residual fuel will be drained via tarp drain as the flange is slowly opened. That fuel will drain into a 55 gal drum, and will be pumped with a diaphragm pump through (b) (3) (A) into the Vac truck. Flow will be controlled by loosening/tightening flange bolts.
- Once all fuel is removed, the flange will be rebolted.

(b) (3) (A)

(U) (b) (3) (A) Tank 3 & 4 FOR Line Draining

Scheme of Maneuver

- After (b) (3) (A) tank draining, an estimated 20 gallons were left (b) (3) (A) (pictured below).
- The residual fuel will be drained by slowly loosening the flange fasteners over a drip pan and secondary containment. That fuel will drain into a 55 gal drum, and will be pumped with a diaphragm pump (b) (3) (A) into the Vac truck. Flow will be controlled by loosening/tightening flange bolts.
- Once all fuel is removed, the flange will be reconnected.



(U) Draining Tank Laterals

Job Steps	Anticipated Hazards	Controls	Probability	Severity	RAC

Spill Management/ Emergency Management	POL Spill	**Emergency Response Communication Plan**
		• Three-party surveillance crews will be issued short-range radios for communication to ensure coordination. Call/contact FLC Control Operator Room in the event of a spill.
		• Call 911 to summon the Federal Fire Department for help with all HAZWASTE spills.
		  • IN CASE OF EMERGENCY
		  • FLC Control Operator Room – 2-way radio
		  • Main: (b) (3) (A)
		  • Alternate: (b) (3) (A)
		  • Qualified JBPHH spill response: (b) (3) (A)
			Unlikely	Negligible	L

Draining	• Pressurized line • Valve stuck open	• Install secondary containments around drain area • Spill Kits containing absorbents, nitrile gloves, and waste bags pre-stationed at each location • Site supervisor will monitor draining • (b) (3) (A)	Seldom	Critical	M
Draining (pressurized line)	• Fuel spray during initial opening of drain down valve • Uncontrolled flow • Over pressurized drain line	• Remove cap from lateral drain valve, threaded tee with pressure gauge, secondary (b) "ball valve and (b)(3) flex hose to lateral low point drain valve • Take pictures of the setup and send to JTF RH Repair leadership for visual approval of setup prior to initial opening of lateral low point drain • (b) (3) (A) e	Seldom	Critical	M
Cracking Flange	• Uncontrolled flow • Hand injury	• Work authorization permit will be issued by (b) (4) daily to ensure LOTO is in place • Rehearsal will be performed prior to actual work • Spill Kits containing absorbents, nitrile gloves, and waste bags pre-stationed at each location and along drum transport pathway. • PPE will be worn at all times • Store additional drums at site as a contingency	Unlikely	Negligible	L

(U) Draining Tank Laterals

Job Steps	Anticipated Hazards	Controls	Probability	Severity	RAC
Fire Watch	Risk of Fire	• Contractor shall have fire-extinguishing equipment readily available and be trained in its use. • Fire extinguishers – (2) 10lb Class ABC, one for use and one for back up. • Shall be familiar with reporting fires and sounding the alarm and extinguishing the fire with the proper extinguishing agent if trained and safe to do so. • Shall not be permitted to perform additional tasks that will distract him or her from fire watch responsibilities unless approved by the Site Supervisor.	Unlikely	Negligible	L
Mechanical: Lockout/Tag out	Unknown quantity of fuel	• Wear the appropriate personal protective equipment. • Coordinate with (b) (4) for work authorization permit and LOTO • Ensure all electric motor valves are locked out and tagged out before commencement of residual fuel draining	Unlikely	Marginal	L
Remove / Store / Transport Liquids Utilizing Vacuum Truck	POL Spill during transfer	• Trucks and all related equipment (i.e. hoses, fittings, collection pans, etc.) must be maintained and meet all installation/base, federal, state, local, and industry (API) regulations and guidelines • Proper hearing protection will be utilized to mitigate excessive noise generated by truck operation • Bond truck operations and hoses to the tank • The truck operator will monitor the transfer operation and be ready to quickly close the product valve and stop the pump in the event of a blocked line or release of material through a broken hose, connection or other malfunction • Truck operators will not be allowed to sit in the cab of the truck while loading or unloading • Precautions must be taken to remain away from the engine exhaust system • Maintain a spill kit and 20BC class fire extinguisher near the work area	Seldom	Critical	M