

Enclosure 2

Most Dangerous Least Likely Discharge Scenario - Defueling

SOPs and Mitigating Factors in place:

1. Booms around YON fuel barges are in place to contain any discharges that could occur during unpacking.
2. Surface water will be constantly monitored to identify any sheen that might appear in the harbor to allow for rapid response.
3. Vacuum trucks will be located at Hotel Pier and VS-1C to quickly respond to any discharges at those locations.
4. Hotel Sump will be emptied prior to beginning the unpacking evolution.
5. A CRO and an assistant Control Room Operator will be in the control room throughout the entire operation.
6. Rovers and supervisors will be on site to verify valve operations, configurations, and pipeline monitoring.
7. Spill kits are pre-staged at various locations in the tunnel.
8. Primary and secondary containment boom of 24" is in place across Halawa Stream. 48" boom will be pre-staged on site at Halawa Stream.

Immediate Response Actions:

IAW TAB A - Worst Case Discharge Scenario, in the RHTFSF Response Plan.

Action 1:

- Flood Barriers at Adit 3 "Wye" to increase containment capability to 20" tall.
- Flood Barriers at Adit 1 to direct flow to the swale.
- Flood Barriers at elevators in LAT to direct flow down LAT.

Action 2:

- Keep Adit 2 sealed to direct fuel out Adit 1.

Action 3: Additional pump support outlined in NAVSUPFLC response actions.

Stakeholder Response Actions:

NAVSUPFLC - The following information is the primary response to the WCD of oil.

- Utilize existing ground water sump pumps at end of the harbor tunnel and in the Adit 1 fan building to pump as much oil as possible to FORFAC (Fig 3).
- Install SUPSALV supplemental pumps (4 x 2,200 gpm = 8,800gpm) to move oil to Maersk Peary at Hotel Pier and YON's/barges at Sierra Pier (Fig 2,3 and Picture 3).
- Install 6" valves at the South End of VS-1C to tie into F76 which is offline. From here the product can be pumped to the upper tank farm and secondary containment. Supplemental pumps will be located outside at the end of the lower yard tunnel (Fig 2, 3 and Picture 2).
- Discharge hoses/piping from the supplemental pumps may be connected to any or all of the product pipelines at VS-1C. Any desired destination can be reached from VS-1C (Fig 2, 3 and Picture 2).
- Two 32-inch diameter F-76 lines penetrate the bulkhead that separates the pumphouse from the lower yard tunnel. These sections of the lines are no longer needed. These lines will be cut off on both sides of the bulkhead to allow oil to flow freely into the lower yard tunnel. This would reduce the depth of oil retained in the pumphouse to just over 14" (Fig 4,5 and Picture 1).

- Run temporary discharge piping or hose from the pumps to VS-1C to any desired product pipeline(s), just over 112 feet away at VS-1C (Fig 2 and Picture 2).
- Minor modifications to a line at the upper tank farm will allow pumping up to the UTF tanks secondary containment areas, either to bladders or into the berms directly.
- Line the sides of the ramp with sandbags or other barricades that direct any oil that exits the Adit 1 door into the lower yard tunnel. This oil will be picked up by the pumps (Fig 2,3).

PORT OPS (CNRH Spill Management Team)

- IAW TAB C - On Water Spill Containment and Recovery Strategies, RHTFSF Response Plan.

QI/OSRO - QI will make necessary notifications, and contracted OSROs will respond within a reasonable amount of time with personnel and equipment that is previously identified and discussed in the contract.

USCG - The Federal On-Scene Coordinator Representative (FOSCR) attached to JTF Red Hill will be on call 24/7 to offer expert advice and recommendations to facilitate a unified operational response.

- The National Response Center will contact Sector Honolulu Incident Management Division. If necessary, Pollution Responders and Federal On-Scene Coordinator Representatives will be available to assist with facilitating divisional groups. The National Strike Force coordination center will also be notified to determine if the Pacific Strike Team needs to deploy assets to assist.
- Additionally, the Sector Emergency Management Force Readiness shop has the capability to recall a Type I Incident Response Team from Sector Honolulu to implement the Incident Command System and organize a Unified Command.

Additional response actions are contained in the CNRH RHFSF Response Plan. Actions are subject to modification pending HAZOPs finalized plan.

Discharge Analysis:

Most Dangerous Least Likely Discharge (4.3 million gallons)

The following is based on the most-probable worst-case discharge. In this scenario it is assumed the spill will be unsecured for approximately 6 hours. The analysis also assumes Adit 2 is sealed.

Without supplemental pumps from Navy SUPSALV, the only method for removing fuel from the tunnels would be the UGPH Sump Pumps (Single capacity - 280 gpm; Total capacity - 560 gpm) which are in turn limited by the ullage available in the B-1 and B-1 FORFAC tanks, of which only B-2 is expected to be available. The total discharge from the tank will be 4,305,787 gallons based on engineering analysis conducted by PCCI. The product will reach Adit 1 in approximately 1 hour and begin to fill the entire space. The UGPH sump will send fuel to the B-1 and/or B-2 FORFAC tanks. Approximately 6 hours after the initiation of the rupture the fuel will overflow into the UGPH and begin spilling out of Adit 1. Over the next 18 hours: 1,049,187 gallons will spill out Adit 1 into the drainage swale and potentially impact

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Halawa Stream, the UGPH sump will pump 378,000 gallons to B-2 FORFAC tank, and 2,878,600 gallons will accumulate in the UGPH/Lower HT and will need to be removed via supplemental pumps and remediation.

With four Navy SUPSALV supplemental pumps (Single capacity - 2,200 gpm; Total capacity - 8,800 gpm) in place, they can be utilized to move oil to the tanker vessels or the UTF containment. The following scenario is expected to occur:

The total discharge from the tank will be 4,305,787 gallons based on engineering analysis conducted by PCCI. The product will reach Adit 1 in approximately 1 hour and begin to fill the entire space. The UGPH sump will send fuel to the B-2 FORFAC tanks; which has a 378,000 gallon capacity. Once the flow reaches their suctions, the SUPSALV pumps will direct flow to tanker vessels at Hotel Pier of the barges at Sierra Pier (both located on Joint Base Pearl Harbor). Roughly 7 hours after the rupture, a peak accumulation of 936,187 gallons is expected in the UGPH/Lower Harbor Tunnel. Due to the small gradient of the Harbor Tunnel the oil volume will cover the deck of the Lower Harbor Tunnel a few hundred feet past Adit 2 (sealed). It will not breach the UGPH Deck grating however, and it will not be discharged to the environment through Adit 1.