

Fuel Tank Advisory Committee (FTAC) Meeting



Closure



Tank Cleaning

SAFE. DELIBERATE. ENGAGED. COMMITTED.

Step 1 Preparation (Approximately 3 Months)

- Isolate Tank and Disconnect Piping
- Install and Begin Tank Ventilation using Forced Air
- Remove Flowable Sludge

Step 2 Install Cleaning Infrastructure/Remove Solid Sludge (Approximately 3 Months)

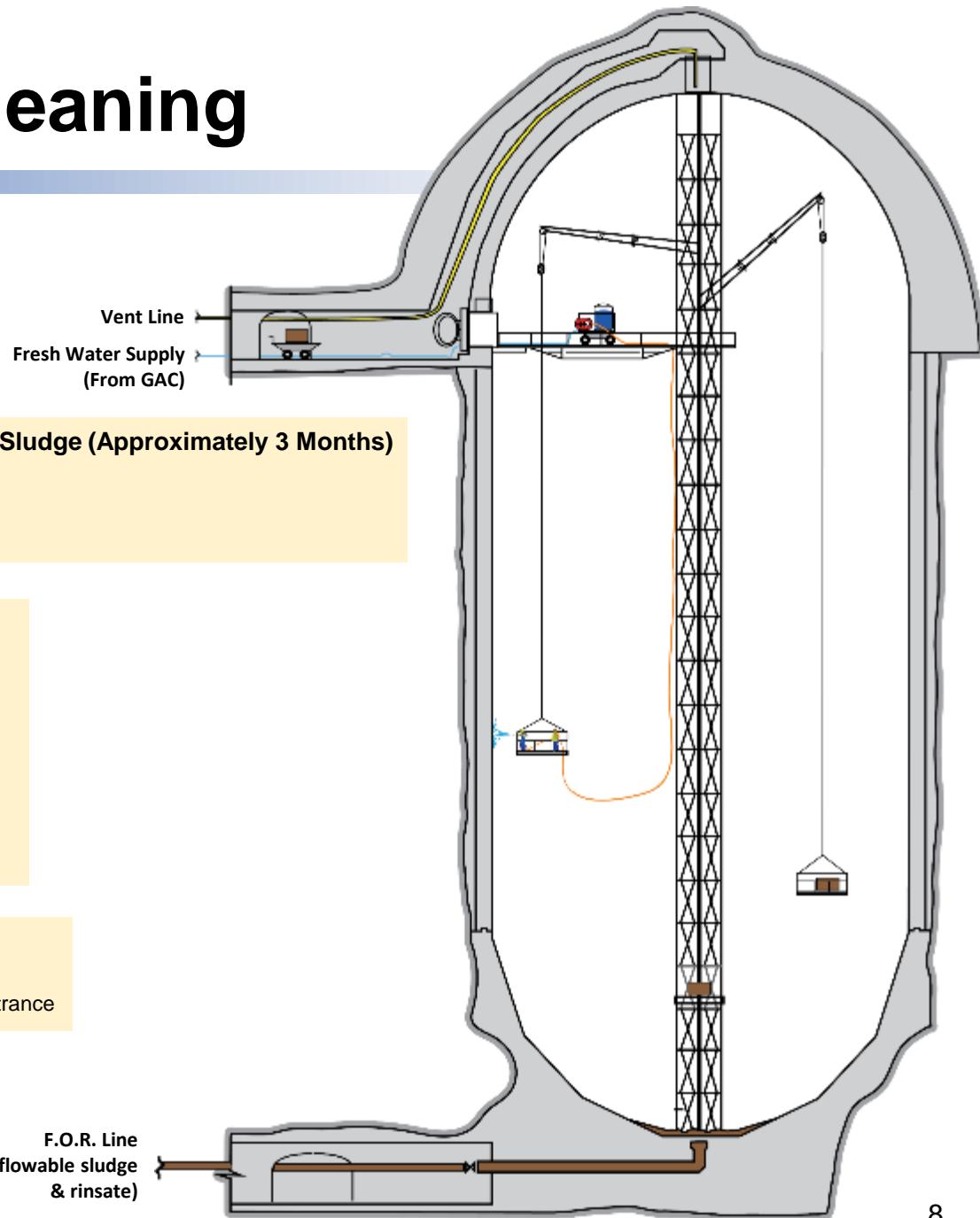
- Install Center Tower Elevator
- Inspect and Repair Central Tower and Catwalk
- Load Test Central Tower and Catwalk
- Remove Solid Sludge

Step 3 Pressure Washing (Approximately 2 Months)

- Set-up Pressure Washing System
- Pressure Wash w/ 3% Simple Green
- Rinse
- Continuously Remove Rinsate
- Dry Tank Interior
- Validate Tank Cleanliness
- Submit Tank Cleaning Report
- Receive Regulatory Agency Approval

Step 4 De-Mobilization (Approximately 2 Months)

- Remove Booms and Infrastructure
- Install Permanent Lockable Steel Hatch at 8-foot entrance

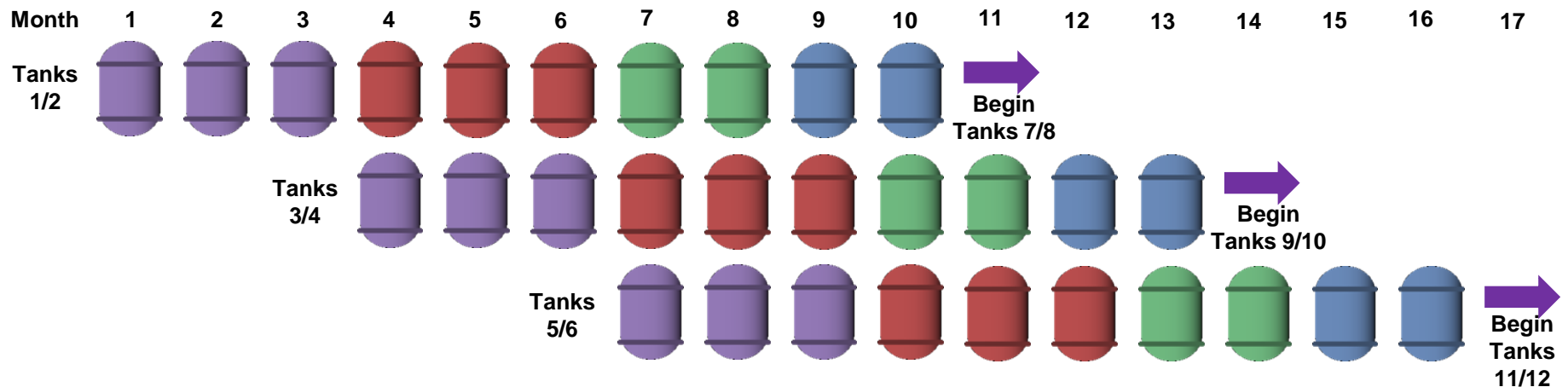




Tank Cleaning Sequence

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- **Step 1:** Preparation (approximately 3 months)
- **Step 2:** Install cleaning infrastructure (approximately 3 months)
- **Step 3:** Pressure Washing (approximately 2 months)
- **Step 4:** Demobilization (approximately 2 months)



- Sequence of work includes contractor activities in 4-6 tanks at any time, with 2 tanks in simultaneous activities
- Slightly less than 10-month cycle for every 2 tanks
- Each tank represents 1 month
- Process starts over for next two tanks every 9 months

NAVY WILL CLEAN TANKS AT RATE THAT WILL NOT ADD RISK TO ENVIRONMENT OR PERSONNEL SAFETY



Layers of Environmental Protection

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All the waste from tank cleaning (sludge, simple green, etc.) will have the same level of protection as fuel during defueling

SANDBAG PLACEMENT/BARRIERS

- Absorbs and Channels Potential Overflow-
- Redirects Potential Spills Away From Drains to Designated Collection Points
- Robust Containment System to Halt Accidental Spillage

AQUIFER PROTECTION

- French Drain Sealing
- Groundwater Monitoring Well Sealing
- Soil Vapor Points and Vault Sealing
- Sump Station Additive Barriers

FOR Line

- Daily rover inspection
- Integrity Testing

CAMERA SURVEILLANCE SYSTEM

- Around the Clock Facility Monitoring with 52 cameras
- Ensure Equipment Security and Environmental Safety
- Early Anomaly and Risk Detection

SPILL RESPONSE DRILLS

- Navy-Led Drills Aligned with Facility Spill Response Plan
- Realistic Spill Scenarios for Optimal Readiness
- Regulator (EPA & DOH) Supervision for Quality Assurance

DEDICATED SPILL RESPONSE

- Red Hill Q1
- Spill kits located throughout facility

FIRE WATCH TEAM

- 24 Hour Surveillance via roving watchstanders
- Tailored Training for Hazard Detection, Rapid Response and Fed Fire Dept Coordination



DELIBERATE PREVENTION, PROTECTION AND PREPARATION

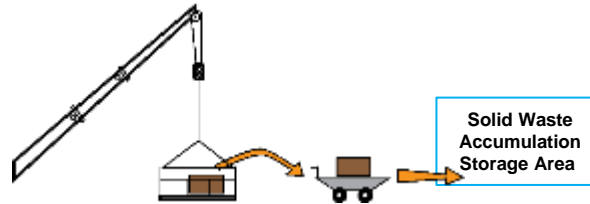


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Sludge Waste Disposal Process

SOLID SLUDGE PROCESS

- After tank ventilation, solid sludge is shoveled into special containers which are then sealed
- Containers lifted out of tank & placed on carts to move waste to an accumulation area
- Containers are accompanied by a spill kit & inside of secondary containment throughout transport
- Accumulation area inspected weekly, containers are labeled and marked to contents, area is provided spill equipment and has secondary containment
- Containers loaded onto a truck, taken to port, then loaded on a ship
- Truck and ship are registered waste transporters
- Waste to be sent to an off-island landfill for ultimate disposal

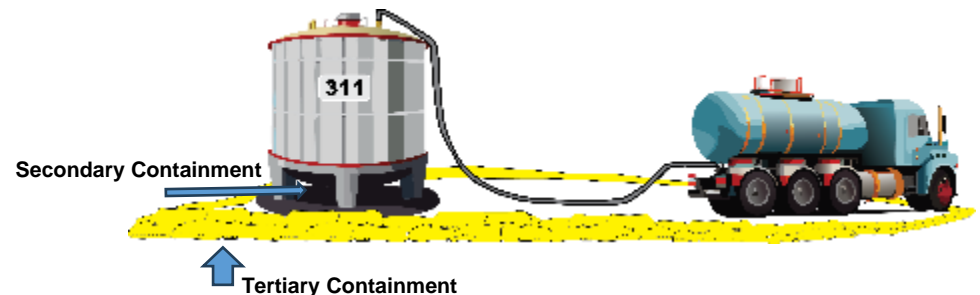
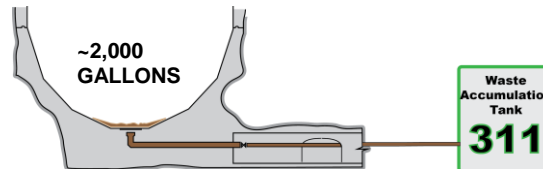


Common Handling Notes

- Manifest is created identifying generator, transport disposal facility. Each sign upon receipt final copy comes back to Navy to confirm disposal facility received.
- Manifest from disposal facility is received by the Navy
- Copies of manifests sent to DOH/EPA upon their request

LIQUID SLUDGE PROCESS

- Tank flooded and discharge down the FOR Line to Tank 311
- Adit - 3 Tank 311 is the waste accumulation area.
- Tank inspected weekly, label and mark tank to contents, provide spill equipment inside secondary tank containment
- Tank 311 is pumped down to a tanker truck
- Tanker truck is a registered waste transporter
- Waste to be sent to an on-island oil recovery facility
- Contractor will separate oil from wastewater at a pre-treatment facility
- Recovered oil is sold for energy recovery/re-refining
- Leftover wastewater sent off for further treatment at wastewater treatment plant



THE NAVY WILL TRACK THE SLUDGE FROM REMOVAL TO DISPOSAL



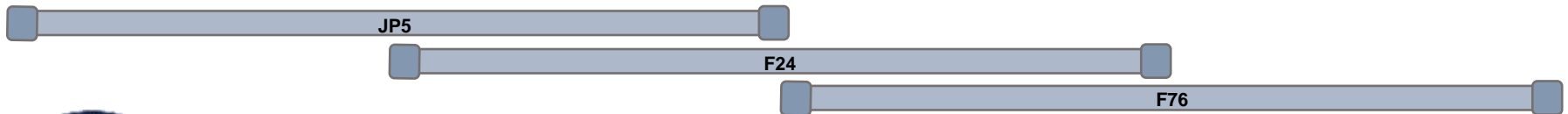
Pipeline Removal

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- Three pipelines will be removed during decommissioning
- The Navy will drain all residual fuel from the pipelines with robust containment measures prior to any removal
- Pipelines will be safely cut, removed, and transported in accordance with all applicable laws and regulations
- The Navy's contractor will ensure proper disposal or recycling of the removed pipelines



During decommissioning, Red Hill pipelines are estimated to contain approximately 4,000 gallons of residual fuel



If extended end-to-end, the total length of pipelines would match the distance from Pearl Harbor to Diamond Head



APPROXIMATELY 10 MILES OF PIPELINE WILL BE REMOVED