

*USS MISSISSINEWA (AO 59)*

*Oil Offloading Operations*

*Ulithi Atoll, FSM*

*February 2003*



# NAVSEA SUPSALV Mission

Responsible for technical support to Fleet in areas of:

- Marine Salvage
- Diving
- Underwater Search & Recovery
- Offshore Oil Spill Response
- Underwater Ship Husbandry

Maintains salvage contracts to augment Fleet capability

Maintains ESSM System (pre-positioned emergency ship salvage and pollution response material)

## ESSM Gear in action



# Sinking of the Mississinewa

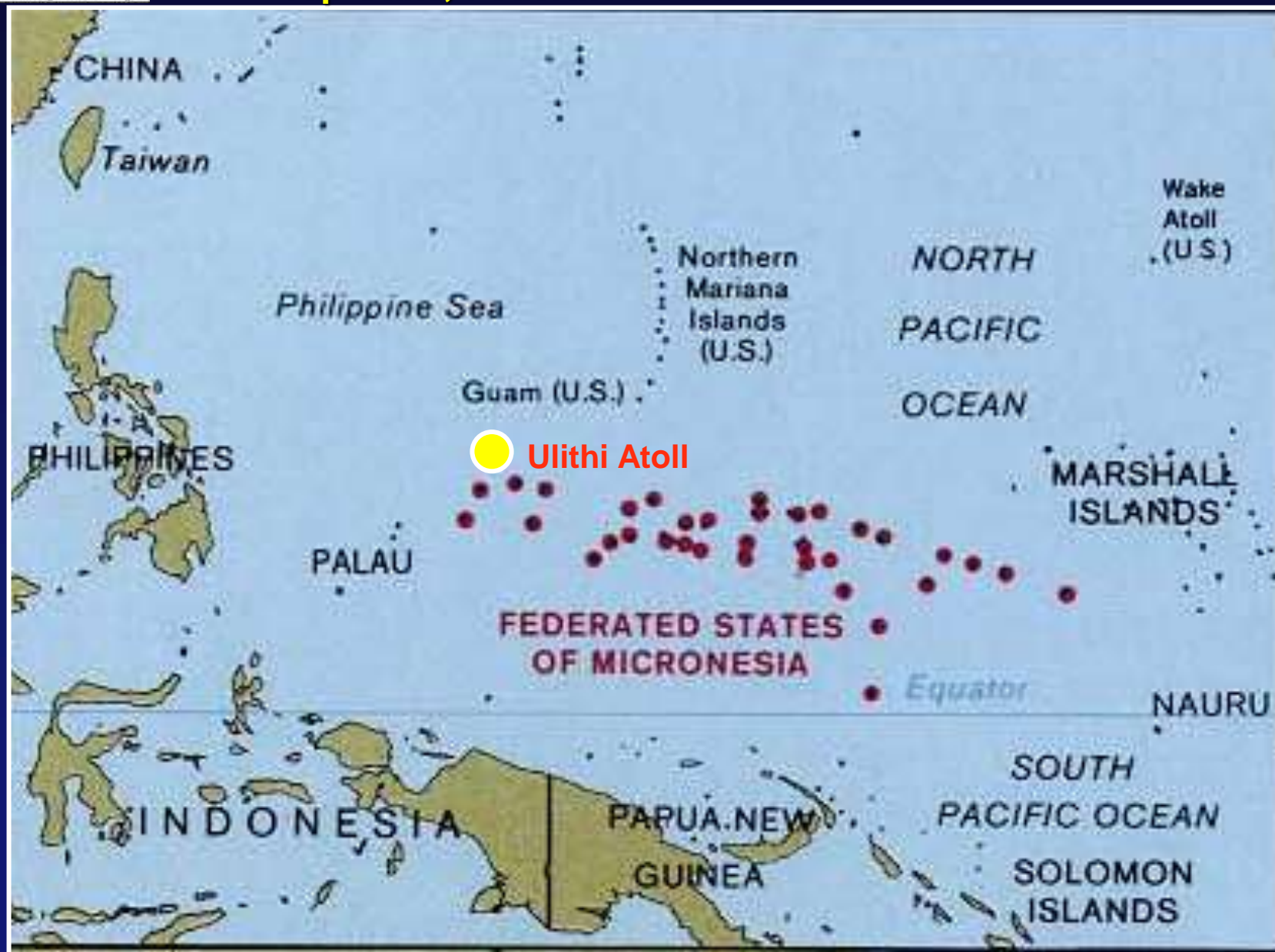
- November 20, 1944
- 63 U.S. personnel lost
- 3,780,000 gallons of oil on board at sinking
- Sunk in 130 feet





# USS Mississinewa at Ulithi Atoll

## Yap State, Federated States of Micronesia





# Recent History

- Wreck located April 2001
- Oil reported leaking, August 2001 YAP, FSM & USCG / NOAA Survey
- First Navy Response – Patch & Pump (Aug 2001)
- Second Leak & Response (Dec-Jan 2001)





# *Need for Additional Response (Offloading)*

- Risk of Continued Intermittent Oil Leaks
- Risk of Future Catastrophic Oil Release
  - Wreck's 22 tanks contained estimated 2.8 M gallons of oil
- Proximity to Pristine Subsistence Fishing Grounds
  - Sea Turtles, Marine Birds, Intertidal and Subtidal Habitats

# Offloading Plan

- Oil Removal - Through the hull – “Hot Tap” Equipment
- Surface-supplied (air) Diving
- Proven Tools and Equipment
- Aggressive Search for Oil
- Personnel Safety
- Environmental Safety



Hot Tap System



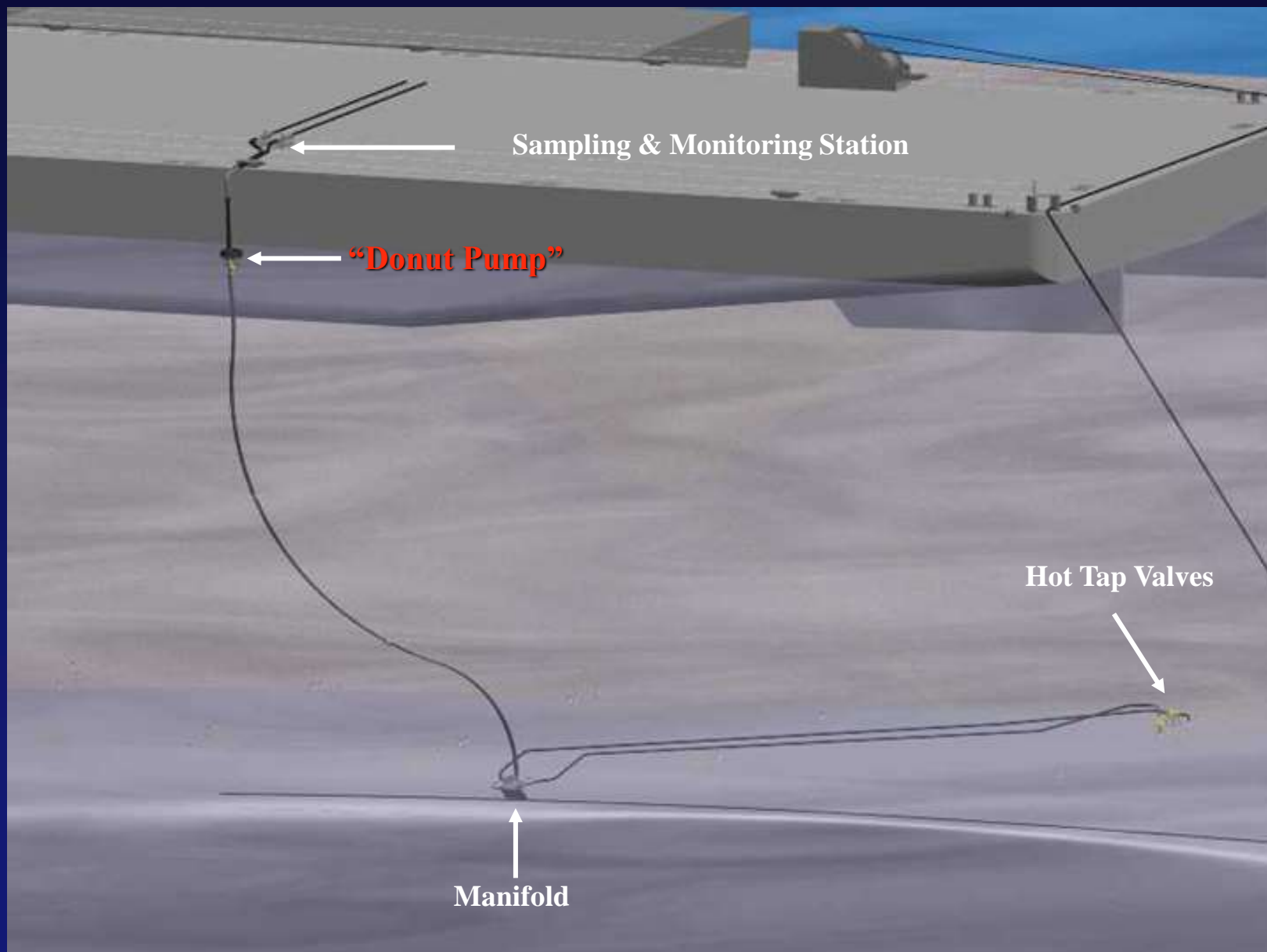
# Logistics – Getting to the site



# Operational Criteria

- Independent vessel-based operation (no facilities ashore)
- Need to remain on-station until completion
- Minimize pollution risk
- Remove all pumpable oil in accessible tanks
- Proper disposal of oil and all wastes

# Pumping Arrangement – Option One





# Resources

- **Vessels**

- USS Salvor (ARS 52) – Navy diving support platform
- Primary support barge & tug
- Additional barge and tug



- Personnel – Salvor, MDSU, EODMU, SUPSALV & contractors
- Equipment - supplied by ESSM (hot taps, pumps, etc.)
- Diving - surface-supplied; recompression chamber; communications (Salvor, MDSU, & EOD MU 5)
- Pollution response equipment (ESSM)

## Response Vessel - Barge Fels 20 loaded with ESSM salvage and oil recovery gear



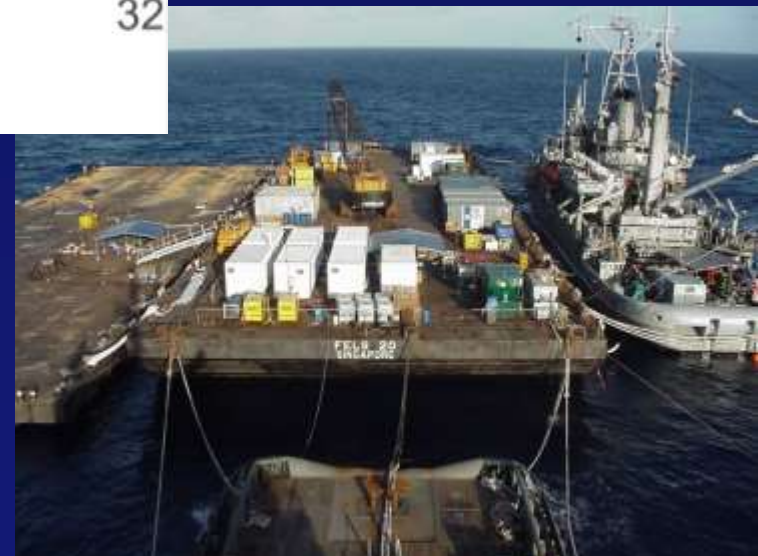
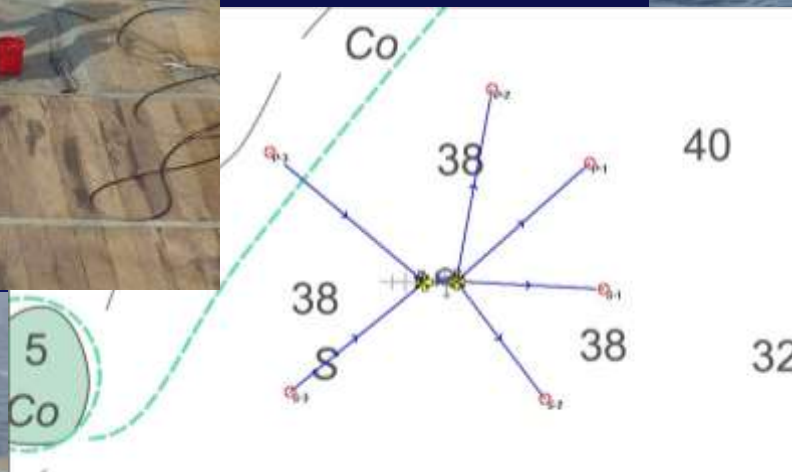
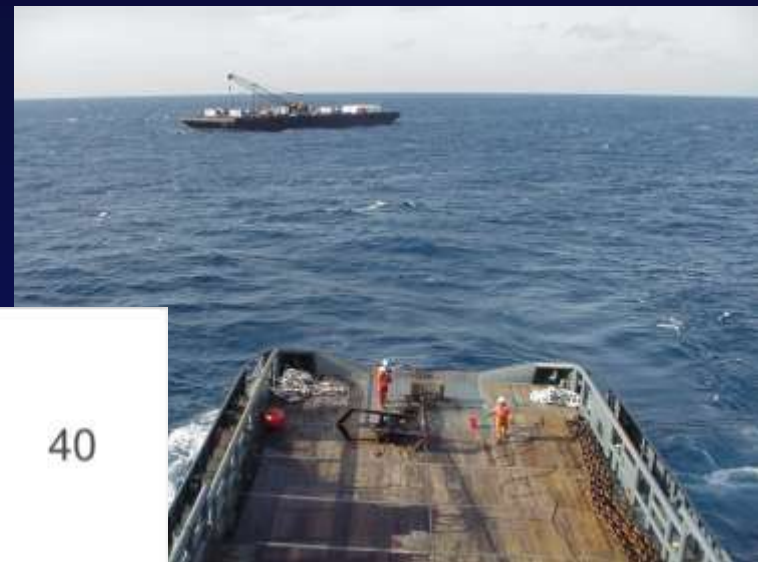
# Oil Spill Mitigation

- Spill Response Plan
- Containment
- Oil Recovery
- Dispersant Plan
- Wildlife Plan
- Storage & Disposal





# Installing the 6-point moor





# Vessels Operational Configuration





# Diver training to use Hot-Tap pumping system - Honolulu



## Divers topside – Ulithi during operation







## Underwater Operations





# Pumps





# Pumping Operations





# Operational Summary

- Installed 20 Hot Taps & Secured with Caps after Pumping
- Cut Access into Two Tanks for Internal Tank Access (& Secured)
- Removed All Accessible Oil from 21 Tanks, Engine Room, Pump Room, and Previously-Leaking Piping
- Transferred Approximately 1.95 Million Gallons of Oil from Mississinewa to Barge, including approximately 7% Free Water
- Successfully completed ahead of schedule
- Est. less than 5 gallons of Oil Released – No Environmental Impact
- Mississinewa Oil to be Sold in Singapore and Recycled

