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# Best Achievable Protection

USCG/WADOE

## Diver Safety and Production

Presented by:

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Vice President of Marine Casualty and  
Emergency Response Services



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# Diver Tasks

Oil Location

Oil Removal

Securing Oil Leak/Lightering

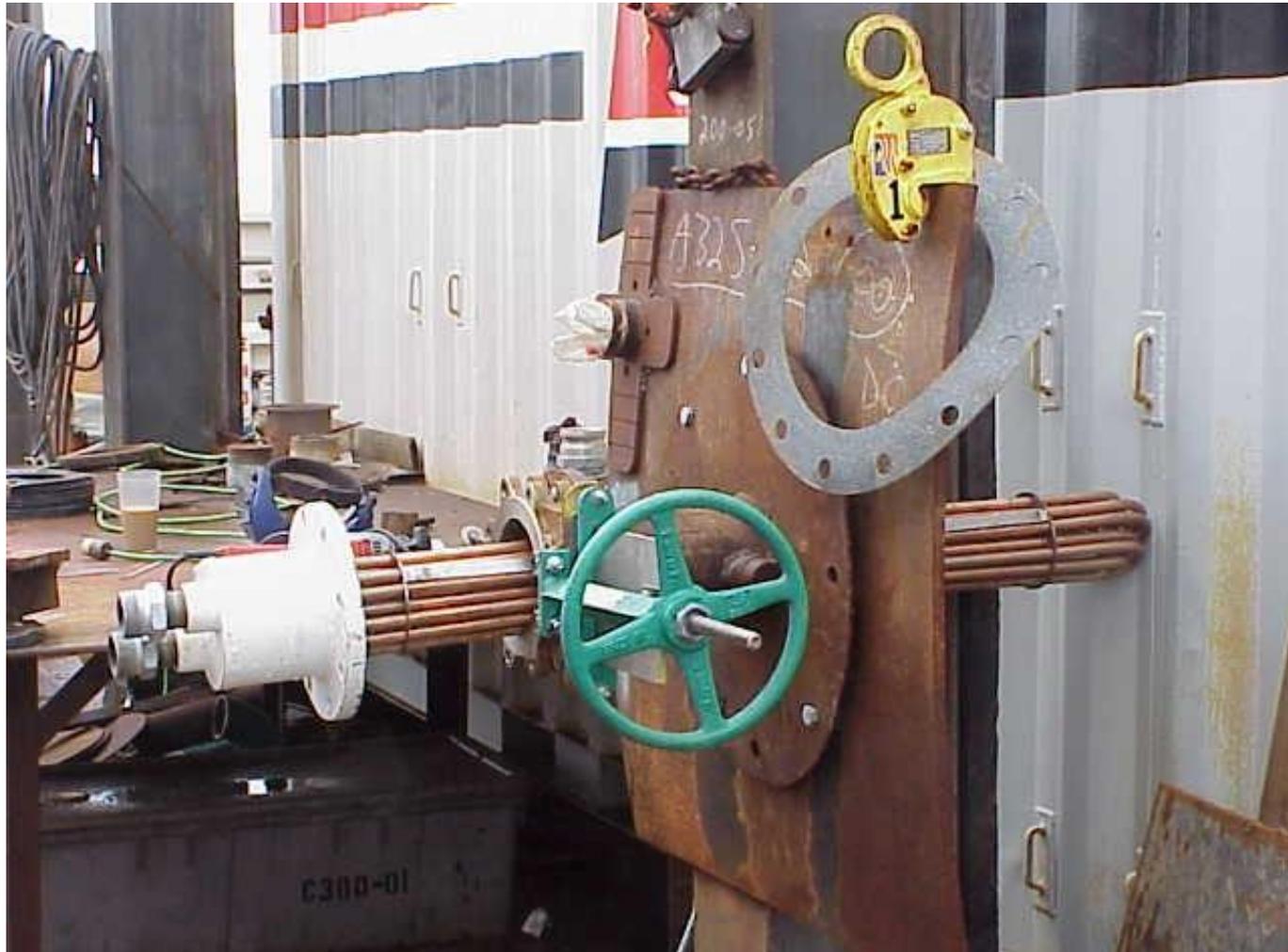
Repairing/Removing/Raising stricken vessel

Removing/Repairing pipelines

Investigation

# EMERGENCY LIGHTERING





# NOT ALWAYS A GOOD IDEA





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# Kuroshima





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# Kuroshima

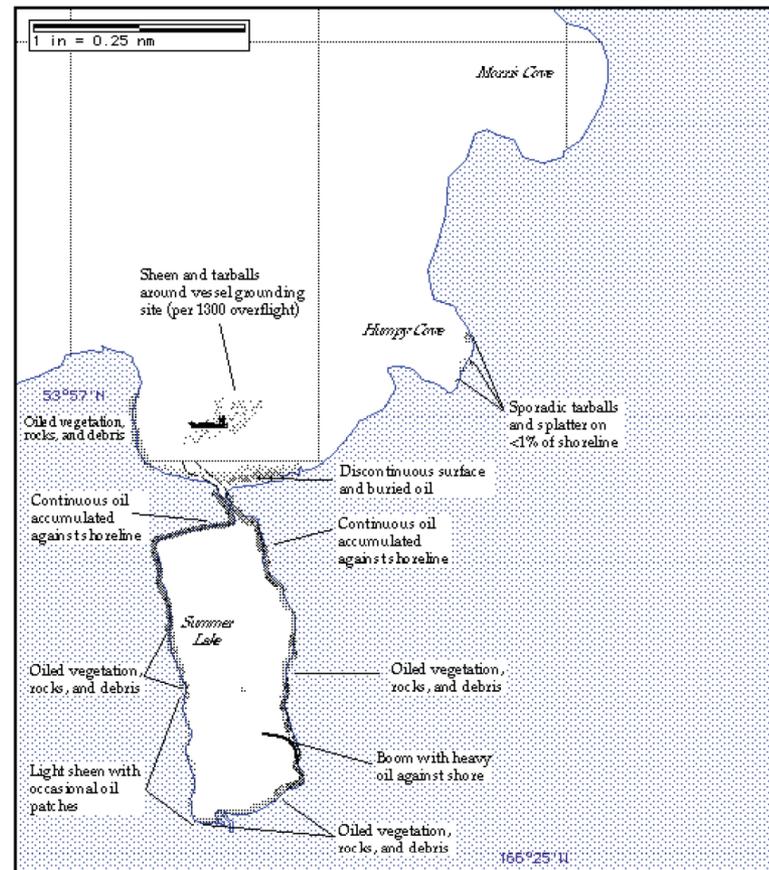
## *M/V Kuroshima* Incident

Shoreline Oiling Map  
prepared by NOAA

**Date/Time:** 02 DEC 97, 1500  
**Platform:** Foot survey  
**Observers:** O'Brien, Kane (EMCON  
AK), Wooley (CHUMIS)

**USE ONLY AS A GENERAL REFERENCE**

Graphics do not represent precise amounts or locations of oil.





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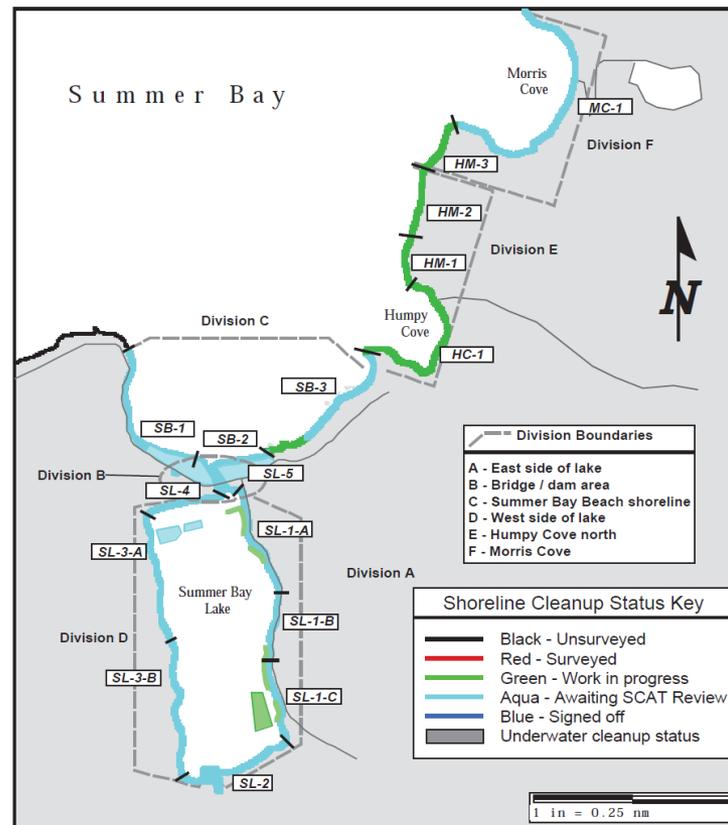
# Kiroshima

## M/V Kuroshima Incident

Shoreline Cleanup Status

Date: 5/7/98

Prepared by: Unified Command





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# Athos 1

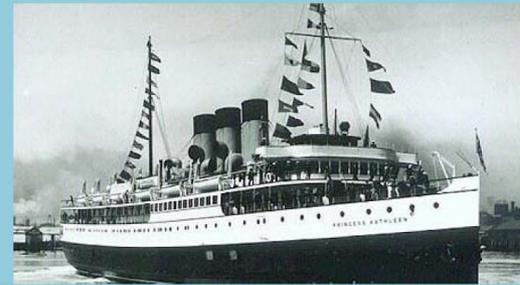




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# Princess Kathleen

- Built in 1924
- Sank near Juneau, AK in 1952
- Oil and Asphalt removed in 2010.



The maiden voyage was from Glasgow, Scotland to Vancouver, Canada via the Panama Canal.

1924



Alaska State Library – Historical Collections

1952

▲  
1925

▲  
1942

▲  
1959

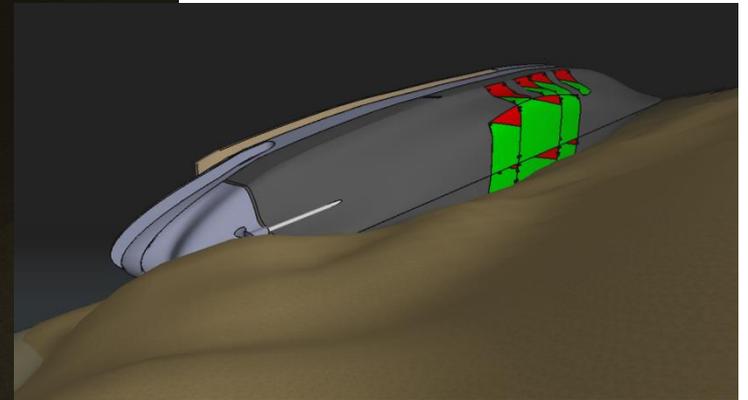
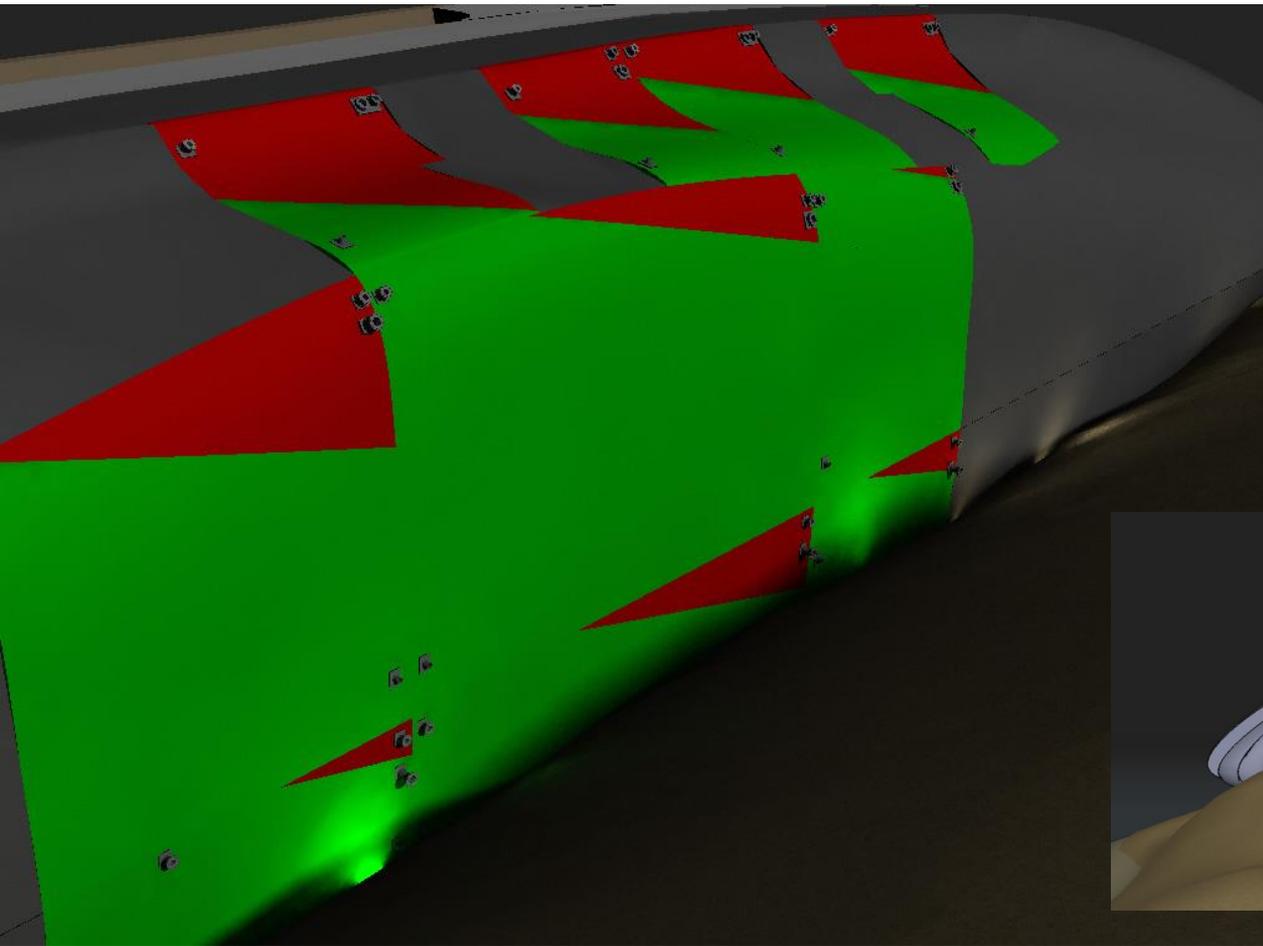
▲  
1976

▲  
1993

▲  
2010

# PHASE 2: Assessment of the Vessel

Sampling tanks and hull for confirmation of oil – Princess Kathleen





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# Silvertip Pipeline Spill





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# Silvertip Pipeline Spill





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# Mitigation Efforts Planning

**Quantify tasks**

**Are Divers Necessary?**

**Procedures – often different when dealing with oils.**

**Diving Modes**

**Efficiency**

**Tooling**

**PPE**





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# Mitigation Efforts

## PPE

- Wet Suits – not good
- Dry Suits
- Hotwater Suits
- HAZMAT Suits
- Hat Selection
- Exposure times



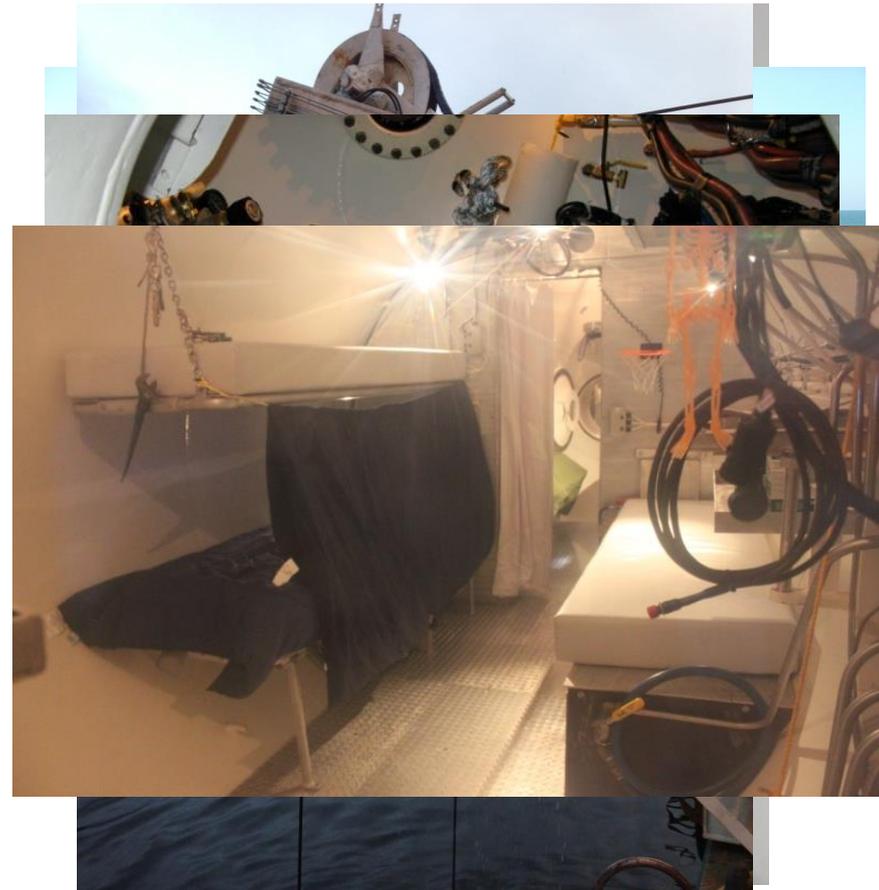
# DECONTAMINATION AND SUPPORT CREW

Appropriate  
Decontamination needs to  
be set up for divers,  
equipment and tooling  
**BEFORE** diving commences.  
Decontamination needs to  
encompass the tending crew  
as well.  
Divers support crew need to  
be protected as well as the  
divers



# SPECIAL CONSIDERATIONS

- Breathing gas supplies need to be contaminant free
- Fire hazard when working with hyperbaric chambers
- Decontamination with





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# In Conclusion

**Divers are awesome**

**Diving can be a great tool in dealing with Oil Spills**

**Not all divers or diving contractors are the same. Specialists should be used when dealing with special issues**

- Thank you
- Questions?