



## **Case Study: Environmentally Safe Decontamination of USS Oriskany**

**Location:** Corpus Christi, Texas

**Client:** Esco Marine

### **Overview**

Esco Marine enlisted the expertise of X4 Environmental to assist in the demolition and decontamination of the USS Oriskany, a Lexington-class aircraft carrier docked in Corpus Christi, Texas. The Oriskany, along with 47 other decommissioned vessels, was designated for the "Ships for Reefs" program, which involves sinking mothballed ships to create artificial reefs in the Gulf of Mexico.

X4 Environmental's primary responsibility was to provide environmentally safe chemical solutions and consultation on the removal of 40,000 gallons (952 barrels) of bunker fuel from the vessel. The challenge was to flush, degas, and eliminate all hydrocarbon residues from the fuel lines and bunkers in a manner that met environmental and safety standards.

## Solution Implemented

To ensure the effective removal of hazardous fuel, X4 Environmental employed a multi-step process:

1. **Fuel Liquefaction:** The fuel lines were first treated with ACL, a biodegradable solvent, which was circulated to liquefy the residual bunker fuel.
2. **Fuel Extraction:** Once liquefied, the fuel was safely extracted and stored in frac tanks, allowing it to be repurposed and sold as recycled burner fuel.
3. **Degassing and Cleaning:** After fuel removal, X4H2000 was applied using a heated pressure washer to degas and eliminate hydrocarbon residues from the fuel lines and holds.
4. **Final Drying Process:** The cleaned lines and holds were left open to dry thoroughly before any subsequent hot work was conducted.

## Results and Impact

By implementing X4 Environmental's advanced chemical treatment and cleaning procedures, Esco Marine achieved significant cost savings and operational efficiency:

- **Time Efficiency:** The cleaning process was completed in a fraction of the time required by conventional decontamination methods.
- **Cost Reduction:** The total project costs were reduced by 50% due to the streamlined procedures and fuel recovery.
- **Enhanced Safety:** The risk of hazardous conditions, including fuel-related explosions and toxic exposure, was significantly minimized.
- **Environmental Compliance:** The use of biodegradable solvents and controlled degassing ensured adherence to environmental regulations and sustainability best practices.

## Conclusion

X4 Environmental's innovative approach to fuel removal and degassing provided Esco Marine with a safe, efficient, and cost-effective solution for the decontamination of the USS Oriskany. By leveraging environmentally friendly chemicals and optimized cleaning techniques, the project contributed to both ecological preservation and improved operational efficiency within the "Ships for Reefs" initiative.