

Waterford 3  
Emergency Diesel Generator  
Fuel Oil Storage Project  
NRC Overview  
April 5, 2006

## Objectives

- Increase margin by using EDG “rated capacity” method to calculate fuel storage requirements
- Increase margin by installing significantly more on site fuel oil storage capacity (40,000 gallons)
- Fully comply with EPU commitment
- Use standard No. 2 diesel fuel oil
- Slight reduction in FOST to reduce operator burden



## EPU Commitment

To improve the fuel oil storage capability and provide a larger operational band, Waterford 3 commits to a design change to the onsite fuel oil storage system that will accommodate fuel oil storage volume equivalent to the fuel oil needed to run each DG for seven days based on calculational methods described in American National Standards Institute (ANSI) Standard N195-1976, "Fuel Oil Systems for Standby Diesel Generators." The modification will be completed by December 31, 2006 . Supporting TS changes will be submitted as needed to support changes.

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## License Amendment Request

- Change to Technical Specification
  - Relocate fuel oil requirements to new Technical Specification
  - Increase the required capacity
  - Maintain allowed time for capacity < 7 days but > 6 days
  - Relocate FO Testing Program to Administrative TS
- Supporting Bases Changes

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## New Required Capacity

- Based on 7-day rated capacity of the Emergency Diesel Generator
- Includes margin for testing
- Provided in two tanks per train
  - Existing safety related tank
  - New non-safety related tank

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## Required Capacity Comparison

	Current	Proposed
Volume (gallons)	39,300	<b>55,000</b> 38,000 in safety related tank (5 days) 17,000 in non-safety tank (2 days + margin for testing)
Calculational Method	Time dependent with exceptions -does not include 10% margin -does not include testing volume	Rated Capacity No exceptions
Duration	7 days	7 days

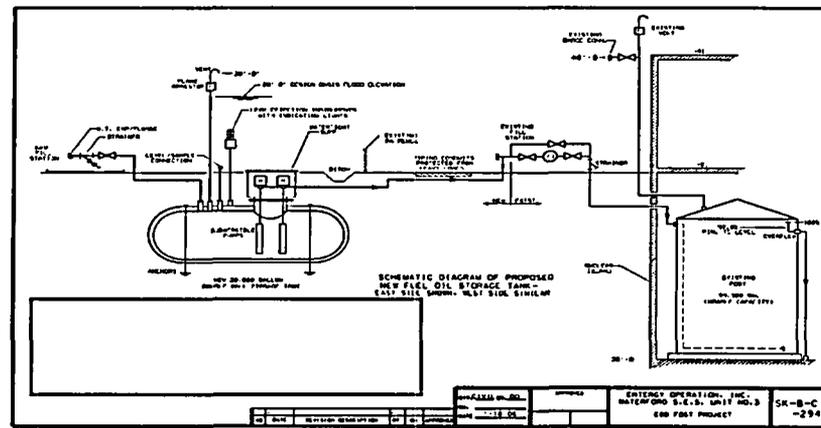
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## Design Concept

- Install two new 20,000 gallon non-safety storage tanks connected to existing FOST fill stations
- Double walled tanks with dual submersible pumps powered by EDG's
- Industrial grade tanks and equipment
- Underground / missile protected tank and pumps
- Watertight / flood protected / hurricane proof

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## Design Concept



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## Defense In Depth

- ANSI fuel oil storage calculational requirements fully met
- Leak detection indication provided
- Train separation maintained
- Design will be hurricane / flood proof

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## Defense In Depth

- DBA consumption (~5 gpm) equates to:
  - >5 days fuel supply in each SR tank
  - >2 days in each NS tank
- SR tanks cross-connected (active failure proof)
- Replenishment fuel is available from multiple area sources following DBA

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## Summary

- Proposal fully meets EPU Commitment
- Provides significant increase in fuel storage, controlled by TS
- Provides increased defense in-depth
- Reduces operator and chemistry burden

- Questions?