



# NRC Briefing - TMI2 Project Status

*March 5, 2025*

# Agenda



- Team Introductions
- ES Overview
- TMI2 Project Overview
- TMI2 Challenges
- TMI2 Project Update
- Community Advisory Panel (CAP) Update

# Our Team



- Sam Bambino, ES SVP Operations
- Paul Ross, TMI-2 Project Director
- Jason Norville, TMI-2 Director of Programs & Compliance
- Amy Hazelhoff, ES SVP Regulatory Affairs
- Chad Miltenberger, TMI2 Technical Manager
- Joe Lynch, Regulatory Affairs Director (TMI2 & KPS)

# EnergySolutions (ES) at a Glance



EnergySolutions (ES) is a global nuclear leader delivering environmentally sustainable and technologically innovative solutions across the full lifecycle of the nuclear industry.

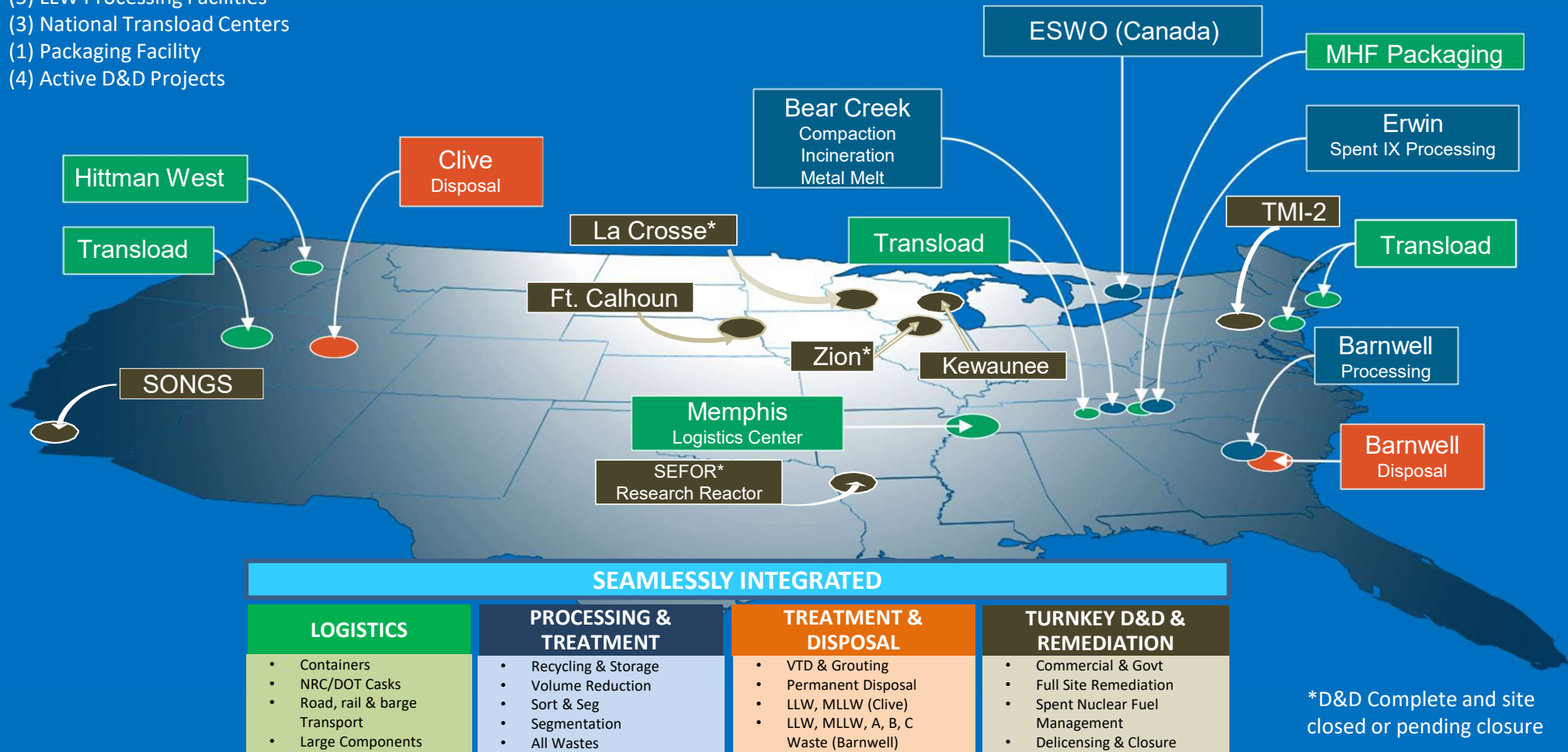
With decades of experience, EnergySolutions serves commercial, government and international customers in the nuclear, environmental, and energy sectors. We are dedicated to providing innovative and cost-effective solutions to manage complex nuclear challenges.

<b>Owner and Operator In:</b> <ul style="list-style-type: none"><li>• Nuclear waste management</li><li>• Treatment and disposition</li><li>• Facility decontamination</li><li>• Decommissioning and site remediation</li><li>• Project Execution</li></ul>	<b>Primary Customers:</b> <ul style="list-style-type: none"><li>• All N. American nuclear utilities</li><li>• Medical &amp; Research facilities</li><li>• U.S. and Canadian government agencies</li><li>• International companies</li></ul>	<b>Reactor D&amp;D Site Remediation:</b> <ul style="list-style-type: none"><li>• 3 decades of nuclear decommissioning experience</li><li>• 8 utility D&amp;D projects completed, with sites achieving regulatory closure</li><li>• 4 active utility D&amp;D project totaling &gt;\$4 B</li></ul>	<b>Nuclear Services Division:</b> <ul style="list-style-type: none"><li>• Utility maintenance &amp; modifications</li><li>• EPC Capital projects</li><li>• Mechanical, Electrical and Civil</li><li>• New nuclear construction</li></ul>	<b>Federal Services:</b> <ul style="list-style-type: none"><li>• Environmental Investigation</li><li>• Remediation and Restoration Services</li><li>• Multi-disciplined Engineering services</li><li>• Structure/component deactivation</li><li>• Segmentation and demolition</li><li>• Hazardous toxic radioactive waste characterization and treatment</li></ul>
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# Fully Integrated WM and D&D Operations



- (2) Licensed Disposal Sites
- (5) LLW Processing Facilities
- (3) National Transload Centers
- (1) Packaging Facility
- (4) Active D&D Projects





# Ongoing Nuclear Decommissioning Projects



**Fort Calhoun Nuclear Generating Station**

In April 2019, EnergySolutions signed a contract with Omaha Public Power District to decommission the station. The plant operated for 43 years and shut down in 2016.



**San Onofre Nuclear Generating Station**

In October 2019, the California Environmental Quality Act permit was unanimously approved for the San Onofre Nuclear Generating Station decommissioning project.



**Three Mile Island—Unit 2**

In December 2020, EnergySolutions completed the process for its subsidiary, TMI-2 Solutions, to acquire the Three Mile Island—Unit 2 Nuclear Power Plant, from subsidiaries of FirstEnergy Corp.



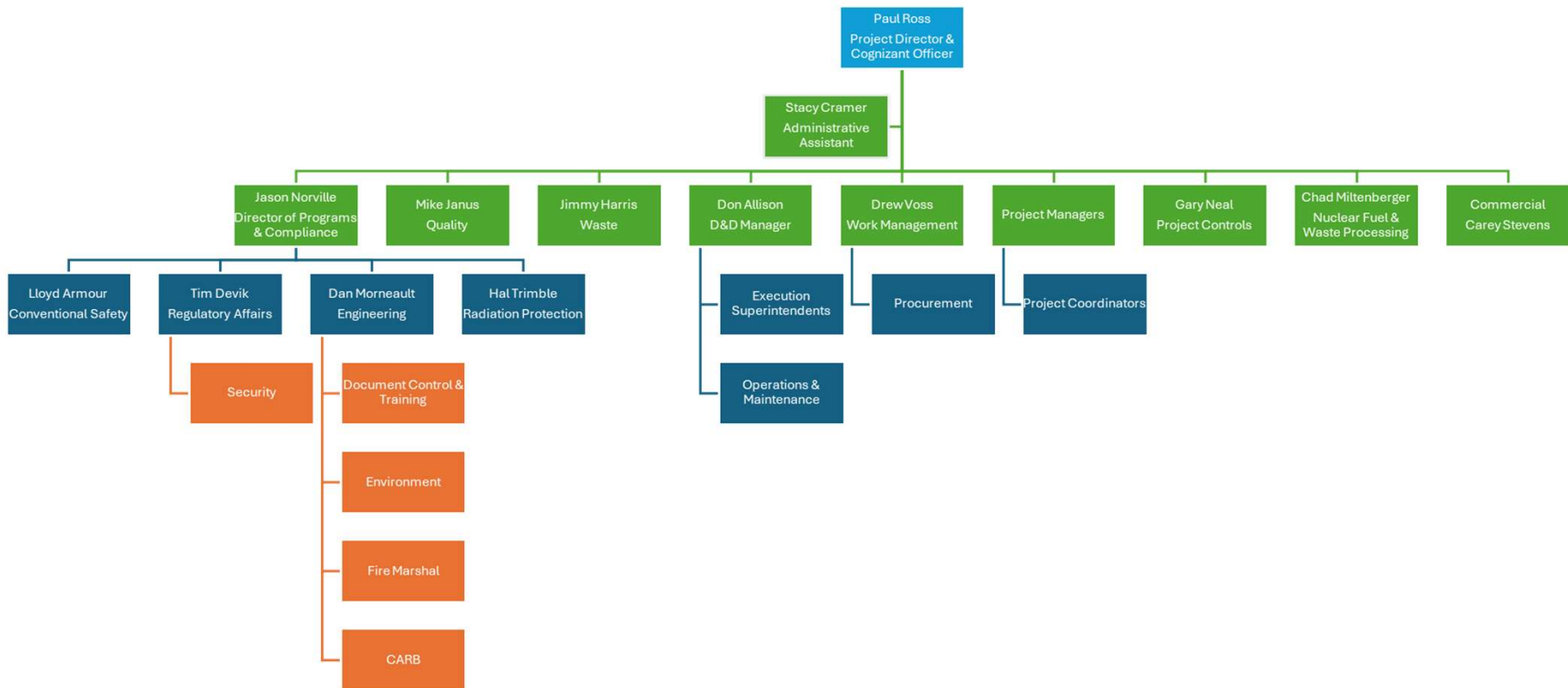
**N.S. Savannah**

In the spring of 2020, Radiation Safety & Control Services, Inc. (RSCS), announced a partnership with EnergySolutions to decommission the world's first nuclear-powered merchant ship, the N.S. Savannah.



**Kewaunee Power Station (KPS)**

# TMI-2 Organization



# ***TMI2 Project Overview***



## **TMI2 Decommissioning Phases**

- Phase 1 – Planning, Engineering, Remediation
  - Phase 1a – Preparation for Decommissioning
    - Complete (April 2023)
  - Phase 1b – Fuel Bearing Material Recovery & Source Term Reduction
    - Duration: ~7 years (2023-2029)
- Phase 2 – Typical Decommissioning and Dismantlement, Site Remediation, License Termination
  - Duration: ~8-10 years (2030-2037)
- Phase 3 – Fuel Bearing Material Management (2029-2052)



# TMI2 Project Overview

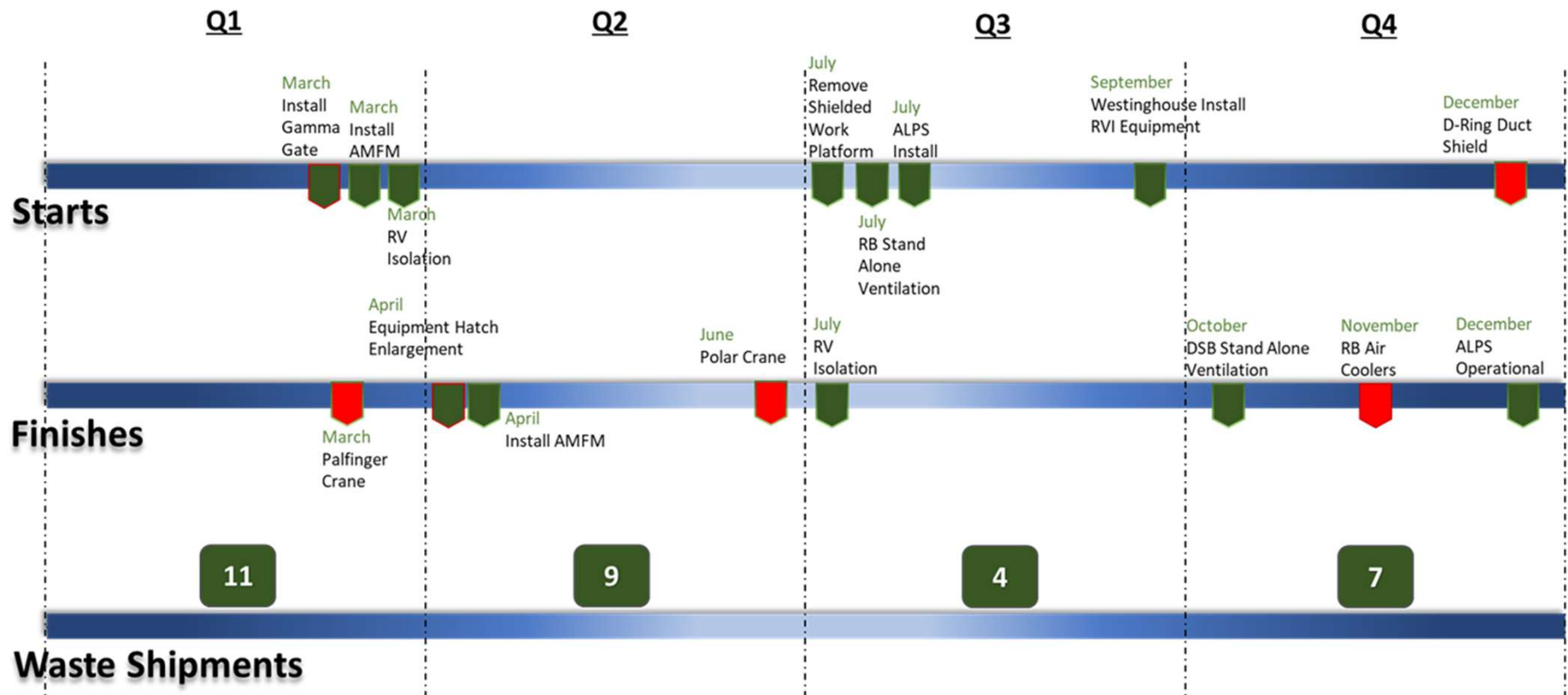


## Phase 1b Activities include:

- ISFSI Construction – Completed
- Decommissioning Support Building (DSB) Construction in progress
- Removal, packaging, and storage of remaining Fuel Bearing Material in planning
- Dose reduction in progress
- Removal of Low-Level Radioactive Waste (LLRW) in progress
- Decontamination of systems in progress



# TMI-2 Project Overview



# TMI2 Commitment to Safety



## Criticality Safety

- Safe fuel mass limit exceeds the inventory of fissile material at TMI-2

## Radiological Safety

- Focus on ALARA principles, learn from site-specific & industry experiences, and empower staff to daily challenge radiological safety due to the uniqueness of the TMI-2 source term

## TMI-2 Health & Safety (H&S) Policy

- TMI-2 makes every reasonable effort to achieve and maintain industry best Occupational H&S Program performance to protect our employees, contractors, clients, communities, and others who could be affected by our activities

## Employee Concerns Program (ECP)

- Provides a confidential process through which individuals can raise nuclear safety concerns without fear of retaliation

## Corrective Action Program (CAP)

- System by which issues are identified and corrected including a process for evaluating the safety significance of issues, setting priorities in correcting issues to preclude recurrence, and tracking issues until corrective actions are completed



# TMI2 Challenges



- Hiring/Retaining Talent
- Radiological Conditions resulting from the Accident

# Leveraging Technology for Safety and Efficiency

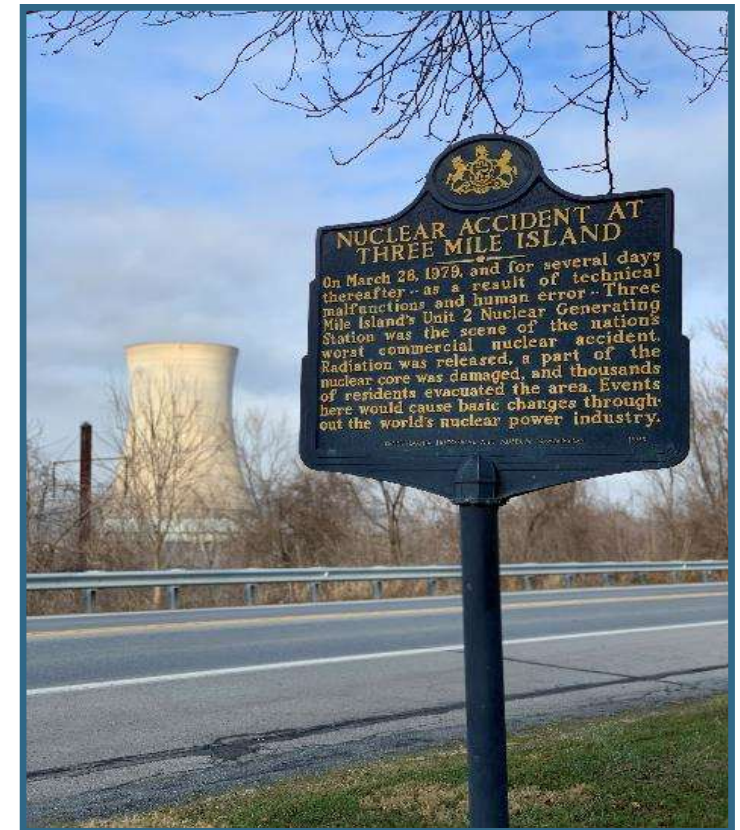
At TMI-2, EnergySolutions is implementing new technologies to improve worker safety and increase TMI2 project effectiveness / efficiency





# TMI2 Project Update

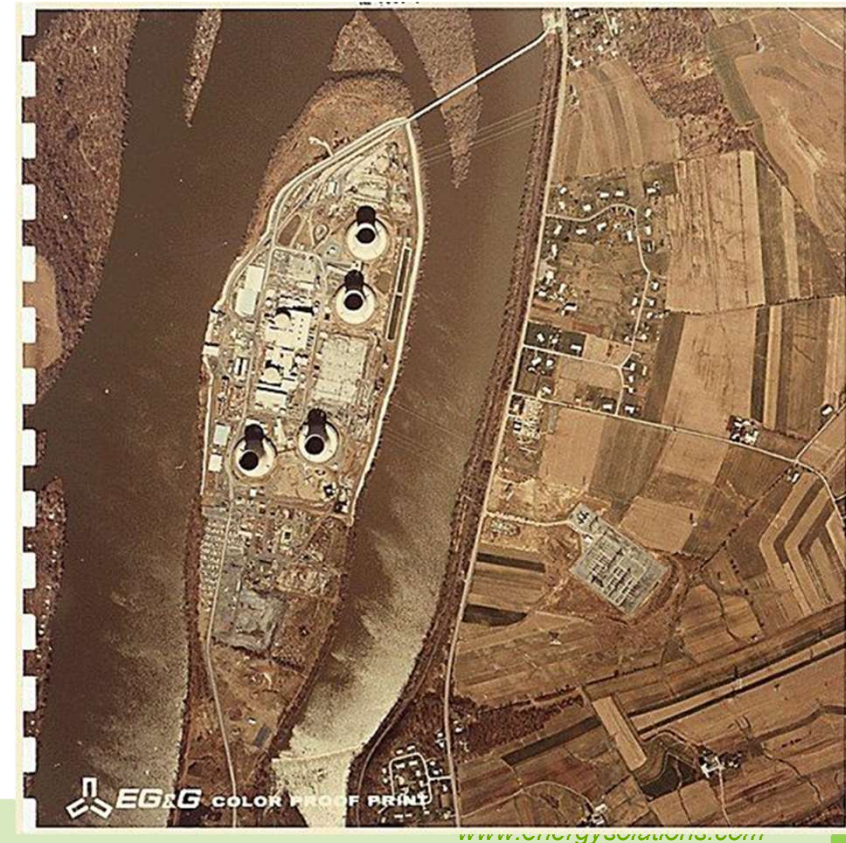
- Secondary independent isotopic characterization of building completed
- Beta characterization of Reactor Building with calibrated film in progress
- Use of cascading impactor air samples in development
- First Jr. Radiation Protection (RP) Technician Class completed
- Evaluating establishment of an on-site Alpha lab



# TMI2 Project Update

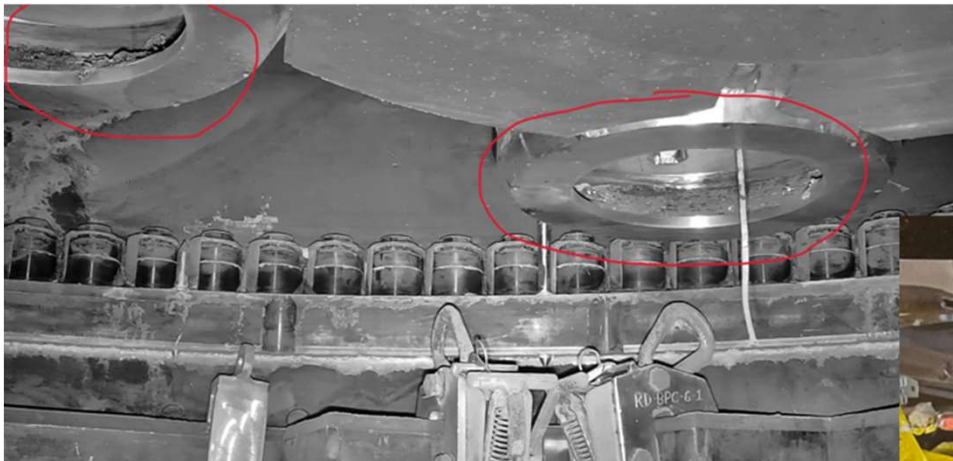
## RP Controls:

- Raised Reactor Water levels to reduce dose rates
- Fuel Transfer canal work in progress to support Reactor Vessel Isolation
- Enhanced RB Air Cooler removal plan to save over 100 Person-Rem in 2025



# TMI2 Project Update

## FTC Interference Removal



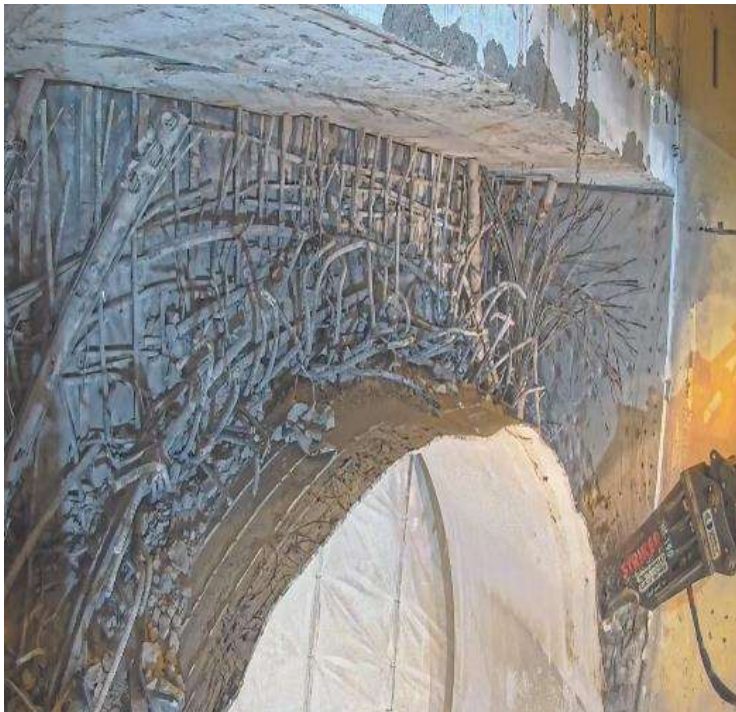
## RB Air Coolers





# *TMI2 Project Update*

## Equipment Hatch Enlargement



# *TMI2 Project Update*



## **ISFSI Storage Pad Construction**





# *TMI2 Project Update*



## **Decommissioning Support Building (DSB)**



# TMI2 Project Update



- 18 Shipments Completed in 2023
  - 10,607 cubic feet of waste
- 40 Shipments in 2024
  - 29,239 cubic feet of waste
- 31 Planned Shipments for 2025
  - Q1 – 10 Shipments
  - Q2 – 10 Shipments
  - Q3 – 5 Shipments
  - Q4 – 6 Shipments



# *TMI2 Community Advisory Panel*



- Established in April 2021 to enhance open communication, public involvement and education about the TMI2 decommissioning project
- Eleven (11) member panel comprised of a cross-section of local stakeholders, elected officials and community leaders
- Ten (10) virtual/hybrid & face-to-face meetings to date
- Next CAP Meeting – March 20, 2025
- Presentations available on [www.tmi2solutions.com](http://www.tmi2solutions.com)



# Closing

- *Questions*

