



TMI-2 Community Advisory Panel Meeting Minutes

Date: Thursday, September 21, 2023

Time: 6:00pm – 7:30pm

Location: Hybrid, accessible via www.tmi2solutions.com
Dial In: +1 385-500-4880, Conference ID 500079013#

Penn State Harrisburg

Educational Activities Building - North, Room 110
299 College Avenue, Middletown, PA 17057

I. Welcome and Attendance – Marie-Louise Abram, Interim CAP Chairperson

- a. Ms. Abram opens the meeting as interim TMI-2 CAP chairperson. Conducted TMI-2 CAP roll call and introduced the CAP organization and its functions.
 - i. TMI-2 CAP Attendance
 1. **Virtual:** Amy Burrell, David Shoff, Jim Hazen, Dave Allard
 2. **In-Person:** Marie-Louise Abram, Hannah Pell, Richard Kluskiewicz
 3. **Absent:** Bart Shellenhamer, Jay Ostrich, Curt Miner, Scott Miller, Joyce Corradi
- b. Penn State Harrisburg (PSU Hbg) Introductory Remarks – Dr. John M. Mason, Jr; Chancellor
 - i. Dr. Mason welcomed attendees and stated that the college is happy to support future TMI-2 CAP meetings. Discussed personal memories of the accident and acknowledged Ms. Abram for serving as interim Chairperson. Reiterated that it is important to create space for and maintain an open dialogue.
 - ii. Dr. Mason shared several updates for PSU Hbg, including that there are now over 4500 students in residence, and the student population includes representatives from over 50 countries and from all states. PSU Hbg is also planning construction of a new interdisciplinary academic learning center.
 - iii. Dr. Mason emphasized the college is engaged in local economic development and is always seeking internship opportunities. There are a range of experts on campus that may be able to help from time to time. Dr. Mason acknowledged the several additional PSU Hbg staff in attendance.

II. Decommissioning Status Update – Frank Eppler, TMI-2 Deputy Project Director

- a. Mr. Eppler began by noting that everyone on the project is excited; the project is aware of concerns and want to be accessible to local stakeholders. TMI-2 Solutions will continue to get the word out to expand TMI-2 CAP meeting attendance and participation in the future.
- b. Discussion of the differences between TMI-2 and TMI-1. Both units share Three Mile Island in the middle of the Susquehanna, and the shaded parcels show the assets that TMI-2 Solutions owns. The remainder of the island is owned by Constellation. The areas impacted by the TMI-2 accident are within the TMI-2 footprint.
- c. EnergySolutions (ES) is the owner who purchased the TMI-2 assets from the previous owner [GPU Nuclear]. Most of the project senior leadership works for ES. TMI-2



Solutions is a subsidiary for ES and, under TMI-2 Solutions is a joint venture established to execute the decommissioning work in the field.

- d. The TMI-2 decommissioning project is broken up into different phases. Phase 1a was when the project was still in the Post-Defueling Monitored Storage (PDMS) state and included preparations for active decommissioning. The focus of Phase 1b is to clean up the remaining ~1% of accident-related material. After the 1979 accident, more than 99% of the source term was removed and transferred to the DOE.
 - i. General Phase 1b timeline from the Post-Shutdown Decommissioning Activities Report (PSDAR), which breaks down what it looks like over the next 6 years with the expectation that when the project reaches 2029, TMI-2 will look like any other decommissioning site in America. ES has several other typical D&D sites.
- e. Mr. Eppler described the photographs of decommissioning work conducted on the Reactor Building, including the exterior tendons, Personnel Air Lock (PAL) removal, and Equipment Hatch segmentation. Clarified that it is not the cooling towers, but rather the enclosed cylindrical building where power is generated at a nuclear plant.
 - i. Every Reactor Building is similar – all have Equipment Hatches which, during outages, are opened so personnel can move in and out freely. The Equipment Hatch was removed because the project needs to move large equipment into and out of the Reactor Building to support the source term reduction and Fuel Bearing Material recovery activities.
 - ii. There are still several barriers that remain between the entrance to the TMI-2 Reactor Building and the environment.
- f. The videos of the Drone Flight and Spot surveys in the Reactor Building basement were shown and described.
- g. Radiation Monitoring – Radiation monitoring is a crucial part of the decommissioning project. Everyone deserves to know how the contamination is going to be kept safe, whether the NRC, PADEP, and in accordance with local requirements. There have been no events, and there is constant monitoring around the site through the REMP [Radiological Environmental Monitoring Program].
- h. Waste Planning and Shipments
 - i. Mr. Eppler stated that there are a lot of questions about waste – what will leave the island, and what will be stored on-site – and described the four classes of waste. 99% of TMI is the lowest level possible, such as equipment and rubble, which will be shipped offsite to ES' low-level radioactive waste (LLRW) facility in Clive, Utah. The project's third batch of LLRW was shipped offsite this afternoon. Pictured are TMI-2 waste specialists standing next to the shipment with no additional radiation protection measures required.
 - ii. The fourth class of waste is the highest activity, which is owned by the Federal government. This is the remaining ~1% of the accident material discussed earlier, also called "Fuel Bearing Material." This will be stored onsite in approximately 14 canisters until the Department of Energy (DOE) is prepared to take possession of it.



- i. TMI-2 Charity Golf Tournament – There is a critical relationship between TMI and the Londonderry Township fire department. Every year is the charity golf tournament to support our first responder organization. This year a record was set for the highest amount of money raised (\$40,000).

III. Regulatory Update – Tim Devik, TMI-2 Licensing Manager

- a. Mr. Devik stated that with NRC approval of the License Amendment Request (LAR), TMI-2 Solutions has transitioned to the DECON license basis, or active decommissioning. Since the end of the 99% removal [in 1993], the TMI-2 facility was in a monitored storage period known as PDMS. Now, the license allows TMI-2 Solutions to resume the remaining cleanup in order to eventually remove the facility from the Pennsylvania countryside.
- b. Mr. Devik explained that, as a direct consequence of the TMI-2 accident and how it fundamentally changed the nuclear industry, all nuclear plants talk to each other in order to share lessons learned and continue to increase safety.
- c. Given the historical significance of the TMI-2 accident, the facility has previously been deemed eligible for the National Register of Historic Places. Although eventually the buildings and structures will be demolished, in the meantime, the Section 106 process is underway to determine what can be preserved to help tell the story for future generations how this place was cleaned up.
 - i. Under the Section 106 process, the NRC considers potential impacts to culture and the environment in coordination with other Federal and State historic agencies, as well as Tribes.
 - ii. See Section 106 process handout from the American Council on Historic Preservation (ACHP).
- d. Mr. Devik concluded with an update on the routine (quarterly) NRC inspections. No issues or violations have been identified.

IV. Department of Energy – Dr. Erica Bickford, Office of Nuclear Energy, Integrated Waste Management Program

- a. Dr. Bickford leads the DOE's Office of Integrated Waste Management, which oversees a program directed by Congress to identify a site for consolidated fuel using the consent-based siting process.
 - i. Not currently authorized to operate a facility, and these efforts will depend on future appropriations from Congress.
 - ii. Mission -> Construct one or more Federal interim storage facilities, using a consent-based siting process, ready to receive commercial spent nuclear fuel as soon as practicable.
- b. Integrated Waste Management System includes one or more interim storage facilities, transportation of the spent nuclear fuel, and an eventual final geologic repository.
- c. Storage and Transportation Preparations
 - i. The DOE is developing and implementing the consent-based siting process.
 - ii. DOE does not expect to have the Federal facility constructed until the next decade. In the meantime, the DOE conducts site visits and infrastructure evaluations to understand what it's going to take to move the spent fuel from nuclear power plant sites to those facilities.



1. As of this week completed 22 site visits have been completed with 50 sites to left to go. Site evaluations include taking a lot of photos; pictured is the TMI-2 Reactor Building and cooling towers.
- iii. Site visits include reviews of rail access and options for truck and barge transportation. Rail is more suitable for heavy loads, so DOE expects rail to be the primary means of travel. The Susquehanna is not deep enough to accommodate barge.
 1. Site visits usually take place over three days. The DOE submits questions in advance, such as – how many canisters are expected? For TMI-2, currently that estimate is 12-14. Is there a history of moving heavy components off the site? TMI site visit provided a lot of valuable historical information from the defueling efforts in the 1980s. The bridge load is approximately 40 tons, and there are open questions about the conditions of the bridge and planned refurbishments.
 2. Last day often includes meeting with public stakeholders, including elected officials, Community Advisory Boards, and Federally recognized Tribes.
 3. The TMI site visit included active participation from Pennsylvania state agencies which resulted in a more robust understanding of future options.
- iv. Learn more about the DOE's Consent-Based Siting Process: <https://www.energy.gov/ne/consent-based-siting>.

V. Oversight Comments

- a. **Pennsylvania Department of Environmental Protection – Dwight Shearer, Director, Bureau of Radiation Protection**
 - i. Mr. Shearer stated that PADEP is a partner, participating in daily calls and have recurring weekly and monthly updates from TMI-2 Solutions and the NRC.
 - ii. During the last CAP meeting there was a request to provide more information about PADEP radiation monitoring. PADEP slides provide information about the radiation monitoring locations surrounding Three Mile Island, results indicate that air sampling levels have remained consistent for the past ten years. PADEP takes recurring samples of milk, fish, water, and sediment.
 - iii. There has been no radiological migration offsite. PADEP continues to serve as the independent check on utilities to fulfill its mission to protect citizens and the environment.
- b. **Decommissioning Nuclear Safety Review Board – Bill Ostendorff, DNSRB Chairperson**
 - i. The DNSRB group was onsite from May 9-11, 2023. ES has been extremely responsive to DNSRB recommendations.
 - ii. There has been a change to the DNSRB membership, Jay Tarzia has left, and has been replaced by a new member who is also a health physicist. The DNSRB will be back onsite in several weeks.



- iii. Mr. Ostendorff echoed Mr. Devik's statements about how positively the TMI-2 accident has changed the industry, and the importance of maintaining open and transparent communications.

c. Nuclear Regulatory Commission – Amy Snyder, Senior Project Manager

- i. Ms. Snyder summarized the licensing highlights, including the LAR which changed the Technical Specifications to take the TMI-2 facility out of monitored storage. There were some typos and editorial changes needed in the Safety Evaluation Report (SER) which did not impact its conclusions. The changes to the Technical Specifications required a hazards assessment to ensure decommissioning activities will be conducted safely.
- ii. The LAR for the historical and cultural reviews will require an environmental assessment and the Section 106 review, which evaluates and determines potential mitigation options for the eventual demolition of the facility.
- iii. The NRC issued two exemptions on criticality monitoring and waste reporting.
- iv. Other licensing submittal reviews include the PSDAR Rev. 5 and the Decommissioning Trust Fund Report.
- v. Ms. Snyder provided an update on NRC inspection status and oversight. Inspections are performed under the decommissioning program protocol. The NRC has been onsite every month, and the reports from August, September and November will be forthcoming. NRC verified all systems were in place to begin decommissioning in the beginning of May.

VI. TMI-2 CAP Business – Marie-Louise Abram, Interim TMI-2 CAP Chairperson

- a. Ms. Abram introduced the new TMI-2 CAP member, Dave Allard, former Director of the Bureau of Radiation Protection for PADEP (Retired July 2022).
- b. Ms. Abram requested nominations for the next TMI-2 CAP Chairperson to be sent via email.
- c. Motion to approve the proposed revision to the CAP Charter.
 - i. Dave Allard motions, Jim Hazen seconds. Approved.
- d. Motion to approve previous TMI-2 CAP meeting minutes.
 - i. Jim Hazen motions, Dave Allard seconds. Approved.
- e. Next CAP Meeting is scheduled for **Thursday, January 11, 2024, from 6pm-730pm.**
 - i. All TMI-2 CAP meetings will continue to be virtually accessible.

VII. TMI-2 CAP Questions and Open Discussion – Marie-Louise Abram, Hannah Pell – Interim TMI-2 CAP Chairperson and TMI-2Solutions CAP Member

- a. No questions or open discussion.

VIII. Public Question and Answer Period – Marie-Louise Abram, Hannah Pell – Interim TMI-2 CAP Chairperson and TMI-2Solutions CAP Member

- a. **Question 1** from Dave Allard:
 - i. Mr. Allard thanked everyone for the presentations and noted its important to present environmental surveillance data.
 - ii. Question for DOE – Approximately 99% of the accident material ended up in Idaho. For the remaining 1% throughout the RCS [Reactor Coolant System], will there need to be any conditioning of that debris, considering it isn't strictly SNF [spent nuclear fuel] like TMI-1.



1. Hannah Pell forwarded the above question to DOE's Dr. Bickford on 9/25/2023.
- iii. Mr. Eppler stated that TMI-2 Solutions is working closely with our canister fabricators [NAC International] and provided additional context about the ongoing licensing reviews and our plans to remove the fuel bearing material in the smallest pieces possible to limit the number of casks on the TMI ISFSI.
- b. **Question 2** from Rich Janati (PADEP):
 - i. Mr. Janati noted that, as Mr. Eppler described, Phase 1b is expected to be completed in 2029. Mr. Janati questioned whether TMI-2 CAP members are aware that TMI-2 will be going back into SAFSTOR.
 - ii. Mr. Eppler responded and stated that TMI-2 Solutions does not intend to return to the SAFSTOR condition following Phase 1b, and this has been clarified in subsequent submittals to the NRC (See [ML23221A140](#)).

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