LaCrosse Decommissioning
Lessons Learned
March 13, 2019
Gerry van Noordennen
Lessons Learned

- What Went Well
- What Can We improve On
LaCrosse Boiling Water Reactor (LACBWR) Site
LACBWR Key Facts

- BWR (50MWe)
- AEC demonstration reactor
- Owned by Dairyland Power Cooperative (DPC)
- Operated from 1967 to 1987
- Licensed site shared with operational fossil plant
Current Status

- Fuel in dry storage
- Demolition Complete
- License Termination Plan Approved
- Confirmatory Surveys
  - Complete in 2019
  - Reduce Licensed Area to ISFSI
- License Transfer Amendment
  - Implementation Pending Approval of Final Status Surveys
- Transfer Remaining ISFSI Licensed Area Back to Dairyland Power Cooperative (DPC) in 2020
Turbine Building Demolition
Stack Demolition
Waste Treatment Building Demolition
Removal of Circulating Water Discharge Pipe
Reactor Building Interior Demolition
Interior Demolition
Completing Interior Demolition
Waste Load Out Tent Demolition
Reactor Building Shell Demolition
Reactor Building Shell Demolition
Reactor Building Shell Demolition
Reactor Building Liner Removal
Groundwater

- Tritium Plume
  - Detected in December 2017 monitoring well sampling
  - Source identified as Reactor Building Ventilation Exhaust directed down toward storm water and ice melt underneath the vent. Gaseous tritium combines readily with water.
  - No other radionuclides identified
  - Exhaust system brought on line on November 20, 2017
  - Stormwater/ice melt flowed to sump area in communication with shallow aquifer
  - Dye study used to confirm and calibrate plume
  - Current monitoring well readings at background
Tritium Groundwater Plume
What Went Well

- On budget and schedule
- License transfer was a fast, seamless transition
- Excellent support from Federal, State and Local regulators
- Positive stakeholder feedback
- Maintaining DPC Staff to operate ISFSI
- No disruption of coal plant operation
Lessons Learned

- **Ventilation Exhaust Effects**
  - Careful consideration of ventilation exhaust effects when demolishing concrete containing tritium or other radionuclides from operational leaks and spills

- **License Termination Plan**
  - Deviating from published NRC guidance requires additional NRC review time
  - Use the same definitions and terms in MARSSIM
  - Follow past precedent
  - Goal is to obtain NRC approval within 2 years of submittal
Decommissioning Next to an Operating Power Plant

- Careful coordination with operating plant needs and outage schedule
- Partial site release to remove coal plant from licensed area
- Strong coordination on site wide environmental discharge and air permits
Summary

- Decommissioning a power reactor can be accomplished in a timely and efficient manner while not affecting other site operating plants.
- Effective stakeholder communication results in seamless license transfers and no schedule delay.
- Lessons learned to be applied to the next decommissioning project.