La Crosse License Transfer for Accelerated Decommissioning

Agenda

- Introductions - Ken Robuck
- Purpose of the Meeting - Rob Palmberg
- La Crosse Background and Current Status
  - Rob Palmberg
- Overview of the License Transfer Agreements/Timing
  - John Hess
- La Crosse Technical Qualifications, Decommissioning Approach & Schedule - Nick Williams
- Financial Qualifications and Assurance - John Matthews
- Summary

Purpose of the Meeting

- Communicate intent to accelerate decommissioning of the La Crosse BWR
  - LACBWR overview and current status
- Describe the approach and benefits of license transfer to LaCrosse*Solutions*
- Overview of the structure of the agreements
- Overview of LaCrosse*Solutions* planned decommissioning approach & schedule
- Overview of the organization and qualifications
  - Zion Update

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

LACBWR Site

LACBWR Site


G-3 Crib House
LACBWR Cribhouse
LACBWR LSA Building
LACBWR Eat Shack
Warehouse #2
LACBWR Turbine Building
Warehouse #3
LACBWR Reactor Building
Warehouse #1
LACBWR Stack
LACBWR Administration Building
Waste Treatment Building
Barge Washing Break Room
G-1 Crib House
Gas Room
Sub Station Shed
Sub Station Shed
Back-up Control Center
Transmission Sub-Station Switch House
N
Rail Spur - LACBWR Site
Genoa, WI
Date
04/27/15
Drawing
15042701.a

Decommissioning to Date

- LACBWR staff performed limited dismantlement work between 1996 and 2004
- In 2005, efforts shifted to RPV and Class B/C waste removal that was successfully completed in 2007.
  - ES performed the removal and disposal of the RPV and B/C waste at the Barnwell disposal facility
- Fuel transfer to dry storage commenced in 2008 and was completed September 19, 2012
- Additional dismantlement work completed in 2012 – 2014 including removal of fuel racks and completion of main turbine generator component removal

LACBWR Current Status

- All spent fuel is in dry storage on the Independent Spent Fuel Storage Facility (ISFSI)
  - License amended to provide nuclear security for the ISFSI area only
- Plant buildings still standing
- LACBWR placed in Passive SAFSTOR in 2014
- ES providing RPM and RP program management
- Initial Site Characterization completed by ES
- License Termination Plan being prepared by ES
  - Expect to submit to NRC NLT Q4 2015

LACBWR Current Status

- Dairyland's cost estimate to decommission LACBWR plant through site restoration is approximately $85M
- NDT balance to decommission LACBWR plant is approximately $91M as of 12/31/14
- Dairyland's estimate of costs to decommission the ISFSI is approximately $1.5M as of 12/31/14
- NDT balance to decommission the ISFSI is approximately $1.8M as of 12/31/14
- Dairyland funds the ISFSI costs from its operating budget, not from the NDT.
- Dairyland has a meeting scheduled with the State of Wisconsin on June 26th to discuss the project
  - Governor's Office, PSC, Emergency Management, & Department of Health

Why Pursue a Different Approach?

- Transfers risk to Energy*Solutions*/LaCrosse*Solutions*
- Leverages Energy*Solutions* core competencies
  - Decommissioning
  - Waste Management & Disposal
- Enables accelerated schedule for completion of D&D
  - Expeditious reduction of radiological source term/liability
  - Earlier release of the site for beneficial reuse
- Eliminates uncertainty with LLRW disposal
  - Cost & Access
- Provides additional assurances beyond the Nuclear Decommissioning Trust funds
- Energy*Solutions*/LaCrosse*Solutions* assumes direct license responsibility to the NRC

Overview of the Agreements

- Energy*Solutions* will create a special purpose subsidiary, LaCrosse*Solutions*, to be licensee for LACBWR
- LaCrosse*Solutions* will:
  - Become the lead licensee for LACBWR Decommissioning Operations
  - Take possession of the used nuclear fuel (but not ownership)
  - Assume full responsibility for licensed activities
  - Assume all liabilities and obligations for radiological decommissioning and site restoration directly related to the LACBWR decommissioning
- Dairyland will remain the licensed owner and retain title to:
  - Used nuclear fuel
  - The Nuclear Decommissioning Trust
  - Real estate and site improvements

Overview of the Agreements

- Used Nuclear Fuel
  - Dairyland has a Standard Contract with DOE for disposal of used nuclear fuel
    - Initial round of litigation completed – awarded $37.6M
    - 2nd round of litigation pending
- LaCrosse*Solutions* does not require a Standard Contract per 42 U.S.C. 10222(b)(1)(A), because it is not authorized to use any fuel in the reactor and will not own the fuel
- LaCrosse*Solutions* will subcontract the security and maintenance of the fuel/ISFSI to Dairyland, which will retain the liability to fund the storage costs for the fuel

Structure of the Agreements

- LaCrosse*Solutions* and Dairyland plan to execute a Decommissioning Agreement
  - Provides for access to the Nuclear Decommissioning Trust to pay for decommissioning costs
  - ES believes funds are sufficient to cover all remaining decommissioning and license termination costs
  - ES has performed a detailed cost estimate and due diligence to validate
- Additional Financial Assurance Provided
  - 3rd Party Performance Bond/Surety for 20% of cost (~$17M)
  - Parent Guarantee ($15M)
  - Disposal Capacity Asset for Clive Disposal of Class A Waste (no Class B/C Waste expected to remain)

Timing

- Decommissioning Agreements executed within the next few weeks
- Dairyland and Energy*Solutions* will then submit:
  - Application for transfer of the 10 CFR 50 license
  - Energy*Solutions* decommissioning cost estimate
  - PSDAR update
- Energy*Solutions* commences detailed decommissioning planning in Q3 under a separate contract with Dairyland
  - These costs are included in ES cost estimate
- Closing follows NRC approval of license transfer and receipt of other necessary approvals

La Crosse*Solutions* Technical Qualifications

- Energy*Solutions* technical capabilities are based upon:
  - Decommissioning core competence
  - Zion*Solutions* and Energy*Solutions* employees
  - Key Zion contractors
  - Zion systems and processes where applicable
  - Energy*Solutions* disposal assets
- Zion update & applicability to LACBWR
- LACBWR decommissioning approach and schedule

Zion Decommissioning Summary

- Dual Unit Westinghouse 4 Loop Pressurized Water Reactor Site (Each Unit 3250 MWt /1085 MWe)
- Permanent Cessation of Operations 1998
- Part 50 Operating License and asset transfer from Exelon to Zion*Solutions* in Sept 2010 to begin site active decommissioning
- Original target completion - 2020
- Current target completion – FSS complete mid - 2018
- Decommissioning fund continues to provide adequate financial assurance
- Safe and efficient site remediation with systematic approach that prioritizes the elimination of site risks
- Protection of the environment, the workforce and public, ultimately returning the site for future beneficial reuse

Reactor Decommissioning Group

- Leadership Team composed primarily of personnel with 20-30+ years commercial reactor decommissioning experience will be integrated with the LACBWR D&D
- Engrained NRC culture of:
  - Safety first/procedure compliance
  - Self-identification/continuous improvement
- Have successfully and safely completed complex high risk tasks at Zion, e.g.:
  - 65 Canister Fuel Transfer/GTCC Campaign
  - Unit 1 and 2 Reactor Vessel Internal Segmentation
  - 37 B/C Waste Shipments
  - Post fuel program and Emergency Plan transition

Zion Video

- Show Zion Video

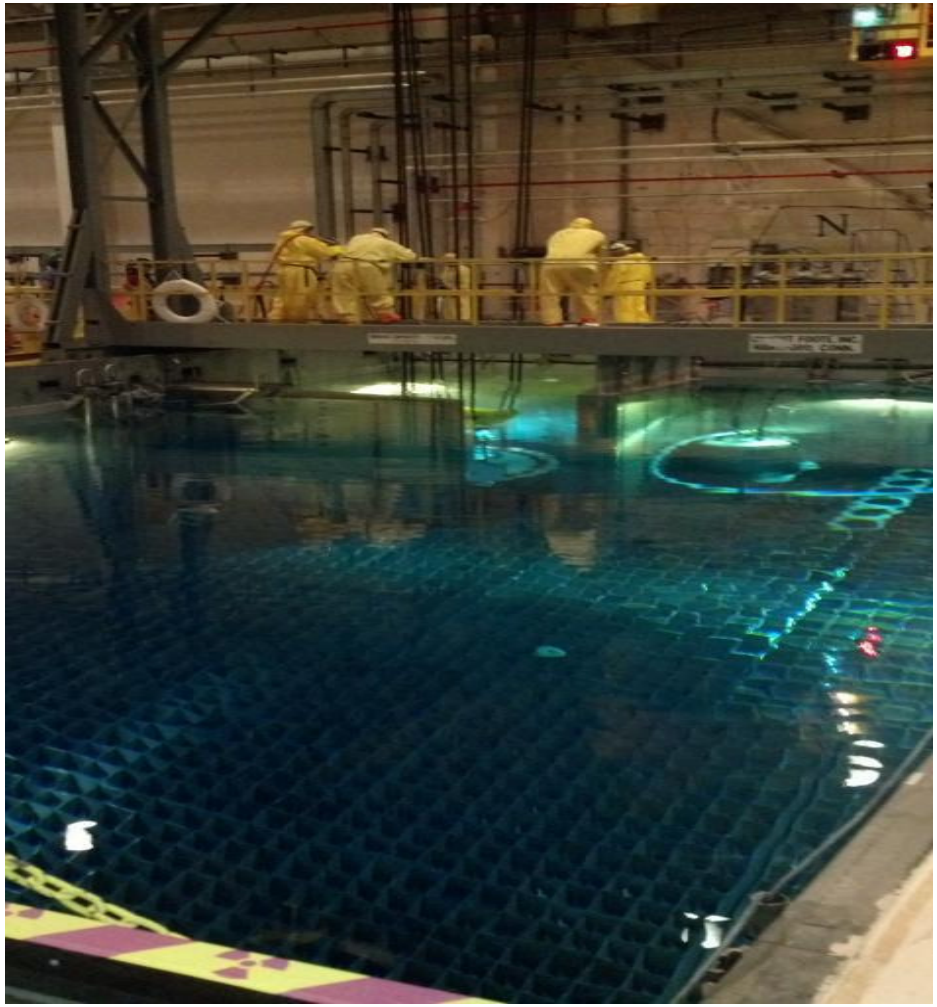
Summer Progress.mp4

Zion Fuel Transfer Operations

61 pf 61 Canisters
processed
and transported to
ISFSI

52 Week Campaign

18.1 Person Rem Est.
16.3 Person Rem Goal
11.1 Person Rem Actual



DAIRYLAND POWER COOPERATIVE

LACBWR License Transfer

Zion Fuel Canister In Processing

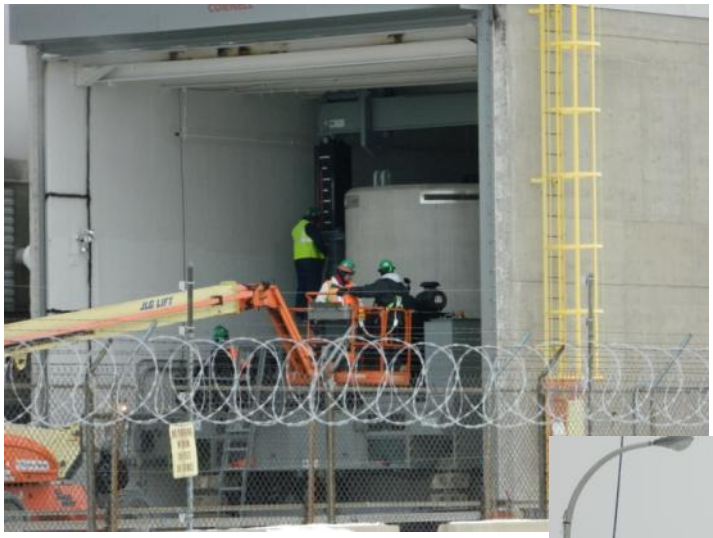
ENERGYSOLUTIONS

Transfer Cask Being Lowered into Spent Fuel

Robotic Welding on First Fully Loaded Fuel Canister

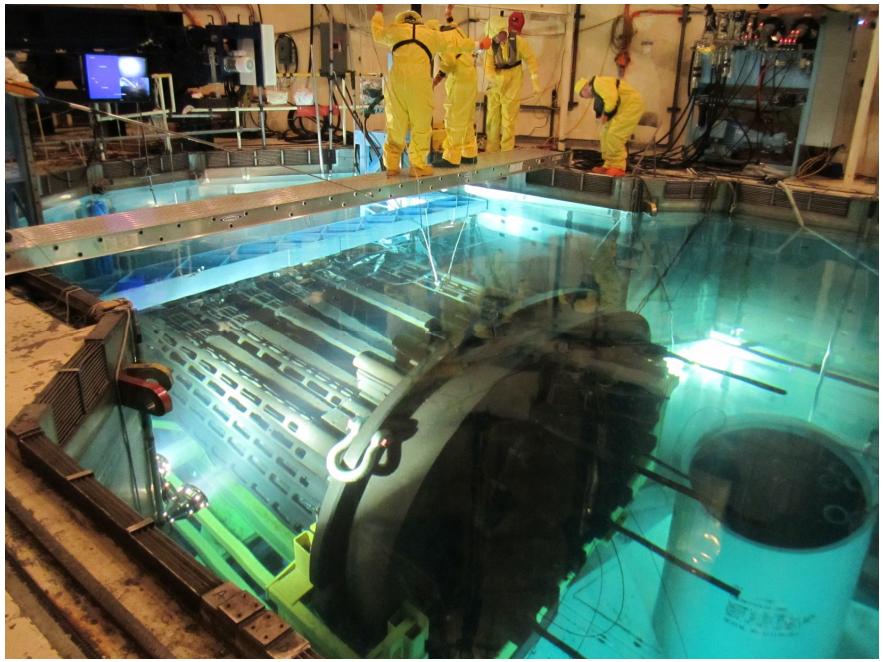
Zion's First Fuel Canister In Processing

Loaded Fuel Cask In Transport to Zion's ISFSI



Zion Reactor Vessel Segmentation

- Unit 1 and Unit 2 Lower Internals Complete.
- Four GTCC waste canisters to ISFSI (Complete 3/6/2015)
- U2 and U1 Cavities have been drained and decontaminated. Paint fixative applied to cavity walls and floor.
- Unit 2 reactor vessel segmentation started



Cutting on Lower internals Unit 1

U2 RV Segmentation Equipment in Place

U2 Bridged Strand Jack System

U2 Strand Jack System and TSP in Refueling Cavity

Environmental Protection

Zion*Solutions* Environmental Protection

- Compliance
- Stewardship

Site At Completion (End State)

- Zoned for Heavy Industrial Use
- Above grade buildings demolished and removed (to a minimum 3’ below grade)
- Basement areas backfilled and land areas returned to natural contours
- Roadways and rail lines will remain
- Intake and discharge piping from and into Lake Michigan will remain
- Some buried piping will remain
- Adjacent facilities/structures to remain:
  - ComEd Switchyard (to the West)
  - ISFSI Complex (to the Southwest)
  - ISFSI Warehouse (to the Southwest)
  - Microwave Tower (to the South)
  - Sewage Lift Station

Zion 2015 Summary

- FTO Complete January 9th
- GTCC Complete March 6th
- Vessel Internals Complete Jan 15th
- License Term. Plan Submitted Dec/14-NRC Accepted Apr/15
- Unit 2 Rx Vessel Segmentation (2nd Quarter)
- Unit 1 Rx Vessel Segmentation (4th Quarter)
- Crib House Demo (2nd Quarter)
- Unit 2 Large Components (4th Quarter)
- Unit 1 Large Components (1st Quarter-2016)
- Turbine Building Unconditional Release Surveys (4th Quarter)
- Start Turbine Building Demolition (4th Quarter)

Future Site Owner

Zion/LACBWR Comparison

- Zion
  - Large site, twin 1085 MWe PWRs
  - Multiple large buildings-operational/logistical complexity
  - GTCC/Fuel dose rates up to 13,000 R/hr
  - 37 B/C Waste liners typically 400 to 1000 R/hr
  - High risk items handled safely to date by Zion*Solutions*
- LACBWR
  - Small site, single 50 MWe BWR
  - Small building footprints, reduced operational/logistical challenges
  - Resin/sludge dose rates to 1 R/hr
    - Removal this summer by ES
  - Thermal shield dose rates to 130 mR/hr
  - Areas of high alpha contamination

Project Similarities

- Highest risk work already complete at both sites
- Primary remaining activities
  - Class A waste removal, shipping, disposal
  - Building decon/demolition
  - Final Status Survey
  - Site restoration
- Allows ES Reactor Group to manage similar tasks in the 2016 to 2018 timeframe

La Crosse*Solutions* Technical Qualifications

- **Project Organization**
  - Upon license transfer LaCrosse*Solutions* assumes full responsibility for and control over the LACBWR
  - LaCrosse*Solutions* will adopt the existing emergency preparedness, training, and security procedures from LACBWR and revise the QAPD
  - Establish these functions at LACBWR using project personnel

La Crosse*Solutions* Technical Qualifications

- **Project Controls**
  - Based on lessons learned from past D&D projects
  - Baseline project controls tied to financial reporting systems to track costs to specific WBS elements
  - Report monthly on cost and schedule variances plus earned value
  - Manage cash flow to baseline to ensure the trust fund has adequate funds to cover estimate to complete
  - Accountability reviews by corporate and external stakeholders

Decommissioning Approach & Schedule

- Source term removal within radiologically controlled areas
  - Minimize survey and surgical removal
  - Utilize large capacity intermodal and/or gondola rail cars to move LLW to Clive
  - Remove structures to a minimum of 3 feet below grade
  - Affected systems/buildings – ship to Clive
  - Release plan using MARSAME guidance for unaffected systems/buildings

Decommissioning Approach & Schedule

- Non-Rad Materials and Areas
  - Remove hazardous materials such as asbestos, light ballasts, PCB's, Hg switches, and oil before removal of components or demolition as necessary to meet disposal site WAC
- Clean components with scrap value will be evaluated for salvage (not to impact critical path)

Decommissioning Approach & Schedule

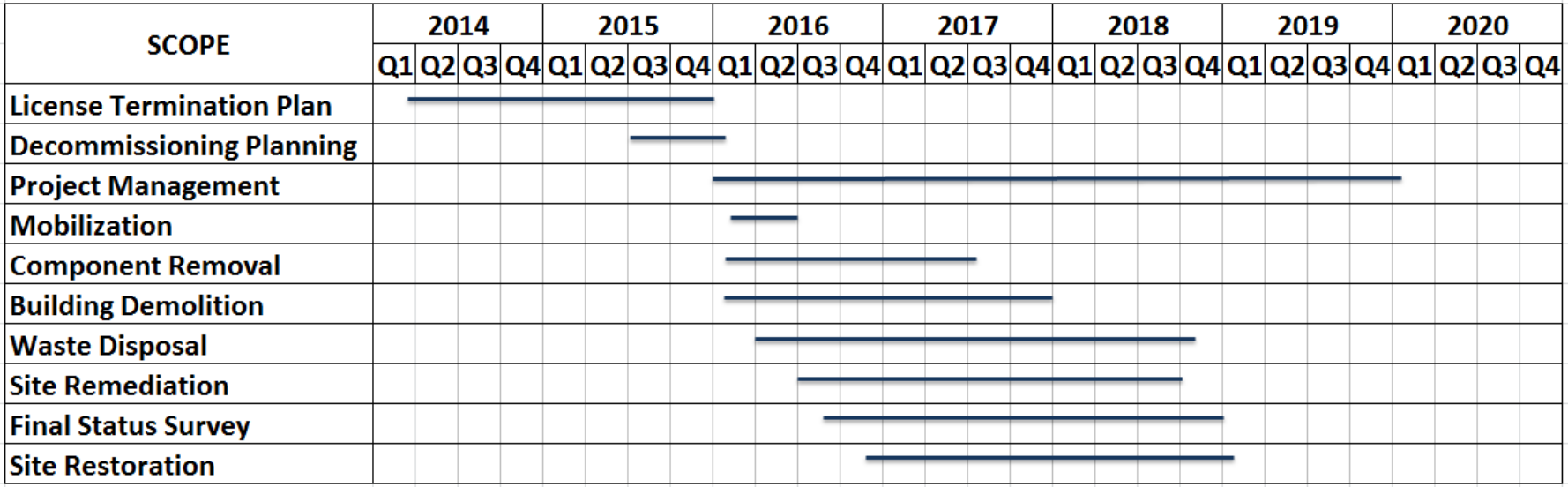
- Demolish buildings
  - Radioactive building debris sent to Clive
  - Final Status Survey per MARSSIM
  - NRC/ORISE Confirmatory Survey
  - Backfill
- License Termination Plan
  - LTP under development by Dairyland/Energy*Solutions*
  - Target submittal by Dairyland in Q4 2015
  - LTP and Final Status Survey approach similar to Zion LTP (recently accepted for review by NRC)

Waste Removal/Transport Logistics

- Logistics is key to effective D&D
- Construct new rail lines for waste loading & transport

Decommissioning Approach & Schedule

LACBWR Schedule



SCOPE	2014				2015				2016				2017				2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
License Termination Plan																												
Decommissioning Planning																												
Project Management																												
Mobilization																												
Component Removal																												
Building Demolition																												
Waste Disposal																												
Site Remediation																												
Final Status Survey																												
Site Restoration																												

La Crosse*Solutions* Financial Qualifications

- Nuclear Decommissioning Trust Fund Established
  - Existing Dairyland non-taxable Grantor Trust
  - Pre-paid external sinking fund per 10 CFR 50.75(e)(1)(i)
- NDT sufficient to fund remaining radiological decommissioning and site restoration costs
  - Based on Energy*Solutions* updated cost estimate
  - Without accounting for future earnings
  - Includes cost of site restoration
- Current ES decommissioning estimate - $85.6M
  - In 2015$'s as of June 2, 2015
  - Includes radiological decommissioning and site restoration
  - Includes decommissioning planning and related costs incurred pre-closing

La Crosse*Solutions* Financial Qualifications

- 20% Performance Bond/Surety (approx. $17M)
  - Third party surety provided to Dairyland for obligations under the Decommissioning Agreement
  - Expected to satisfy the assurance requirement per 10 CFR 50.75(e)(1)(iii)(A)
- LLW Disposal Capacity Asset
  - Covers disposal of all Class A LLW from LACBWR at Clive, UT facility
  - Held by back-up NDT
    - Special purpose easement (legal instrument)
    - Protected in the event of Energy*Solutions* bankruptcy

La Crosse*Solutions* Financial Qualifications

- Parent Guarantee ($15M)
  - Provided to Dairyland for obligations of Energy*Solutions*' subsidiary – LaCrosse*Solutions*, LLC
- Energy*Solutions'* equity interest in LaCrosse*Solutions*, LLC also pledged as collateral
- Default under the Decommissioning Agreement
  - Dairyland will have the right to take possession of the subsidiary and the Back-up NDT
  - LaCrosse*Solutions*, LLC structured to provide protection against Energy*Solutions* bankruptcy (non-consolidation)
  - One LaCrosse*Solutions* Director appointed by Dairyland
  - Unanimous vote for voluntary bankruptcy filing

Summary

- Dairyland and Energy*Solutions* are near final agreement on arrangements to transfer license responsibility for LACBWR decommissioning
- LaCrosse*Solutions* will have the technical qualifications to assume license responsibility
- The parties have strengthened the financial assurances that will be available to complete the LACBWR decommissioning
- LaCrosse*Solutions* will be financially qualified to assume licensee responsibility
- A license transfer application will be submitted in weeks
- Approval of the license transfer will enable accelerated completion of LACBWR decommissioning