NUCLEAR DECOMMISSIONING SYMPOSIUM

April 4-5, 2019
Hyatt Regency Dulles
Herndon, VA

PRE-SYMPOMIUM WORKSHOP
Understanding Implications and Risks Imposed by State Agencies on Decommissioning

THURSDAY, APRIL 4, 2019
OVERVIEW

Nuclear energy is becoming less prominent in the United States energy portfolio, with five plants being retired since 2013, and six more planned retirements by 2025. Aging infrastructure, and the decreasing price of gas and renewables is speeding up plans to decommission plants across the country. As more plants decommission, new models for decommissioning are used, and therefore tested for future projects.

Planning to decommission a plant can be a challenge, with regulatory requirements on both the national and state level, efficiency considerations, differing models of risk from both a liability and operational standpoint, and complex coordination between stakeholders. Proper planning is critical for local economies and the environment, and the concerns of regional leaders must also be considered.

EUCI’s Nuclear Decommissioning Summit brings leaders from utilities, regulators, consultants, contractors and other decommissioning specialists to discuss the latest trends in decommissioning models in order to illuminate different options for future plant closures.

LEARNING OUTCOMES

• Evaluate decommissioning options in an evolving market
• Benefit from a dynamic decommissioning marketplace that leads to efficiency improvements over time.
• Assess liability risk as an emerging business model for decommissioning
• Review case studies on the license transfer transaction model
• Manage operational risks of decommissioning
• Get up to date on NRC rulemaking
• Anticipate state level non-radiological issues relevant to closure

WHO SHOULD ATTEND

Directors, Vice Presidents, Managing Directors, Heads of
• Nuclear Decommissioning
• License Renewal
• Plant Management
• Fleet Management
• Nuclear Policy
• Operations
• Risk Management
• Legal
From utilities and decommissioning vendors
AGENDA

THURSDAY, APRIL 4, 2019

12:30 – 1:00 pm  Registration

1:00 – 1:50 pm  Decommissioning Marketplace Overview
A dynamic change is transforming the nuclear industry when it comes to decommissioning, increasing its importance on the nuclear value chain. The various business models in use continue to evolve, driven by economic, regulatory, and workforce factors. Efficiency improvements that come with increased activity promise to make the nuclear industry more competitive in the future.

Rod McCullum, Senior Director, Used Fuel and Decommissioning, Nuclear Energy Institute

1:50 – 2:40 pm  Liability Risk Transfer – Emerging Business Model for Decommissioning
The prevailing trend that has emerged is for plant owners to transfer licensed responsibility for decommissioning to a decommissioning contractor for a fixed amount of nuclear decommissioning trust fund assets. For contractors, assuming project control is the key to accepting a fixed price risk transfer. But, for plant owners, technical and financial assurance of effective performance is the key to affecting a genuine liability risk transfer. Emerging tax issues will drive project structures until Treasury creates predictable tax treatment for shutdown plants.

- Key IRC 468A Trust Fund Tax Issues Drive Project Structures
  - Overview of IRC 468A Qualified Funds
  - “True Sale” Tax and Accounting Treatment Versus “Service Arrangement”
  - Self-Dealing Rules
- Transfer of Spent Fuel is a Market Driver
- Case Studies Explain the Variants
  - Zion
  - LaCrosse
  - Vermont Yankee
  - Oyster Creek
  - Pilgrim

John Matthews, Partner, Morgan, Lewis & Bockius LLP

2:40 – 3:10 pm  Networking Break

3:10 – 4:00 pm  Decommissioning Case Study: Entergy
This session provides an overview of decommissioning activities at the Entergy plants that have shut down or will be shutting down in the near future, as well as Entergy’s business reasons for pursuing the License Transfer Transaction Model, with a focus on transaction updates for Vermont Yankee, Pilgrim, and Palisades.

Susan Raimo, Senior Counsel, Entergy Services LLC
4:00 – 4:50 pm  
**Blocking and Tackling – Managing the Operational Risks of Nuclear Decommissioning**

Nuclear decommissioning projects represent massive undertakings present risk exposures ranging from managing worker dose to effecting safe demolition to packaging and overseeing hundreds of waste shipments. Against a backdrop of intense public interest and regulatory scrutiny, the slightest miscue can suggest the overall project is not proceeding in a safe and professional manner and result in added costs and delays. Much has been learned from projects that have been completed and are currently underway, and it is important that these best practices be shared as new projects are launched. In this session we will engage with successful decommissioning practitioners to gain the benefit of their experiences in managing safe and efficient projects, including:

- Transitioning from The Operational to the Decommissioning Mindset for Retained Plant Personnel
- Managing a Multi-Generational Workforce Where Some May Have Limited Exposure to Nuclear Projects
- Balancing Site Egress Efficiency with Security Concerns
- Reducing and Eliminating Fire Loading and Electrical Hazards Early in the Project
- Maintaining Housekeeping Standards in a Demolition Zone
- Developing Project Insurances Appropriate to the Risk Exposures
- Staying Ahead of Emerging Risks as Project Phases Progress
- Developing and Using a Risk Register, Risk Dashboard and Associated Risk Management Tools
- Measuring and Maintaining a Nuclear Grade Safety Culture Through all Project Periods

*Daniel McGarvey, Chairman, Power and Nuclear, Marsh*

4:50 pm  
End of Day 1

FRIDAY, APRIL 5, 2019

8:30 – 9:00 am  
Continental Breakfast

9:00 – 9:50 am  
**NRC Rulemaking: Update and a Look Towards the Horizon**

The U.S. Nuclear Regulatory Commission (NRC) staff is proposing rulemaking in 8 parts of Title 10 of the Code of Federal Regulations (10 CFR), involving 14 technical areas. The NRC's goals in amending these regulations are to provide for a safe, effective, and efficient decommissioning process; reduce the need for exemptions from existing regulations and license amendment requests; address other decommissioning issues that the NRC staff considers relevant; and support the principles of good regulation, including openness, clarity, and reliability. For several technical areas, the NRC staff is proposing to adopt a graded approach that is commensurate with the reductions in radiological risk at four levels of decommissioning. Further, to allow maximum flexibility while maintaining adequate protection of public health and safety and the common defense and security, the NRC staff is proposing to make several of the new requirements alternatives to the current requirements in these areas. The NRC staff is also proposing conforming changes to the regulations for power reactors beyond those related to the decommissioning of nuclear reactors. This presentation will provide background and an overview of this rulemaking effort.

- Background
- Graded Approach
- Overview of Rulemaking
- Path Forward

*Alysia Bone, Project Manager, Regulatory, NRC*
AGENDA

9:50 – 10:40 am  Decommissioning Case Study: Crystal River 3  
This session provides an overview of lessons-learned in connection with the permanent shutdown of Crystal River 3. Topics will include:  
• Impacts of a Premature Shutdown  
• Regulatory Challenges  
• Perspectives on NRC Decommissioning Rulemaking  
• Evaluation of Decommissioning Options in an Evolving Market  
Tracey LeRoy, Associate General Counsel, Duke Energy

10:40 – 11:10 am  Networking Break

11:10 am – 12:00 pm  Challenges and Lessons Learned on How Non-Radiological Issues Can Impact Closure
This session will build on the workshop topics and will discuss how to plan for the end and include non-radiological issues concurrent with the typical radiological D&D process. This session will explore specific steps to understand and plan for so that the states or EPA do not impact schedules or costs of the D&D program; specifically, how to kick off the D&D process by taking into account the non-radiological environmental issues.  
Nadia Glucksberg, PG, LEP Hydrogeologist, Haley & Aldrich, Inc.  
Jay Peters, Risk Assessment Practice Lead, Haley & Aldrich, Inc.

12:00 – 1:00 pm  Group Luncheon

1:00 – 1:50 pm  Decommissioning Delivery Company Perspective on the Decommissioning Process
Today’s nuclear power plant decommissioning market is very active with 12 reactors (11.7 gigawatts) scheduled to retire in the next 7 years. However, the market is evolving and there are new sets of market drivers that now dictate how decommissioning projects will be executed. This session will provide a delivery company perspective on the project execution/business models in the market focusing on project execution, risk and broader business impacts associated with each of the following decommissioning approaches:  
• Self-performance  
• Decommissioning General Contractor  
• License Stewardship  
• Asset Transfer  
Jay Brister, VP Business Development, AECOM

1:50 – 2:40 pm  Preparing Your Infrastructure for Decommissioning
Evolving business models for nuclear plant decommissioning create unique challenges for infrastructure activities in information technology, supply chain, records retention, human capital management, and other activities that support the nuclear decommissioning process. In addition, 10CFR Part 810 requirements limit options and alternatives for cost reduction strategies in these areas. This session will review strategies and considerations for these areas.  
Terry Maxey, Managing Director, Power Generation Global Lead, Accenture

2:40 – 3:10 pm  Networking Break
Community Engagement During Decommissioning – San Onofre Case Study

During the decommissioning process, engaging with the local community can be challenging with many unforeseen consequences. They can be neutral, supportive or, more likely, adversarial. Learn how the establishment of a Community Engagement Panel (CEP) by Southern California Edison is addressing this challenge during the decommissioning of the San Onofre Nuclear Generating Station. The CEP acts as a bridge to inform the community about the impact of the decommissioning process, and to assist SCE in learning about the concerns of the community.

Topics addressed include:
- CEP Structure and Programming
- Communications
- Activist Groups
- Legal Challenges
- Dealing with the Unexpected

Dan Stetson, Executive Director, The Nicholas Endowment

4:00 pm  Symposium Concludes
PRE-SYMPOSIUM WORKSHOP

Understanding Implications and Risks Imposed by State Agencies on Decommissioning

THURSDAY, APRIL 4, 2019

8:00 – 8:30 am  Registration and Continental Breakfast

8:30 – 11:30 am  Workshop Timing

OVERVIEW

Although power plant decommissioning follows the NRC process as defined in NUREGs and MARSSIM guidance, the requirements applicable to the non-radiological evaluation and cleanup of building materials, coatings, and environmental media – all of which are required to complete the overall site decommissioning and closure process - change from state to state. Each state has different procedures, regulations, and different licensing requirements (i.e. documents must be certified by specific Licensed or Certified Professionals, with requirements that extend beyond a Professional Engineer’s stamp). What may be acceptable in Michigan or New York, may lead to citations or regulatory violations in California. Understanding the different requirements in states where Decommissioning projects will be performed will be critical to avoid delays and added expense.

LEARNING OUTCOMES

• Discuss why state and EPA regulations for non-radionuclides play a role in nuclear power plant decommissioning
• Identify which state and EPA regulations for non-radionuclides will be requirements for upcoming power plant decommissioning projects
• Recognize the differences (and similarities) for completing site characterization for structures and environmental media, and how compare/contract to the standard MARSSIM approach
• Develop an understanding of the cleanup levels that states and EPA use for non-radionuclides and how they are applied to obtain regulatory closure in the decommissioning process
• Be able to plan and budget for the non-rad requirements so that it does not impact schedules or become critical path to license termination and site closure

WORKSHOP AGENDA

THURSDAY, APRIL 4, 2019

8:00 – 8:30 am  Workshop Registration and Continental Breakfast

8:30 – 9:00 am  Introduction
Why non-radiological impacts need to be addressed during decommissioning, and overview of State and Federal requirements applicable to investigation and cleanup of non-radiological impacts

9:00 – 9:30 am  The Basics
Methods for characterizing structures and environmental media for non-radiological constituents
WORKSHOP AGENDA

THURSDAY, APRIL 4, 2019 (CONTINUED)

9:30 – 10:00 am  Federal Powers and Oversight
How EPA will be involved to enforce compliance with the Toxic Substance Control Act (TSCA)

10:00 – 10:15 am  Morning Break

10:15 – 11:00 am  Power of the States
An overview of state requirements that could impact D&D and schedule. Similarities and differences in characterization and regulatory closure requirements among states where decommissioning projects are being planned; the states addressed will be tailored to those states where there is audience interest.
- Florida
- Michigan
- Massachusetts
- California

11:00 – 11:30 am  Achieving Regulatory Closure for Non-Radiological Impacts
Review of how cleanup levels for non-radionuclides often identified at nuclear power plants are derived and applied to demonstrate compliance with state regulatory requirements, comparing and contrasting approaches to those typically used to achieve license termination for radionuclides.

WORKSHOP INSTRUCTORS

Nadia Glucksberg, PG
LEP Hydrogeologist, Haley & Aldrich, Inc.

Nadia has been investigating groundwater at sites impacted by radiological and non-radiological (or chemical) contaminants for almost 30 years. She has a bachelors in Geological Sciences from Cornell University and a Masters in Hydrogeology from the Oregon Graduate Institute. She is a licensed geologist in Georgia, Maine, Illinois and Wisconsin and a Licensed Environmental Professional in Connecticut.

Nadia was the former chair of the American Nuclear Society (ANS) Decommissioning and Environmental Sciences Division and the former Vice Chair of ANS’s Northeast Section. She has lead investigations and developed regulatory closure strategies at more than a dozen active and decommissioning nuclear power plants as well as fuel cycle facilities across the USA.

Jay Peters
Risk Assessment Practice Lead, Haley & Aldrich, Inc.

Jay is the practice leader for risk assessment at Haley & Aldrich, Inc. and holds a BS degree in Toxicology from Northeastern University and an MS degree in Environmental Health from Tufts University. In his more than 25 years of professional experience, Jay has developed risk-based regulatory closure strategies and managed risk assessment projects for Superfund Sites, Resource Conservation and Recovery Act sites, and brownfield redevelopment and property transfer sites, under the regulatory frameworks of more than twenty state cleanup programs, seven Environmental Protection Agency regions, and the Nuclear Regulatory Commission. He specializes in developing cleanup levels and regulatory closure strategies that address multiple agency requirements for nuclear power and non-power plant decommissioning projects.
INSTRUCTIONAL METHODS
Case Studies and PowerPoint presentations will be used for all learning outcomes

REQUIREMENTS FOR SUCCESSFUL COMPLETION
Participants must sign in/out each day and be in attendance for the entirety of the conference to be eligible for continuing education credit.

IACET CREDITS
EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

**EUCI is authorized by IACET to offer 0.9 CEUs for this symposium and 0.3 CEUs for the workshop.**

EVENT LOCATION
The event is located at the Hyatt Regency Dulles, 2300 Dulles Corner Blvd, Herndon, VA 20171. A room block has been reserved for the nights of April 3-4, 2019. Room rates are US $159. Call 1-703-713-1234 for reservations. Mention the EUCI event to get the group rate. See our website for all the latest hotel info. The cutoff date to receive the group rate is March 3, 2019 but as there are a limited number of rooms available at this rate, the room block may close sooner. *Please make your reservations early.*

REGISTER 3, SEND THE 4TH FREE
Any organization wishing to send multiple attendees to this conference may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.
Please make checks payable to "PMA"

EVENT LOCATION

The event is located at the Hyatt Regency Dulles, 2300 Dulles Corner Blvd, Herndon, VA 20171. A room block has been reserved for the nights of April 3-4, 2019. Room rates are US $159. Call 1-703-713-1234 for reservations. Mention the EUCI event to get the group rate. See our website for all the latest hotel info. The cutoff date to receive the group rate is March 3, 2019 but as there are a limited number of rooms available at this rate, the room block may close sooner. Please make your reservations early.

Please Select

- **Bundle Price**: Nuclear Decommissioning Symposium and Pre-Symposium Workshop: April 4-5, 2019: US $1795
  - Early Bird on or before March 15, 2019: US $1595

- **Nuclear Decommissioning Symposium Only**
  - April 4-5, 2019: US $1395
  - Early Bird on or before March 15, 2019: US $1195

- **Pre-Symposium Workshop Only**
  - April 4, 2019: US $595
  - Early Bird on or before March 15, 2019: US $495

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

<table>
<thead>
<tr>
<th>Print Name</th>
<th>Job Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Company

What name do you prefer on your name badge?

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>State/Province</th>
<th>Zip/Postal Code</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Phone

Email

List any dietary or accessibility needs here

CREDIT CARD INFORMATION

<table>
<thead>
<tr>
<th>Name on Card</th>
<th>Billing Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Account Number</th>
<th>Billing City</th>
<th>Billing State</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exp. Date</th>
<th>Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)</th>
<th>Billing Zip Code/Postal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OR Enclosed is a check for $_________ to cover ____________ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before March 1, 2019 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of conference cancellation, EUCI’s liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.