EPA 316(b) FISH IMPINGEMENT IN POWER AND INDUSTRIAL PLANTS

October 8-9, 2014
Renaissance Providence Downtown
Providence, RI

EUCI is authorized by IACET to offer 1.5 CEUs for the conference.

Sponsor
OVERVIEW

The U.S. Environmental Protection Agency provided long-awaited guidance on fish protection at cooling water intake structures (CWIS) on May 19, 2014. The final Rule issued under Section 316(b) of the Clean Water Act applies to facilities that withdraw at least two million gallons per day (MGD) of cooling water from Waters of the U.S. The requirements set forth in the final Rule will be implemented through the National Pollutant Discharge Elimination System (NPDES) permitting process.

The final Rule provides greater compliance flexibility than earlier drafts. Entrainment reduction will be determined on a site-specific basis, while impingement mortality reduction is slightly more prescriptive. In the draft Rule, whereas there were only two compliance alternatives for meeting impingement mortality reduction, the final Rule includes seven compliance options. This final Rule harmonizes the schedules for entrainment and impingement mortality compliance to avoid potential conflicts that could result from installing impingement reducing technologies prior to entrainment technologies.

This conference will incorporate a detailed overview of the final ruling provisions and explore the impacts of the final Rule on existing facilities. Along with plant operator case studies, the conference will address areas that could cause a plant to be out of compliance under the new ruling, and examine the site-specific CWIS designs and operating procedures that will ensure the plant’s next permitting process is as straightforward as possible. Featured instructors will include federal fish and wildlife personnel, attorneys experienced in 316(b) law, expert biologists and engineers, and environmental interests.

WHO SHOULD ATTEND

Power industry and industrial plant personnel with the following title or responsibilities...
- Environmental compliance
- Cooling water intake engineers and staff
- Plant engineers and staff
- Environmental engineers and staff
- Legal counsel and staff
- State regulatory agencies
- Biologists
- State wildlife resource staff
- Technology providers
- Engineering firms
- Permitting staff
- State PUC commissioners and staff
- US EPA
- Environmental stakeholders
- Staff or individuals whose duties include 316(b) responsibilities

LEARNING OUTCOMES

Through presentations, case studies and interactive discussions, attendees will have the opportunity at this conference to:
- Examine and discuss the legal aspects of the Final 316(b) Rule
- Review US EPA and local environmental agency involvement in 316(b)
- Analyze and contrast the 7 EPA recognized best technologies available
- Categorize and distinguish aquatic life impacted by CWIS
- Identify entrainment issues and formulate reduction strategies
- Review environmental stakeholder positions and develop approaches that minimize concerns
- Review 316(b) permitting sequence processes
- Assess engineering criteria for best technology available (BTA)
- Examine impingement and entrainment case studies
AGENDA

Wednesday, October 8, 2014

8:00 – 8:30 a.m.  Registration and Continental Breakfast

8:30 – 10:00 a.m.  Final 316(b) Ruling: What You Need to Know and What it Means to Your Plant

Section 316(b) has been a part of the Clean Water Act (CWA) in some form since 1976, but has been remanded and rewritten several times. Barring additional legal challenges, the final ruling will go into effect in the fourth quarter of 2014 for the 1065+ plants believed to fall under this ruling. While the final rule contains many elements of the draft rule, several provisions changed significantly and there are a few “surprises.”

This session will explore the nuances of the rule and illuminate the key differences between the final version and the earlier and draft iterations of 316(b) including:

- Timeframe for compliance and re-licensing
- A Section 7 NEPA “consultation” by any other name...
- Clarification of the state vs EPA oversight

- Todd Griset, Partner, Preti Flaherty, LLP

10:00 – 10:15 a.m.  Morning Break

10:15 – 11:00 a.m.  EPA Involvement

The new rule assigns compliance and enforcement authority to state agencies in most cases. However the EPA retains authority in Massachusetts, Idaho, New Hampshire, New Mexico, District of Columbia, certain Federal facilities along with Tribal Lands and most US territories and is ultimately responsible for the Clean Water Act enforcement. This session will explore permitting cases specific to New England and discuss the rationale behind some of the changes between the draft and final ruling.

- Robert K. Wood, Director, Engineering and Analysis Division, US EPA (invited)

11:00 a.m. – 12:15 p.m.  Review of Fish Impingement Reduction/Elimination Best Technologies Available (BTA)

While each power or industrial plant will be dealing with a unique set of challenges regarding 316(b), the rule does specify modified traveling water screens as best technology available (BTA) for fish impingement with six additional options that are equal or better performing. In this session, biologists and engineers will examine the seven compliance alternatives, detail the specification in the rule for each, and explore possible modifications to existing systems to bring them into compliance with the new regulations. This will also include discussion of mortality studies, methodology and scope.

- Jon Black, Senior Fisheries Biologist, Alden Research Laboratories, Inc.
- Greg Allen, Senior Engineer, Alden Research Laboratories, Inc.

12:15 – 1:15 p.m.  Group Luncheon

1:15 – 2:00 p.m.  Environmental Stakeholders

Environmental and conservation groups played a significant role in shaping the final 316(b) ruling, often by legal action. In this session, the Waterkeepers organization will outline its stake in CWA issues and specific 316(b) enforcement actions.

- Reed Super, Attorney, The Super Law Firm on behalf of Waterkeepers
AGENDA

Wednesday, October 8, 2014 (CONTINUED)

2:00 – 3:30 p.m.  Houston, We Have an Entrainment Problem

Entrainment is the process by which aquatic species eggs, larvae and very young juveniles too small to be retained by the fish screens or other impingement measures, pass into the plant’s cooling system. In the final Rule, EPA addressed a scheduling conflict between compliance with entrainment and impingement requirements. The draft Rule required impingement to be addressed prior to entrainment. Under such a scenario, it would be possible for a facility to install fish protection technologies to address impingement and at a later date find these technologies incompatible with those technologies or operational measures necessary to reduce entrainment. This session will discuss methodologies for entrainment determination and strategies for mitigation including:

- Requirements of entrainment characterization study
- Potential to use existing data?
- Factors that influence a Director’s “entrainment determination”
- Options for reducing entrainment
- Estimating the potential costs of cooling water intake alternatives
- Monetizing ecological benefits
- The role of cost-benefit in determining entrainment compliance
- Non-water quality environmental and other impacts

- Jon Black, Senior Fisheries Biologist, Alden Research Laboratories, Inc.
- William Dey, Vice President and Senior Scientist, ASA Analysis and Communications, Inc.
- Dr. David Harrison, Jr., Senior Vice President, NERA Economic Consulting
- Jeff Burns, Vice President, Burns Engineering Services, Inc.

3:30 – 3:45 p.m.  Afternoon Break

3:45 p.m. – 5:00 p.m.  Option 5: Modified Traveling Water Screens

Of the 7 impingement mortality compliance options from the final rule, Option 5, the modified traveling water screen is the technology EPA identified as the basis for the BTA impingement mortality standard. Survey data provided by industry shows that 93 percent of generators and 73 percent of manufacturers already have screens, and EPA believes the vast majority of facilities will be able to upgrade their screens to modified traveling screens with fish return. This session will include a discussion of “fish-friendly” return systems along with:

- Overview of Options 1-7
- Pre-approved and streamlined alternatives
- Modified traveling screens
- Optimized performance
- Fish return design challenges

- Sean McGaughran, Global Manager – Intake Systems, Evoqua Water Technologies, LLC

5:00 – 6:00 p.m.  Networking Reception Sponsored by: [Evoqua Water Technologies logo]
AGENDA

Thursday, October 9, 2014

7:30 – 8:00 a.m.  Continental Breakfast

8:00 – 9:15 a.m.  Fish: The Reason for the Ruling

As part of the ruling documentation, the EPA cited studies that estimated billions of larval fish, millions of juvenile fish and other marine life are affected by power and industrial plant cooling water intake structures (CWIS) each year. The intent of Section 316(b) was always to minimize the impact to aquatic life, and the final ruling has given great weight to the programmatic biological opinion of the US Fish and Wildlife Service and the National Marine Fisheries Service. The presence of endangered or threatened species can mandate additional “may” and “should” elements to the “must” and “shall” requirements for NPDES permitting. This session will address the biological aspect of aquatic life relevant to plant operations and explore impacts to threatened species from the US Fish & Wildlife, National Oceanic and Atmospheric Administration and state Fish & Wildlife perspective:

- Cathy Tortorici, Division Chief, ESA Interagency Cooperation Division, National Oceanic and Atmospheric Administration
- Patrice Ashfield, Chief, Branch of Consultations and Habitat Conservation Planning, US Fish & Wildlife Service (invited)

9:15 – 10:30 a.m.  316(b) Permitting Sequence Review

From the moment the final NPDES permit is issued for a facility, the clock is running to prepare for the next required permit, which will incorporate the final 316(b) rule. In this session, participants will identify elements of the permitting sequence that have changed under the final rule, the elements that need to be addressed for successful re-permitting and the proper identification and inclusion of all stakeholder agencies. In addition the following will be covered:

- Biological aspects of permitting
- Physical plant aspects
- 2 Year technology optimization and review period
- Areas of remaining uncertainty within the final ruling
  1. Inclusion of non-fragile species in biological studies
  2. Obligation of plant operator to self-identify threatened and endangered species that normal operation may impact
  3. Biological data characterization studies

- Mark Mattson, Vice President, Normandeau Associates, Inc.

10:30 – 10:45 a.m.  Morning Break

10:45 a.m. – 12:15 p.m.  NPDES Permit Application and Time Lines

Because so much of the determination of BTAs is site specific that the EPA acknowledges it may take up 39 months to plan, collect, and compile the data and studies required, early engagement with permitting authorities on cooling water intake structures (CWIS) is critical. This session will review the timeline for engaging the NPDES permitting agency and Director, (hint; it is early and often) and strategies for driving the permitting process towards the most effective and cost efficient BTA that can be approved. This session will focus on the Section 122.21(r)(1-12) reports needed of permit issuance.

- Harold M. Blinderman, Partner, Day Pitney, LLP
- Jason Kinnell, Principal Economist, Veritas Economic Consulting
- Harold Thompson, Senior Mechanical Engineer, Kleinschmidt Associates

12:15 – 1:30 p.m.  Group Luncheon
Mount Tom Station Case Study

In April, 2014 the Mount Tom Generating Station, received a draft NPDES permit issued by the U.S. Environmental Protection Agency, (EPA) in cooperation with the Massachusetts Department of Environmental Protection (MADEP) that includes conditions to address 316(b) impingement and entrainment. Mount Tom Station is a 147 MW, once-through cooling, coal-fired facility located along the banks of the Connecticut River in Holyoke, MA. Resident fish, migrating species such as American shad, river herring and American eels as well as ESA- listed shortnose sturgeon are present in the area of the intake. This case study will review the results of the 2-year impingement and entrainment studies, the BTA Technology Assessment, and the compliance technologies, operational modifications and post-construction monitoring required by EPA in the recently issued draft permit.
- Chris Tomichek, Senior Manager - Fisheries and Aquatic Resources, Kleinschmidt Associates

Case Studies for 316(b): Nuclear and Fossil Fuel Plants

A number of power and industrial plants (including the Seabrook Nuclear Plant) that are currently in the permitting process or that have recently completed, will be used in this session to offer an up-to-the-minute review of current 316(b) rule applications. The case studies will examine:
- Challenges of upgrading existing compliance technologies
- Site specific technologies employed to minimize entrainment and impingement
- Biological aspects of compliance
- Lessons learned
- Paul Geoghegan, Senior Marine Scientist, Normandeau Associates, Inc.

Afternoon Break

Case Studies for 316(b): Nuclear and Fossil Fuel Plants (continued)

- Paul Geoghegan, Senior Marine Scientist, Normandeau Associates, Inc.

Conference Adjourns
INSTRUCTIONAL METHODS

Case studies, PowerPoint presentations, and panel discussions will be used in this program.

REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

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 1.5 CEUs for the conference.

EVENT LOCATION

A room block has been reserved at the Renaissance Providence Downtown, 5 Avenue of the Arts, Providence, RI 02903, for the nights of October 7-8, 2014. Room rates are $169, plus applicable tax. Call 1-401-919-5000 for reservations and mention the EUCI program to get the group rate. The cutoff date to receive the group rate is September 7, 2014, 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 4TH FREE

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

PROCEEDINGS

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CONFERENCE, OCTOBER 8-9, 2014: US $1495
EARLY BIRD ON OR BEFORE SEPTEMBER 26, 2014: US $1295

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All cancellations received on or before September 5, 2014, will be subject to a US $195 processing fee. Written cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event or publication. This credit will be good for six months. In case of event 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.