



Hot Topic: Clean Water Act Section 316(b) - Planning for the Final Rule

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Presentation Outline

- Review of the Proposed Rule
- Implementation Schedule
- “Gossip” on Potential Changes
- Thoughts on Compliance Approaches

Section 316(b) of the Clean Water Act

- “Any standard established pursuant to section 301 or section 306 of this Act and applicable to a point source shall require that the *location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.*”
- Forty Years Later, the Meaning and Implementation of this Section is Still Very Controversial
 - New Facilities Rule (a.k.a. Phase I) promulgated in 2001
 - “Existing Facilities Rule” was proposed in Spring 2011 and final rule is expected in July 2012
- Proposed Thresholds for Inclusion:
 - > 2 MGD with 25% dedicated to cooling water
 - NPDES Permit and withdrawal from Water of the US

Observations on the Proposed Rule

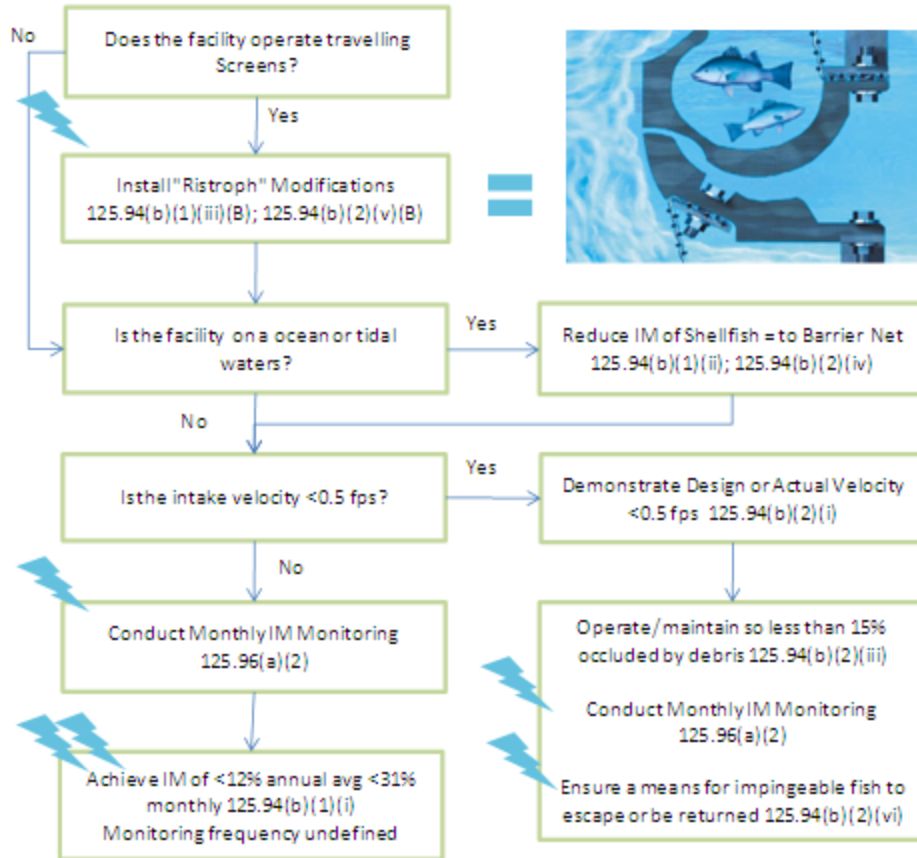
- Closed Cycle Cooling is **NOT** BTA Nationally
 - Closed cycle cooling not generally available
 - Proposed rule and preamble defend that position
 - Some of the data and findings can be used on a site-specific basis
- Required Impingement Control Measures are Relatively Cheap
 - Achieving Required Performance will be Difficult
- EPA Bet on the Performance of Fine Mesh Panels in 2004 (for Entrainment); This Time it is Ristroph/Fletcher-type Travelling Screen Modifications (for Impingement)
 - Rate of survival is key question
- Entrainment Mortality Controls Determined by Best Professional Judgment (BPJ)
 - Costly studies required for facilities >125 MGD
 - Entrainment *Mortality* is relevant metric: EPA recognizes the challenges of excluding/returning ichthyoplankton alive as well as monitoring for EM

Observations on the Proposed Rule - 2

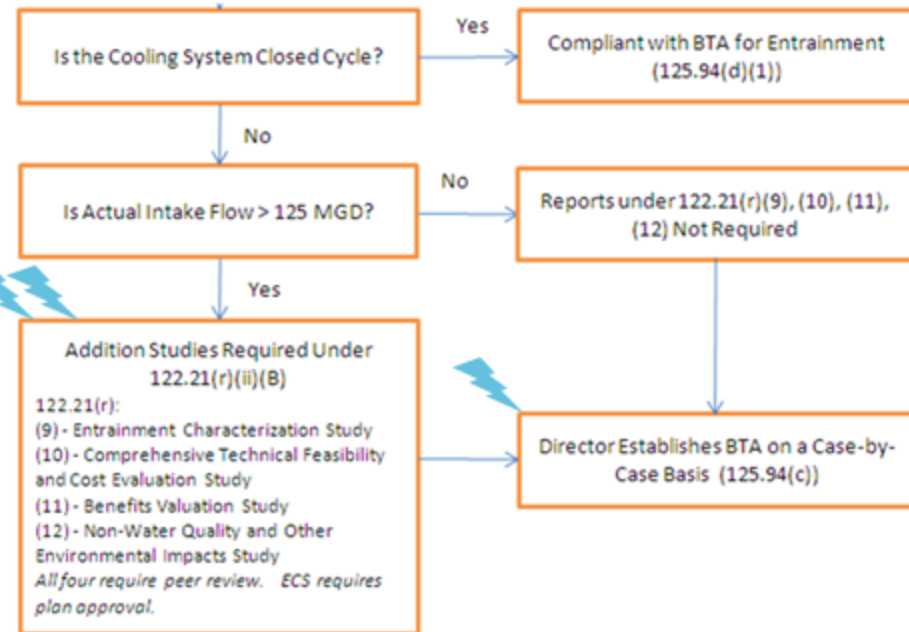
- Cost/Benefit Ratio for IM controls is ~ 20/1 – Very poor precedent for site-specific BPJ determinations of BTA
- Preamble and Rule were Written by Committee – Themes and Specifics are Not all Consistent or Correct
- Proposed 40 CFR is Highly Prescriptive – EPA Indicates that It's Proposal was Not Limited to the Language of 40 CFR
- The Timing of Implementation has Inconsistencies That Need to Be Reconciled as Part of AEP's Strategy
 - Plan for (and demonstrate?) IM retrofit long before implementation
 - IM considered separate from entrainment

The Proposed Existing Facilities Rule

Impingement



Entrainment



Plan for What?

- The Proposed Rule has Some Serious Flaws
 - e.g., the quantitative impingement mortality (IM) performance goals, redundant requirements
- The Final Rule will Differ from the Proposed Rule, Perhaps in Very Substantial Ways
 - Previous rules have changed dramatically
 - EPA has acknowledged problems
- Potential to Include Thermal Issues in the Evaluation

Schedule will be a Challenge

- Rule Issued in July 2012; Rumors of Delay but EPA has Maintained they will not Need it
- Rule Becomes Effective 60 Days Post Publication
- Several Reports, with Strategic Implications, are Due 6 Months Post Effective Date
- Industry, Agency, and “Peer” Resources will be Limited and Very Busy During Key Periods
- As Proposed Implementation Requires Careful Planning and Compromises on Schedule

Preliminary Implementation Schedule – “Phase II” Plants

Report and Task	2013	2014	2015	2016	2017
122.21(r)(2) Source water physical data	x				
122.21(r)(3) Cooling water intake structure data	x				
122.21(r)(5) Cooling water system data	x				
122.21(r)(6) Proposed IM reduction plan					
Impingement mortality reduction plan	x				
Agency review (assume 3 months)	-----				
Impingement mortality monitoring (assume 1 year)		-----			
Results of impingement mortality monitoring			-----	x	
122.21(r)(7) Performance studies	x				
122.21(r)(8) Operational status	x				
122.21(r)(9) Entrainment characterization study plan					
Entrainment Mortality Data Collection Plan	x				
Peer Review Data Collection Plan	-----x				
Agency Review (assume 3 months)	-----				
Conduct Entrainment Monitoring (assume 1 year)		-----			
Final Entrainment Characterization Study Report				-----x	
122.21(r)(10) Comprehensive technical feasibility and cost evaluation study					
Preliminary Review of Alternatives and Development of Plan			-----	-----	
Peer Review of Study Plan*				---	
Conduct Peer Review					-----
Develop Final report				-----	x
122.21(r)(11) Benefits valuation study					
Preliminary Benefits Estimate and Development of Plan			-----		
Peer Review of Study Plan*			---		
Conduct Peer Review of Study					-----
Final Benefit Valuation Study Report				-----	x
122.21(r)(12) Non-water quality and other environmental impacts study					
Preliminary Assesement of AEI and Development of Plan				-----	
Peer Review of Study Plan*				---	
Conduct Peer Review					-----
Develop Final Report				-----	x
* Two stages of peer review may be productive.					
x Deadline in Proposed Rule					

AECOM Speculation on the Final Rule

- Entrainment BTA Based on BPJ will Be Maintained for High Flow Facilities
- Ristroph Retrofit and Intake Velocity < 0.5 fps will be Maintained as BTA; Redundancies will be Reduced
- Other Compliance Approaches (Including Measures that Reduce Impingement Rates) will be Allowed
- IM Performance Requirements may be Eliminated but Monitoring may be Required at the Discretion of the NPDES Director
- Schedule will Remain Substantially the Same

Recommendations for Preparing for the Final Rule

- Continue to Engage the USEPA on the Rulemaking
- Perform a Preliminary Assessment of Alternatives for Rule Compliance
- Develop a Strategy for Peer Review
- Consider the Status of the Thermal Discharge
- Develop a Schedule for Rule Implementation
 - There are important inconsistencies
- Have Discussions with the NPDES Permitting Agencies

Discussion and Questions

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