March 31, 2011

# EPA Proposes New Rule for Cooling Water Intake Structures at Existing Facilities

In the latest chapter regarding efforts to adopt regulations concerning how power plants and industrial facilities must comply with Section 316(b) of the Clean Water Act, EPA, on Monday, March 28, 2011, announced proposed regulations establishing requirements for cooling water intake structures ("CWIS") at existing facilities (the "Proposed Rule"). According to EPA, the Proposed Rule covers approximately 1,260 existing facilities. About 670 of these facilities are power plants and 590 are manufacturing and industrial facilities.

Significantly, EPA elected not to establish a uniform entrainment standard based on closed-cycle cooling other than for new units at existing facilities. Instead, EPA is proposing a self-described "common sense framework, putting a premium on public input and flexibility," by combining national standards for reducing impingement mortality with site-specific decision-making to determine the best technology available ("BTA") for reductions in entrainment. The 413-page Proposed Rule, currently posted in pre-publication form on EPA's website, allows permitting authorities to use their best professional judgment in making permitting decisions related to entrainment on a case-by-case basis.

**Background**

Section 316(b) of the Clean Water Act [33 U.S.C. 1326(b)] requires that "the location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." After decades of rulemaking delays, EPA, in 2004, issued regulations setting national performance standards for reduction in impingement mortality (which occurs as aquatic organisms in cooling water meet a facility's intake screens) and entrainment (which occurs when organisms are drawn through a facility's cooling water system) for over 500 existing power plants (the "Phase II Rule"). Several environmental organizations, along with six states, mounted a legal challenge to EPA's decision shortly after the rule's announcement.

On January 25, 2007, the United States Court of Appeals for the Second Circuit remanded or set aside key components of the Phase II rule. *Riverkeeper, Inc. v. U.S. EPA*, 475 F. 3d 83 (2d Cir. 2007) ("*Riverkeeper II*"). Several industry groups petitioned the United States Supreme Court for review of the Second Circuit's decision. On April 1, 2009, Justice Scalia, writing for the Court, ruled that EPA permissibly relied on cost-benefit analysis, reasoning that if EPA's interpretation of the Section 316(b) standard as allowing for consideration of a technology's costs and the relationship between those costs and the environmental benefits produced was reasonable, then that interpretation must govern under long-standing Supreme Court precedent granting deference to an agency's interpretation of a statute. *See Entergy Corp. v. Riverkeeper, Inc.*, 129 S.Ct. 1498 (2009).

With respect to existing manufacturing facilities that withdraw water for cooling purposes, EPA published final regulations on June 16, 2006 (the "Phase III Rule"). Both industry and environmental stakeholders mounted a challenge to the Phase III Rule in several federal court venues. The Proposed Rule now consolidates the universe of potentially regulated facilities from the 2004 Phase II Rule with the existing facilities addressed in the 2006 Phase III Rule.

**EPA's Proposed Rule**

The Proposed Rule applies to all existing power-generating facilities and existing manufacturing and industrial facilities that withdraw more than 2 million gallons per day of water and use at least 25% of such water exclusively for cooling water purposes.

The Proposed Rule (i) establishes uniform national impingement standards; (ii) establishes a process for making BTA determinations regarding entrainment on a case-by-case basis using best professional judgment to reduce entrainment; and (iii) requires new units at existing facilities to reduce intake flow commensurate with that for closed-cycle cooling.

*Impingement*

Existing facilities that have a CWIS design intake flow of greater than 2 million gallons per day and that withdraw at least 25% of their water from an adjacent water body for cooling purposes would be subject to an upper limit on impingement mortality. Facilities can satisfy this requirement by monitoring their intake and demonstrating that impingement mortality does not exceed 12% on an annual basis, and 31% on a monthly basis. The determination of which technology to use to comply with this limit, would be determined by each existing facility. The Proposed Rule identifies modified traveling screens as a "best performing technology" for reducing impingement mortality commensurate with these numeric limits. Alternately, facilities can reduce their intake velocity to 0.5 feet per second. EPA determined that, at that velocity, most fish can swim away from the cooling water intake. EPA also identified the seasonal deployment of barrier nets on estuaries and oceans as the best performing technology for minimizing the impingement mortality of shellfish.

*Entrainment*

Existing facilities that withdraw at least 125 million gallons of water per day would be required to provide detailed information and conduct comprehensive studies to assist EPA or state permitting authorities in determining what site-specific controls, if any, would be required to reduce entrainment. Following evaluation of this information, the permitting authority would then determine what BTA entrainment standard to propose and explain in writing the basis for the proposal. The written explanation and the draft permit would then be available for public comment under the permitting authority's normal permitting process.

The Proposed Rule requires that local factors, including energy reliability, increased air emissions, land availability and remaining useful plant life, be evaluated by the permitting authority in making any decisions regarding the best technology available for reducing entrainment. Importantly, reflecting over 30 years of federal and state decision-making, any evaluation must also include a full consideration of whether the benefits justify the costs. The Proposed Rule provides that the permitting authority may reject an otherwise available entrainment technology as BTA (or not require any BTA controls) if the costs of the controls are not justified by the benefits. Overall, the Proposed Rule identifies nine factors that must be given consideration: 1) numbers and types of organisms entrained; 2) entrainment impacts on the waterbody; 3) quantified and qualitative social benefits and social costs of available entrainment technologies, including ecological benefits and benefits to any threatened or endangered species; 4) thermal discharge impacts; 5) impacts on the reliability of energy delivery within the immediate area; 6) impact of changes in particulate emissions or other pollutants associated with entrainment technologies; 7) land availability inasmuch as it relates to the feasibility of entrainment technology; 8) remaining useful plant life; and 9) impacts on water consumption.

In electing to proceed on a site-specific basis when considering entrainment controls, EPA stated as follows:

EPA proposes to reject closed-cycle cooling as the basis for national entrainment controls and choose an option under which the permitting authority would establish entrainment controls on a site-specific basis after considering specified factors. EPA concluded that closed-cycle is not the best technology available for minimizing adverse environmental impact on a national basis. The record shows that closed-cycle cooling is not practically feasible in a number of circumstances. While EPA cannot identify with precision the extent of these limitations on installation on closed-cycle on a nation-wide basis, EPA knows that the circumstances are not isolated or insignificant. In light of this, EPA decided that it should not establish closed-cycle cooling as the presumptive BTA entrainment control. Instead, entrainment controls should be determined in a site-specific setting where the opportunity for local community input in decision-making process will be maximized.

Proposed Rule at 132.

**Next Steps**

EPA will provide a 90-day public comment period beginning on the date that the Proposed Rule is published in the Federal Register. Pursuant to its settlement obligations with several environmental organizations, EPA is required to take final action on the Proposed Rule by July 27, 2012.

As currently proposed, facilities would have to comply with the impingement mortality and entrainment requirements as soon as possible. Facilities may request additional time (up to eight years) to comply with the requirements for impingement mortality. With respect to the entrainment requirements, under the proposal, implementation for existing facilities to the extent required would be established under a schedule of compliance created by the permitting authority. New units at existing facilities would be required to comply by the time they begin operations.

If you have any questions, please feel free to contact any of the attorneys listed on the sidebar. A prepublication version of the Proposed Rule is available here.