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VIA EMAIL ONLY

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SUBJECT: U.S. SUPREME COURT'S DECISION INTERPRETING CLEAN WATER SECTION 316(b) REQUIREMENT FOR BEST TECHNOLOGY AVAILABLE FOR COOLING WATER INTAKE STRUCTURES (*ENTERGY CORP. V. RIVERKEEPER, INC. ET. AL.* (2009) 556 U.S. ___ [129 S.Ct. 1498])

On April 1, 2009, the United States Supreme Court issued an important decision interpreting Federal Water Pollution Control Act (Clean Water Act) section 316(b) to allow the United States Environmental Protection Agency (U.S. EPA) to include cost/benefit considerations in establishing technology-based requirements for cooling water intake structures. The Court's decision overturns portions of a lower-court decision that had set aside significant parts of U.S. EPA's regulations for cooling water intake structures at large, existing facilities. U.S. EPA's regulations had previously been remanded by the United States Court of Appeals, Second Circuit, and were later suspended in the wake of that court's decision in *Riverkeeper v. EPA* (hereinafter *Riverkeeper II*).¹ The Supreme Court granted review and reversed the Second Circuit decision on the issue of cost-benefit analyses in selecting technology for minimizing adverse environmental impact.

The following memorandum discusses the Supreme Court's decision and its effect on the permitting of cooling water intake structures as well as adoption of a statewide policy for once-through cooling. Because the regulations remain suspended pending further action by U.S. EPA, the decision on its own does not require any additional new analysis prior to permitting of such structures or otherwise restrict the State Water Resources Control Board (State Water Board) in developing a policy.²

¹ *Riverkeeper, Inc. v. EPA* (2d. Cir. 2007) 475 F.3d 83.

² As described more fully below, certain aspects of the *Riverkeeper II* decision were not addressed by the Supreme Court and thus remain applicable to interpretations of the federal standard.

BACKGROUND

Clean Water Act section 316(b) requires that the "location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."³ The Clean Water Act regulates water withdrawn from waters of the United States, used to cool facilities, and then discharged to a water of the United States. Resulting adverse environmental effects include impingement of aquatic organisms against intake screens or entrainment of organisms in the cooling mechanism.⁴ The State Water Board and regional water quality control boards (collectively Water Boards) regulate cooling water intake structures pursuant to National Pollutant Discharge Elimination System (NPDES) permits.

U.S. EPA first attempted to promulgate regulations interpreting section 316(b) in the 1970's, but the regulations were challenged and later withdrawn on procedural grounds.⁵ Well over two decades passed before U.S. EPA again tried to adopt regulations for cooling water intake structures. In the interim, U.S. EPA issued a draft guidance document for use in implementing section 316(b), describing studies needed to evaluate adverse environmental effects from cooling water intake structures in order to make permit-specific determinations of best technology available (BTA) on a case-by-case basis.⁶ U.S. EPA also issued decisions discussing how cost may be considered, allowing for site-specific variances under what came to be known as a "wholly disproportionate" standard.⁷ The U.S. EPA Administrator found that no cost-benefit analysis was required, but further noted that it was not reasonable to interpret section 316(b) to require specified technology where its cost was found to be "wholly disproportionate to the environmental benefit to be gained."⁸ This approach was upheld⁹ and used by U.S. EPA to issue NPDES permits for cooling water intake structures in the years prior to the development of new rules.

Following a 1995 consent decree, U.S. EPA took a phased approach to adopting new regulations interpreting section 316(b). Rules for new facilities (called Phase I) were

³ 33 U.S.C. § 1326(b). The full text of subsection (b) provides that: "Any standard established pursuant to [Clean Water Act sections 301 or 306] 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." Section 301 prohibits the discharge of pollutants from a point source into surface water unless the discharge meets technology-based effluent limitations and any more stringent limitations necessary to meet applicable water quality standards. (33 U.S.C. § 1311.) Under section 306, new point sources of pollutants are required to meet technology-based standards of performance. (*Id.*, § 1316.)

⁴ The process also results in a thermal discharge that may adversely affect wildlife, aquatic life, or marine life. These effects are governed by a separate subsection of the Clean Water Act section 316. (33 U.S.C. § 1326(a).)

⁵ *Appalachian Power Co. v. Train* (4th Cir. 1977) 566 F.2d 451.

⁶ U.S. Environmental Protection Agency, Draft Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment: Section 316(b) P.L. 92-500, May 1, 1977.

⁷ See, US EPA, Environmental Appeals Board, Decision of the Administrator, *In the Matter of Public Service Company of New Hampshire, et. al. Seabrook Station, Units 1 and 2*, Case No. 76-7, June 10, 1977.

⁸ *Id.*, at p. 6.

⁹ *Seacoast Anti-Pollution League v. Costle* (1st Cir. 1979) 597 F.2d 306, 311.

promulgated in 2001.¹⁰ The Phase I regulations established performance standards based upon closed-cycle cooling¹¹ for large facilities or, for smaller facilities, technology designed to achieve comparable reduction of adverse environmental effects. The Phase I rules were challenged and largely upheld by the Second Circuit in *Riverkeeper, Inc. v. EPA* (2d Cir. 2004) 358 F.3d 174 (hereinafter *Riverkeeper I*). The Second Circuit remanded a portion of the Phase I regulations that allowed compliance with section 316(b) via restoration measures, finding that approach “plainly inconsistent with the statute’s text.”¹²

U.S. EPA adopted the Phase II regulations for existing facilities in 2004.¹³ Rather than standards based upon closed-cycle cooling, the Phase II regulations set forth five compliance alternatives that encompassed a range of percentage reductions in impingement and entrainment. The rules also allowed site-specific variances based upon two categories of cost considerations. In contrast to U.S. EPA’s longstanding use of the “wholly disproportionate” standard, the Phase II regulations allowed a variance (essentially a site-specific BTA determination) where the costs of compliance were “significantly greater than” the costs considered by the agency for similar facilities.¹⁴ A variance was also available where it could be demonstrated that compliance costs would be “significantly greater than” the benefits to be gained from the expenditure.¹⁵

The Phase II rules were challenged by environmental groups, who argued among other things that a cost-benefit analysis was unlawful under section 316(b). The Second Circuit agreed, finding that the regulations impermissibly relied upon a cost-benefit analysis for determining BTA and site-specific variances and remanding the regulations to U.S. EPA on a variety of grounds. U.S. EPA subsequently suspended the rules.¹⁶ Industry groups appealed the decision, and the Supreme Court granted certiorari, considering the narrow issue of whether U.S. EPA may rely upon a cost-benefit analysis in interpreting section 316(b). The Court reversed the Second Circuit decision and remanded the matter for further proceedings consistent with its findings.

¹⁰ The Phase I regulations apply to point sources using a cooling water intake structure with at least 25 percent of water withdrawn for cooling purposes and having a design intake flow greater than 2 million gallons per day (mgd). (40 C.F.R § 125.81.) Requirements vary for facilities greater than and less than 10 mgd. (40 C.F.R § 125.84.)

¹¹ Closed-cycle cooling is a system that recirculates water, consequently drawing in less water than “once-through” cooling processes. Because less water is withdrawn, fewer adverse impacts occur to organisms as a result of impingement and entrainment.

¹² *Riverkeeper I, supra*, 358 F.3d 174, 189.

¹³ The Phase II regulations applied to point sources using a cooling water intake structure with a design intake flow of 50 mgd or greater, having electrical generation and transmission as its primary activity, and using at least 25 percent of water withdrawn for cooling purposes. (40 C.F.R § 125.91.)

¹⁴ 40 C.F.R § 125.94(a)(5)(i).

¹⁵ 40 C.F.R § 125.94(a)(5)(ii). A cost-effectiveness determination was one in which the agency could consider costs in determining which technology met a specified performance target at the least cost, as opposed to choosing a cheaper technology based upon its relative benefit. (*Riverkeeper II, supra*, 475 F.3d at p. 98.)

¹⁶ Memorandum from Benjamin Grumbles, Assistant Administrator, US EPA, to Regional Administrators, March 20, 2007.

ANALYSIS

The central questions at issue in litigation challenging both the Phase I and Phase II¹⁷ regulations for cooling water intake structures have been how to interpret the statute in order to determine what constitutes BTA and what is required for "minimizing adverse environmental impact." Environmental and industry groups have disagreed over whether the "best" technology means that which accomplishes the most for the least cost, and whether cost could even be considered. The Second Circuit had concluded that cost could be considered in only a limited fashion in determining BTA: either to determine what technology can be "reasonably born" by the industry, or to engage in a cost-effectiveness determination.¹⁸ The Second Circuit held, however, that a cost-benefit analysis, which "compares the costs and benefits of various ends, and chooses the end with the best net benefits," is impermissible under section 316(b).¹⁹ These conclusions were based upon the Second Circuit's interpretation of what constitutes the "best" technology and whether it was "available."

The Supreme Court disagreed with the Second Circuit and found U.S. EPA's interpretation of section 316(b) to be a reasonable one.²⁰ While environmental groups argued that the statute included no reference to cost considerations because none was intended, the Court was unpersuaded. The Supreme Court examined other technology-based standards set forth in the Clean Water Act. Many of those other standards include cost among lists of factors to be considered in establishing the standards.²¹ The language of section 316(b) is, by contrast, sparse. The Supreme Court concluded that Congress decided not to include factors for consideration in determining BTA in order to accord broad discretion to U.S. EPA, rather than to forbid a cost-benefit analysis. The majority of the justices agreed that "best technology" may describe that which most efficiently produces a desired good. The majority opinion also discussed the meaning of "minimization" of adverse environmental impact, finding that it did not necessarily mean the greatest possible reduction. Altogether, the Supreme Court determined that U.S. EPA permissibly relied on cost-benefit analysis in establishing performance standards and in providing for cost-benefit variances from those standards.

The Supreme Court decision in many ways returns the landscape for section 316(b) decision-making to the status quo. The Phase II regulations remain suspended, and it is uncertain

¹⁷ U.S. EPA adopted Phase III regulations interpreting section 316 (b) for new offshore and gas extraction facilities in 2006. (71 Fed. Reg. 35006 (Jun. 16, 2006).) Those regulations also have been challenged.

¹⁸ *Riverkeeper II*, *supra*, 475 F.3d at p. 99.

¹⁹ *Id.*, at pp. 98, 100.

²⁰ See, *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.* (1984) 467 U.S. 837. Where Congressional intent is clear, a court must give effect to that intent in reviewing agency regulatory action. Where a statute is silent or ambiguous, the inquiry is whether or not the agency's interpretation is based upon a permissible reading of the statute. (*Id.*, 467 U.S. at p. 843.) The majority disagreed with a dissenting opinion on how to give effect to this analysis. (Compare *Entergy Corp. v. Riverkeeper, Inc.*, *supra*, 129 S.Ct., at p.1505 [majority opinion] with p.1518 [dissenting opinion].)

²¹ Other Clean Water Act standards considered by the Court in its review included "best practicable control technology currently available" (33 U.S.C. § 1311(b)(1)(A)); "best conventional pollutant control technology" (33 U.S.C. § 1311(b)(2)(E)); "best available technology economically achievable" (33 U.S.C. § 1311(b)(2)(A)); and "best available demonstrated control technology" (33 U.S.C. § 1316(a)(1)).

whether new Phase II regulations will use a cost-consideration approach similar to the one remanded in the *Riverkeeper II* decision.²² In the meantime, best professional judgment remains the applicable standard by which BTA is determined on a permit-specific, case-by-case basis. The *Entergy* decision clarifies that cost may be considered as part of any such determination, and a cost-benefit analysis is allowable both for consideration of what constitutes BTA as well as decisions for site-specific variances. Decisions based on a more restrictive "wholly disproportionate" standard are no longer required for existing facilities seeking a variance from what may constitute BTA, but neither are they precluded.

Other aspects of the Second Circuit decision were not addressed in the Supreme Court's review and thus are still valid.²³ These other aspects of the *Riverkeeper II* decision include the Second Circuit's conclusion that after-the-fact restoration measures do not constitute a technology for minimizing environmental impacts, findings relating to the use of broad performance ranges and how compliance relates to BTA, use of technical plans as a method for achieving compliance, and notice requirements for definitions and interpretations contained in the Phase II rules that differ from those in Phase I. The U.S. EPA, in promulgating any amended rules for Phase II facilities, must (1) address substantive issues raised by the Second Circuit (but not addressed by the Supreme Court), and (2) provide public notice and opportunity for comment to address other aspects of the Phase II regulations that the Second Circuit concluded were procedurally defective.²⁴

Notably, use of after-the-fact restoration measures was rejected as a section 316(b) compliance method in both *Riverkeeper* decisions, a conclusion that was undisturbed by the Supreme Court's *Entergy* decision. The Second Circuit found that "[r]estoration measures are not part of the location, design, construction, or capacity of cooling water intake structures . . . and a rule permitting compliance with the statute through restoration measures allows facilities to avoid adopting any cooling water intake structure technology at all . . ." ²⁵ Thus, the exercise of best professional judgment in permit-specific BTA determinations does not allow for restoration or mitigation measures such as restocking fish or habitat preservation to substitute for minimization

²² While the Supreme Court found that a cost-benefit analysis was a reasonable interpretation of the statute, U.S. EPA could also choose to return to a "wholly disproportionate" standard as set forth in earlier decisions and in the Phase I rule. Notably, Justice Breyer's concurring opinion expressed agreement with the remand but would have required U.S. EPA to provide a reasoned explanation for departing from its prior standard.

²³ "We of course express no view on the remaining bases for the Second Circuit's remand which did not depend on the permissibility of cost-benefit analysis. . . . [T]he cases are remanded for further proceedings consistent with this opinion." (*Entergy Corp. v. Riverkeeper, Inc.*, *supra*, 129 S.Ct. at p.1510.)

²⁴ The *Riverkeeper II* court remanded the following specific aspects of the Phase II rules: the determination of BTA on cost-benefit grounds, one of the findings reversed in *Entergy*; use of performance standards expressed as ranges for multiple technologies; use of restoration measures to comply with performance standards set forth in the rule; use of cost-comparison site-specific compliance alternatives, for lack of adequate notice and opportunity for comment on data used; use of a cost-benefit compliance alternative, a finding also reversed by *Entergy*; use of Technology Installation and Operation Plans as a method for achieving compliance, for lack of notice and opportunity to comment; definitions of "new facility" and "existing facility," for explanation of differences from Phase I definitions; and the third-party or "independent supplier" rule, for lack of notice and opportunity to comment.

²⁵ *Riverkeeper II*, *supra*, 475 F.3d at p.110.

of impacts. Such restoration measures would not satisfy the federal requirement that the "location, design, construction and capacity" of cooling water intake structures reflect BTA.²⁶

The *Riverkeeper II* court also raised concerns about the BTA performance standards expressed as ranges. The Phase II regulation had allowed compliance to constitute an 80 to 95 percent reduction in impingement mortality and a 60 to 90 percent reduction in entrainment.²⁷ According to U.S. EPA, these ranges reflected performance of the different technologies identified as BTA. While the court allowed that a margin of error may be appropriate, it nonetheless stated that the rule must require facilities to choose technologies achieving the greatest reduction possible.²⁸ Any new determination of BTA in light of the Supreme Court's *Entergy* decision must address this issue, at a minimum with an explanation and support for the manner in which the rule complies with the findings of the Second Circuit in *Riverkeeper II*.

The Phase I regulations continue in effect for new facilities, as defined. California law also provides a legislative policy statement directing that new and expanded coastal power plants and other industrial structures using seawater for cooling use "the best available site, design, technology and mitigation measures feasible" in order to "minimize the intake and mortality of all forms of marine life."²⁹ This statute only applies to new or expanded coastal facilities, and is inapplicable to existing facilities that do not expand operations. The statute does allow mitigation to be used in concert with other measures to "minimize the intake and mortality" of aquatic life. For facilities covered by Phase I, however, state regulation must be at least as stringent as the federal requirement. Mitigation measures for new facilities are therefore insufficient to satisfy BTA, and absent other actions that will satisfy section 316(b) are insufficient to satisfy BTA for expanded coastal operations.

The *Entergy* decision does not have significant near-term impacts on the State Water Board's efforts to adopt a policy governing use of once-through cooling and cooling water intake structures. Primarily, the *Entergy* decision provides the State Water Board with additional flexibility in construing and implementing section 316(b). For example, the *Entergy* decision allows, but does not require, the State Water Board to use a cost-benefit analysis approach in adopting a policy for coastal cooling water intake structures. Likewise, in reissuing NPDES permits for existing facilities subject to section 316(b), the Water Boards are not required to use a cost-benefit analysis, although they may. In addition, the State Water Board in establishing its policy may consider costs in other ways. The procedural requirements for adoption of a

²⁶ 33 U.S.C. § 1326(b). In light of the Supreme Court's ruling allowing cost-benefit considerations for the national performance standards and site-specific variances, it is possible that restoration could have a more prominent role in future cooling water intake permitting, provided a facility first employs technology to minimize adverse impacts. For example, assuming future U.S. EPA regulations authorize variances from the national performance standards based on site-specific cost-benefit considerations, then a permitting agency could establish after-the-fact restoration as a condition of the variance. Separate and apart from the Clean Water Act, Water Code section 13241.5 authorizes mitigation measures, which could include after-the-fact restoration in excess of Clean Water Act requirements.

²⁷ 40 C.F.R. § 125.94(b)(1)-(2).

²⁸ *Riverkeeper II*, *supra*, 475 F.3d at p.108.

²⁹ Wat. Code, § 13142.5, subd. (b).

statewide policy require some economic considerations as part of the agency's compliance with the California Environmental Quality Act.³⁰

CONCLUSION

The Supreme Court decision in *Entergy* accorded broader discretion to U.S. EPA in determining BTA in regulations interpreting section 316(b) as well as in permit-specific determinations of BTA and granting of site-specific variances. It is uncertain how U.S. EPA will use this discretion in fashioning new rules for Phase II facilities to replace the rules that at this time remain suspended. In the meantime, the Water Boards may consider costs among other factors in exercising best professional judgment for permit-specific interpretations of section 316(b). If you should have any questions, please contact Marleigh Wood of my staff at (916) 341-5169.

cc: **All via email only**

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³⁰ Public Resources Code section 21159 requires that the State Water Board, when adopting a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, must perform an environmental analysis of the reasonably foreseeable methods of compliance, including environmental impacts, mitigation measures, and alternative means of compliance. The analysis must take into account a "reasonable range of environmental, economic and technical factors" (Pub. Resource Code, § 21159, subd. (c).)