

approved by the state that exhibit one or more of the following characteristics: Species that are sensitive to adverse harm from operations of the facility (for example, heat-sensitive species); species that use the local area as spawning or nursery grounds, or both, including those species that migrate past the facility to spawn; species of commercial or recreational value or both; species that are habitat formers and are critical to the functioning of the local ecosystem; species that are important links in the local food web; rare, threatened, or endangered species; or potential nuisance organisms likely to be enhanced by plant operations. In some cases, the permitting authority allows the permittee to identify RIS on a site-specific basis (see State of Maryland comments on proposed Phase II rule).

EPA is considering an approach that employs a RIS or "critical aquatic organisms" approach to determine compliance with the impingement mortality performance standards. Facilities would be required to identify all species being impinged (or having the potential to be impinged) by the cooling water intake structure. From that total list of species, the facility would then choose a limited number of organisms based on a definition of "critical aquatic organisms" provided in the regulations. EPA requests comment on whether 10 to 15 species might be an appropriate number to protect the types of species and ecosystem functions discussed in the above discussions of representative indicator species and critical aquatic organisms. EPA is considering using the same term "critical aquatic organisms" since it has been associated with section 316(b) requirements in the past. EPA is concerned that the RIS term, which has been used in other regulatory programs, may have conflicting programmatic issues and definitions associated with it that could not be anticipated. EPA would consider using the portions of the above language from the definition provided in the 1977 Guidance as it provides a reasonable, but flexible, framework for determining a list of fish and shellfish that are representative of all the species that have the potential to be impinged or entrained at cooling water intake structures. Changes to the language above might include modifying criteria number 8 to require the following:

(8) critical aquatic organisms based on 1–7, are developed by the applicant, with the concurrence of the Director and in consultation with Federal, State, and Tribal fish and wildlife management agencies with responsibility for fisheries and wildlife.

The definition would be added to the proposed rule at § 125.93. As discussed above, EPA is also considering a consultation role for the Director rather than one of concurrence.

Compliance with the impingement mortality and entrainment performance standards could then be measured by either counting the total number of individuals of all the critical aquatic organisms impinged and killed or entrained, or by measuring the total biomass (wet or dry) of the critical aquatic organisms impinged and killed or entrained. This value would then be compared to the calculation baseline to determine compliance with the performance standard.

EPA is also considering two options for making the compliance determination using the critical aquatic organism approach. The first option would be to determine compliance based on a total enumeration of individuals from all of the listed critical aquatic organism species, and the second option would be to base compliance on a separate analysis to determine the reduction in impingement mortality and entrainment for each species. If this critical aquatic organism approach is used, EPA might adopt regulatory language at § 125.94(b)(5) for Option 1 as follows:

(5) Compliance with the applicable impingement mortality and entrainment performance standards in paragraphs (b)(1) through (4) above must be determined based on a comparison of the enumeration of individuals from all of the listed critical aquatic organism species impinged and killed and entrained with the total number of listed critical aquatic organism species estimated to be impinged and killed and entrained at the calculation baseline.

If this critical aquatic organism approach is used for Option 2, EPA might adopt regulatory language at § 125.94(b)(5) for Option 2 as follows:

(5) Compliance with the applicable impingement mortality and entrainment performance standards in paragraphs (b)(1) through (4) above must be determined based on a comparison of the enumeration of individuals from each of the listed critical aquatic organism species impinged and killed and entrained with each of those estimated to be impinged and killed and entrained at the calculation baseline.

EPA invites comments on the use of critical aquatic organism approach, the above definition for critical aquatic organisms, the above regulatory language above, and the two options (a total enumeration of all organisms from the critical aquatic organism species or a separate analysis for each species) for determining compliance with the impingement mortality and entrainment

performance standards. In addition to the potential refinements discussed above EPA is also considering and requests comment on whether the Agency should allow the Director to determine how best to measure compliance, either programmatically or as part of individual permit decisions.

EPA recognizes that a challenge in determining compliance with both the impingement mortality and entrainment performance standards is how to address the number of moribund or dead fish that wash up against the intake structure or become entrained. Under ideal circumstances, fish that were previously injured or killed from weather-related phenomena, or other episodic fish kills, would be removed from the measurement in order to more accurately determine the control technology performance. To ensure consistency with the use of the term moribund among permittees, EPA is considering adding the following definition of moribund (A Dictionary of Ecology, Evolution, and Systematics, Cambridge University Press, 1982) to § 125.93:

Moribund means dying; close to death.

EPA is considering placing in the regulatory language the ability for a facility to take into account moribund fish and shellfish for determining compliance with the impingement mortality and entrainment performance standard using actual or historical data (if representative of current conditions). If EPA allowed the exclusion of already moribund fish and shell fish in determining compliance with the performance standards, the Agency might adopt regulatory language at § 125.94(b)(5) as follows:

(5) Compliance with the applicable impingement mortality and entrainment performance standards in paragraphs (b)(1) through (4) above must be determined based on a comparison of \* \* \*. The number of moribund organisms that were previously injured or killed prior to encountering the intake structure must be removed from the calculation if data are available.

EPA invites comments on including this regulatory language in the regulation at § 125.94 to allow facilities to exclude already moribund fish and shellfish, if data are available. EPA also invites comment on whether a facility should have the opportunity to remove the number of moribund organisms from the calculation but not be required to do so (as in the sample regulatory language above).

#### Other Issues

To calculate the mass of organisms entrained for the calculation baseline