

reductions, a facility had adopted that reduce impingement mortality or entrainment.

If all of the above specifications are determined to be appropriate for the baseline cooling water intake structure that is used to determine the calculation baseline, EPA would modify the regulatory definition at proposed § 125.93 to read as follows:

Calculation baseline means an estimate of impingement mortality and entrainment that would occur at your site assuming (1) the cooling water system has been designed as a once-through system; (2) the opening of the cooling water intake structure is located at, and the face of the standard 3/8-inch mesh traveling screen is oriented parallel to, the shoreline near the surface of the source waterbody; and (3) the baseline practices and procedures are those that the facility would maintain in the absence of any operational controls, including flow or velocity reductions, implemented in whole or in part for the purposes of reducing impingement mortality and entrainment."

EPA also considered whether basing the calculation baseline on a shoreline intake would penalize facilities with constructed waterways such as intake canals or intake bays, if these configurations had a higher potential for impingement and entrainment than a "shoreline" intake located on the open waterbody. Basing calculations on this hypothetical open waterbody intake could potentially result in such facilities having to reduce impingement and entrainment by more than the specified performance ranges. This is not EPA's intent. Rather, facilities should demonstrate they have (or will) reduce impingement mortality or entrainment by the percentages established in the proposed performance ranges when compared to an intake at which no measures have been taken to reduce impingement mortality and entrainment. In the case of an intake located on the "shoreline" of an intake canal or intake bay, EPA would consider the intake's location on the constructed waterway to be the shoreline for purposes of the calculation baseline.

EPA solicits comment on these design specifications for inclusion or exclusion in the definition of the calculation baseline. In particular, EPA is interested in whether it would be redundant to include all of the hypothetical design criteria. EPA requests comments on any other design criteria that may be appropriate to set a consistent and reproducible baseline upon which to determine compliance with the proposed performance standards. EPA also requests comment on whether these design criteria will provide the intended credit in the compliance analyses to

those facilities which have implemented technologies or operational measures that reduce impingement mortality and/or entrainment, without creating unintended consequences such as the opportunity to seek credit for hypothetical "reductions" from unreasonable claims regarding baseline operational measures.

One commenter suggested that determination of the calculation baseline for entrainment be supplemented with an optional alternative, "As Built" approach. Under this approach, a facility would determine the baseline for calculating entrainment reduction by either: (1) Using actual historical measurements of entrained organisms before installation of the new intake technology; or (2) sampling immediately in front of the new technology and enumerating organisms of a size that will pass through a standard 3/8-inch screen. To determine entrainment reduction, the facility would then sample and enumerate entrained organisms behind the new technology or at the outfall. This second option would eliminate the need for predictive estimates of baseline entrainment occurring at a facility and would not require collection of historical data nor the use of estimations that may increase uncertainty.

Potential benefits cited for using this alternative "As Built" approach for estimating compliance with performance included that (1) the facility would demonstrate entrainment reductions directly in an easily verifiable manner that does not rely on hypothetical calculations; (2) facilities could install new technologies sooner than they would under the other calculation baseline approach, because pre-deployment studies would not be necessary; and (3) the baseline numbers would be actual samples of entrained or entrainable organisms. EPA requests comments on providing this approach as an optional alternative for determining the calculation baseline for entrainment.

It should be noted that the commenter states that the "As Built" approach for determining the calculation baseline would not be appropriate for impingement as it is highly species-specific and life-stage specific with no reliable way to measure "impingeable" organisms outside of the cooling water intake structure. The commenter suggests that to determine the calculation baseline for impingement mortality the only valid approach would be to collect samples before the new intake technology is deployed so that the baseline impingement (pre-deployment) can be compared to the

post-deployment impingement to estimate the percent reduction in impingement mortality attributable to the technology. EPA requests additional comment on the applicability of an "As Built" approach to estimate the calculation baseline for impingement mortality.

The proposed Phase II preamble language (see 67 FR 17176) stated that the calculation baseline could be estimated by evaluating existing data from a nearby facility. Some commenters requested that the calculation baseline be allowed to be estimated using data from facilities that are not located nearby or that are located on another waterbody as long as the two facilities had closely comparable environmental conditions including similar locations and similar species that would be impinged and entrained. These same commenters also requested that the proposed rule retain flexibility for the facility in choosing the location of the hypothetical shoreline intake as long as the location is one where an intake might have been placed in the exercise of sound engineering judgment, without regard for fish protection. Another commenter stated that assessing the mere presence or absence of organisms at a nearby facility or in the same waterbody may not accurately characterize the potential for impingement and entrainment at a future cooling water intake structure. This commenter also indicated that site-specific interactions of organisms with the hydrology of the source waterbody and the cooling water intake structure configuration would confound the assessment and that composition and abundance of impingement of organisms can be very different for two cooling water intake structures located close to one another.

EPA requests additional comment on the appropriateness of allowing facilities to define the calculation baseline using data from other facilities, what types of other facilities might be appropriate for this purpose, and whether the variability introduced due to site-specificity is greater than that due to normal fluctuations in natural systems.

B. Options for Evaluating Compliance With Performance Standards

EPA received numerous comments requesting clarification on how compliance with the proposed performance standards for reducing impingement mortality by 80–95% and entrainment by 60–90% would be determined. For both impingement mortality and entrainment, EPA is evaluating two basic methods for