

§ 125.80

40 CFR Ch. I (7-1-13 Edition)

(c) (1) Existing dischargers may base their demonstration upon the absence of prior appreciable harm in lieu of predictive studies. Any such demonstrations shall show:

(i) That no appreciable harm has resulted from the normal component of the discharge (taking into account the interaction of such thermal component with other pollutants and the additive effect of other thermal sources to a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge has been made; or

(ii) That despite the occurrence of such previous harm, the desired alternative effluent limitations (or appropriate modifications thereof) will nevertheless assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made.

(2) In determining whether or not prior appreciable harm has occurred, the Director shall consider the length of time in which the applicant has been discharging and the nature of the discharge.

Subpart I—Requirements Applicable to Cooling Water Intake Structures for New Facilities Under Section 316(b) of the Act

SOURCE: 66 FR 65338, Dec. 18, 2001, unless otherwise noted.

§ 125.80 What are the purpose and scope of this subpart?

(a) This subpart establishes requirements that apply to the location, design, construction, and capacity of cooling water intake structures at new facilities. The purpose of these requirements is to establish the best technology available for minimizing adverse environmental impact associated with the use of cooling water intake structures. These requirements are implemented through National Pollutant Discharge Elimination System (NPDES) permits issued under section 402 of the Clean Water Act (CWA).

(b) This subpart implements section 316(b) of the CWA for new facilities.

Section 316(b) of the CWA provides that any standard established pursuant to sections 301 or 306 of the CWA 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.

(c) New facilities that do not meet the threshold requirements regarding amount of water withdrawn or percentage of water withdrawn for cooling water purposes in § 125.81(a) must meet requirements determined on a case-by-case, best professional judgement (BPJ) basis.

(d) Nothing in this subpart shall be construed to preclude or deny the right of any State or political subdivision of a State or any interstate agency under section 510 of the CWA to adopt or enforce any requirement with respect to control or abatement of pollution that is more stringent than those required by Federal law.

§ 125.81 Who is subject to this subpart?

(a) This subpart applies to a new facility if it:

(1) Is a point source that uses or proposes to use a cooling water intake structure;

(2) Has at least one cooling water intake structure that uses at least 25 percent of the water it withdraws for cooling purposes as specified in paragraph (c) of this section; and

(3) Has a design intake flow greater than two (2) million gallons per day (MGD).

(b) Use of a cooling water intake structure includes obtaining cooling water by any sort of contract or arrangement with an independent supplier (or multiple suppliers) of cooling water if the supplier or suppliers withdraw(s) water from waters of the United States. Use of cooling water does not include obtaining cooling water from a public water system or the use of treated effluent that otherwise would be discharged to a water of the U.S. This provision is intended to prevent circumvention of these requirements by creating arrangements to receive cooling water from an entity that is not itself a point source.

(c) The threshold requirement that at least 25 percent of water withdrawn be used for cooling purposes must be measured on an average monthly basis. A new facility meets the 25 percent cooling water threshold if, based on the new facility's design, any monthly average over a year for the percentage of cooling water withdrawn is expected to equal or exceed 25 percent of the total water withdrawn.

(d) This subpart does not apply to facilities that employ cooling water intake structures in the offshore and coastal subcategories of the oil and gas extraction point source category as defined under 40 CFR 435.10 and 40 CFR 435.40.

§ 125.82 When must I comply with this subpart?

You must comply with this subpart when an NPDES permit containing requirements consistent with this subpart is issued to you.

§ 125.83 What special definitions apply to this subpart?

The following special definitions apply to this subpart:

Annual mean flow means the average of daily flows over a calendar year. Historical data (up to 10 years) must be used where available.

Closed-cycle recirculating system means a system designed, using minimized makeup and blowdown flows, to withdraw water from a natural or other water source to support contact and/or noncontact cooling uses within a facility. The water is usually sent to a cooling canal or channel, lake, pond, or tower to allow waste heat to be dissipated to the atmosphere and then is returned to the system. (Some facilities divert the waste heat to other process operations.) New source water (make-up water) is added to the system to replenish losses that have occurred due to blowdown, drift, and evaporation.

Cooling water means water used for contact or noncontact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from aux-

iliary operations on the facility's premises. Cooling water that is used in a manufacturing process either before or after it is used for cooling is considered process water for the purposes of calculating the percentage of a new facility's intake flow that is used for cooling purposes in § 125.81(c).

Cooling water intake structure means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the U.S. The cooling water intake structure extends from the point at which water is withdrawn from the surface water source up to, and including, the intake pumps.

Design intake flow means the value assigned (during the facility's design) to the total volume of water withdrawn from a source water body over a specific time period.

Design intake velocity means the value assigned (during the design of a cooling water intake structure) to the average speed at which intake water passes through the open area of the intake screen (or other device) against which organisms might be impinged or through which they might be entrained.

Entrainment means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

Estuary means a semi-enclosed body of water that has a free connection with open seas and within which the seawater is measurably diluted with fresh water derived from land drainage. The salinity of an estuary exceeds 0.5 parts per thousand (by mass) but is typically less than 30 parts per thousand (by mass).

Existing facility means any facility that is not a new facility.

Freshwater river or stream means a lotic (free-flowing) system that does not receive significant inflows of water from oceans or bays due to tidal action. For the purposes of this rule, a flow-through reservoir with a retention time of 7 days or less will be considered a freshwater river or stream.

Hydraulic zone of influence means that portion of the source waterbody hydraulically affected by the cooling

water intake structure withdrawal of water.

Impingement means the entrapment of all life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal.

Lake or *reservoir* means any inland body of open water with some minimum surface area free of rooted vegetation and with an average hydraulic retention time of more than 7 days. Lakes or reservoirs might be natural water bodies or impounded streams, usually fresh, surrounded by land or by land and a man-made retainer (e.g., a dam). Lakes or reservoirs might be fed by rivers, streams, springs, and/or local precipitation. Flow-through reservoirs with an average hydraulic retention time of 7 days or less should be considered a freshwater river or stream.

Maximize means to increase to the greatest amount, extent, or degree reasonably possible.

Minimize means to reduce to the smallest amount, extent, or degree reasonably possible.

Natural thermal stratification means the naturally-occurring division of a waterbody into horizontal layers of differing densities as a result of variations in temperature at different depths.

New facility means any building, structure, facility, or installation that meets the definition of a “new source” or “new discharger” in 40 CFR 122.2 and 122.29(b)(1), (2), and (4) and is a greenfield or stand-alone facility; commences construction after January 17, 2002; and uses either a newly constructed cooling water intake structure, or an existing cooling water intake structure whose design capacity is increased to accommodate the intake of additional cooling water. New facilities include only “greenfield” and “stand-alone” facilities. A greenfield facility is a facility that is constructed at a site at which no other source is located, or that totally replaces the process or production equipment at an existing facility (see 40 CFR 122.29(b)(1)(i) and (ii)). A stand-alone facility is a new, separate facility that is constructed on property where an existing facility is located and whose processes are substantially independent of the

existing facility at the same site (see 40 CFR 122.29(b)(1)(iii)). New facility does not include new units that are added to a facility for purposes of the same general industrial operation (for example, a new peaking unit at an electrical generating station).

(1) Examples of “new facilities” include, but are not limited to: the following scenarios:

(i) A new facility is constructed on a site that has never been used for industrial or commercial activity. It has a new cooling water intake structure for its own use.

(ii) A facility is demolished and another facility is constructed in its place. The newly-constructed facility uses the original facility’s cooling water intake structure, but modifies it to increase the design capacity to accommodate the intake of additional cooling water.

(iii) A facility is constructed on the same property as an existing facility, but is a separate and independent industrial operation. The cooling water intake structure used by the original facility is modified by constructing a new intake bay for the use of the newly constructed facility or is otherwise modified to increase the intake capacity for the new facility.

(2) Examples of facilities that would not be considered a “new facility” include, but are not limited to, the following scenarios:

(i) A facility in commercial or industrial operation is modified and either continues to use its original cooling water intake structure or uses a new or modified cooling water intake structure.

(ii) A facility has an existing intake structure. Another facility (a separate and independent industrial operation), is constructed on the same property and connects to the facility’s cooling water intake structure behind the intake pumps, and the design capacity of the cooling water intake structure has not been increased. This facility would not be considered a “new facility” even if routine maintenance or repairs that do not increase the design capacity were performed on the intake structure.

Ocean means marine open coastal waters with a salinity greater than or

equal to 30 parts per thousand (by mass).

Source water means the water body (waters of the U.S.) from which the cooling water is withdrawn.

Thermocline means the middle layer of a thermally stratified lake or reservoir. In this layer, there is a rapid decrease in temperatures.

Tidal excursion means the horizontal distance along the estuary or tidal river that a particle moves during one tidal cycle of ebb and flow.

Tidal river means the most seaward reach of a river or stream where the salinity is typically less than or equal to 0.5 parts per thousand (by mass) at a time of annual low flow and whose surface elevation responds to the effects of coastal lunar tides.

[66 FR 65338, Dec. 18, 2001, as amended at 68 FR 36754, June 19, 2003]

§ 125.84 As an owner or operator of a new facility, what must I do to comply with this subpart?

(a)(1) The owner or operator of a new facility must comply with either:

(i) Track I in paragraph (b) or (c) of this section; or

(ii) Track II in paragraph (d) of this section.

(2) In addition to meeting the requirements in paragraph (b), (c), or (d) of this section, the owner or operator of a new facility may be required to comply with paragraph (e) of this section.

(b) *Track I requirements for new facilities that withdraw equal to or greater than 10 MGD.* You must comply with all of the following requirements:

(1) You must reduce your intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system;

(2) You must design and construct each cooling water intake structure at your facility to a maximum through-screen design intake velocity of 0.5 ft/s;

(3) You must design and construct your cooling water intake structure such that the total design intake flow from all cooling water intake structures at your facility meets the following requirements:

(i) For cooling water intake structures located in a freshwater river or

stream, the total design intake flow must be no greater than five (5) percent of the source water annual mean flow;

(ii) For cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern (where present) of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish by any fishery management agency(ies);

(iii) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the volume of the water column within the area centered about the opening of the intake with a diameter defined by the distance of one tidal excursion at the mean low water level;

(4) You must select and implement design and construction technologies or operational measures for minimizing impingement mortality of fish and shellfish if:

(i) There are threatened or endangered or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure; or

(ii) Based on information submitted by any fishery management agency(ies) or other relevant information, there are migratory and/or sport or commercial species of impingement concern to the Director that pass through the hydraulic zone of influence of the cooling water intake structure; or

(iii) It is determined by the Director, based on information submitted by any fishery management agency(ies) or other relevant information, that the proposed facility, after meeting the technology-based performance requirements in paragraphs (b)(1), (2), and (3) of this section, would still contribute unacceptable stress to the protected species, critical habitat of those species, or species of concern;

(5) You must select and implement design and construction technologies or operational measures for minimizing entrainment of entrainable life stages of fish and shellfish if:

(i) There are threatened or endangered or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure; or

(ii) Based on information submitted by any fishery management agency(ies) or other relevant information, there are or would be undesirable cumulative stressors affecting entrainable life stages of species of concern to the Director and the Director determines that the proposed facility, after meeting the technology-based performance requirements in paragraphs (b)(1), (2), and (3) of this section, would still contribute unacceptable stress to the protected species, critical habitat of those species, or these species of concern;

(6) You must submit the application information required in 40 CFR 122.21(r) and §125.86(b);

(7) You must implement the monitoring requirements specified in §125.87;

(8) You must implement the record-keeping requirements specified in §125.88.

(c) *Track I requirements for new facilities that withdraw equal to or greater than 2 MGD and less than 10 MGD and that choose not to comply with paragraph (b) of this section.* You must comply with all the following requirements:

(1) You must design and construct each cooling water intake structure at your facility to a maximum through-screen design intake velocity of 0.5 ft/s;

(2) You must design and construct your cooling water intake structure such that the total design intake flow from all cooling water intake structures at your facility meets the following requirements:

(i) For cooling water intake structures located in a freshwater river or stream, the total design intake flow must be no greater than five (5) percent of the source water annual mean flow;

(ii) For cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern (where present) of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries

for fish and shellfish by any fishery management agency(ies);

(iii) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the volume of the water column within the area centered about the opening of the intake with a diameter defined by the distance of one tidal excursion at the mean low water level;

(3) You must select and implement design and construction technologies or operational measures for minimizing impingement mortality of fish and shellfish if:

(i) There are threatened or endangered or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the cooling water intake structure; or

(ii) Based on information submitted by any fishery management agency(ies) or other relevant information, there are migratory and/or sport or commercial species of impingement concern to the Director that pass through the hydraulic zone of influence of the cooling water intake structure; or

(iii) It is determined by the Director, based on information submitted by any fishery management agency(ies) or other relevant information, that the proposed facility, after meeting the technology-based performance requirements in paragraphs (c)(1) and (2) of this section, would still contribute unacceptable stress to the protected species, critical habitat of those species, or species of concern;

(4) You must select and implement design and construction technologies or operational measures for minimizing entrainment of entrainable life stages of fish and shellfish;

(5) You must submit the application information required in 40 CFR 122.21(r) and §125.86(b)(2), (3), and (4);

(6) You must implement the monitoring requirements specified in §125.87;

(7) You must implement the record-keeping requirements specified in §125.88.

(d) *Track II.* The owner or operator of a new facility that chooses to comply

Environmental Protection Agency

§ 125.85

under Track II must comply with the following requirements:

(1) You must demonstrate to the Director that the technologies employed will reduce the level of adverse environmental impact from your cooling water intake structures to a comparable level to that which you would achieve were you to implement the requirements of paragraphs (b)(1) and (2) of this section. This demonstration must include a showing that the impacts to fish and shellfish, including important forage and predator species, within the watershed will be comparable to those which would result if you were to implement the requirements of paragraphs (b)(1) and (2) of this section. This showing may include consideration of impacts other than impingement mortality and entrainment, including measures that will result in increases in fish and shellfish, but it must demonstrate comparable performance for species that the Director identifies as species of concern. In identifying such species, the Director may consider information provided by any fishery management agency(ies) along with data and information from other sources.

(2) You must design and construct your cooling water intake structure such that the total design intake flow from all cooling water intake structures at your facility meet the following requirements:

(i) For cooling water intake structures located in a freshwater river or stream, the total design intake flow must be no greater than five (5) percent of the source water annual mean flow;

(ii) For cooling water intake structures located in a lake or reservoir, the total design intake flow must not disrupt the natural thermal stratification or turnover pattern (where present) of the source water except in cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish by any fishery management agency(ies);

(iii) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the volume of the water column within the area centered about the opening of the

intake with a diameter defined by the distance of one tidal excursion at the mean low water level.

(3) You must submit the application information required in 40 CFR 122.21(r) and §125.86(c).

(4) You must implement the monitoring requirements specified in §125.87.

(5) You must implement the record-keeping requirements specified in §125.88.

(e) You must comply with any more stringent requirements relating to the location, design, construction, and capacity of a cooling water intake structure or monitoring requirements at a new facility that the Director deems are reasonably necessary to comply with any provision of state law, including compliance with applicable state water quality standards (including designated uses, criteria, and antidegradation requirements).

[66 FR 65338, Dec. 18, 2001, as amended at 68 FR 36754, June 19, 2003]

§ 125.85 May alternative requirements be authorized?

(a) Any interested person may request that alternative requirements less stringent than those specified in §125.84(a) through (e) be imposed in the permit. The Director may establish alternative requirements less stringent than the requirements of §125.84(a) through (e) only if:

(1) There is an applicable requirement under §125.84(a) through (e);

(2) The Director determines that data specific to the facility indicate that compliance with the requirement at issue would result in compliance costs wholly out of proportion to the costs EPA considered in establishing the requirement at issue or would result in significant adverse impacts on local air quality, significant adverse impacts on local water resources other than impingement or entrainment, or significant adverse impacts on local energy markets;

(3) The alternative requirement requested is no less stringent than justified by the wholly out of proportion cost or the significant adverse impacts on local air quality, significant adverse impacts on local water resources other than impingement or entrainment, or

§ 125.86

40 CFR Ch. I (7-1-13 Edition)

significant adverse impacts on local energy markets; and

(4) The alternative requirement will ensure compliance with other applicable provisions of the Clean Water Act and any applicable requirement of state law.

(b) The burden is on the person requesting the alternative requirement to demonstrate that alternative requirements should be authorized.

[66 FR 65338, Dec. 18, 2001, as amended at 68 FR 36755, June 19, 2003]

§ 125.86 As an owner or operator of a new facility, what must I collect and submit when I apply for my new or reissued NPDES permit?

(a)(1) As an owner or operator of a new facility, you must submit to the Director a statement that you intend to comply with either:

(i) The Track I requirements for new facilities that withdraw equal to or greater than 10 MGD in §125.84(b);

(ii) The Track I requirements for new facilities that withdraw equal to or greater than 2 MGD and less than 10 MGD in §125.84(c);

(iii) The requirements for Track II in §125.84 (d).

(2) You must also submit the application information required by 40 CFR 122.21(r) and the information required in either paragraph (b) of this section for Track I or paragraph (c) of this section for Track II when you apply for a new or reissued NPDES permit in accordance with 40 CFR 122.21.

(b) *Track I application requirements.* To demonstrate compliance with Track I requirements in §125.84(b) or (c), you must collect and submit to the Director the information in paragraphs (b)(1) through (4) of this section.

(1) *Flow reduction information.* If you must comply with the flow reduction requirements in §125.84(b)(1), you must submit the following information to the Director to demonstrate that you have reduced your flow to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system:

(i) A narrative description of your system that has been designed to reduce your intake flow to a level commensurate with that which can be attained by a closed-cycle recirculating

cooling water system and any engineering calculations, including documentation demonstrating that your make-up and blowdown flows have been minimized; and

(ii) If the flow reduction requirement is met entirely, or in part, by reusing or recycling water withdrawn for cooling purposes in subsequent industrial processes, you must provide documentation that the amount of cooling water that is not reused or recycled has been minimized.

(2) *Velocity information.* You must submit the following information to the Director to demonstrate that you are complying with the requirement to meet a maximum through-screen design intake velocity of no more than 0.5 ft/s at each cooling water intake structure as required in §125.84(b)(2) and (c)(1):

(i) A narrative description of the design, structure, equipment, and operation used to meet the velocity requirement; and

(ii) Design calculations showing that the velocity requirement will be met at minimum ambient source water surface elevations (based on best professional judgement using available hydrological data) and maximum head loss across the screens or other device.

(3) *Source waterbody flow information.* You must submit to the Director the following information to demonstrate that your cooling water intake structure meets the flow requirements in §125.84(b)(3) and (c)(2):

(i) If your cooling water intake structure is located in a freshwater river or stream, you must provide the annual mean flow and any supporting documentation and engineering calculations to show that your cooling water intake structure meets the flow requirements;

(ii) If your cooling water intake structure is located in an estuary or tidal river, you must provide the mean low water tidal excursion distance and any supporting documentation and engineering calculations to show that your cooling water intake structure facility meets the flow requirements; and

(iii) If your cooling water intake structure is located in a lake or reservoir, you must provide a narrative description of the water body thermal

stratification, and any supporting documentation and engineering calculations to show that the natural thermal stratification and turnover pattern will not be disrupted by the total design intake flow. In cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish you must provide supporting documentation and include a written concurrence from any fisheries management agency(ies) with responsibility for fisheries potentially affected by your cooling water intake structure(s).

(4) *Design and Construction Technology Plan.* To comply with §125.84(b)(4) and (5), or (c)(3) and (c)(4), you must submit to the Director the following information in a Design and Construction Technology Plan:

(i) Information to demonstrate whether or not you meet the criteria in §125.84(b)(4) and (b)(5), or (c)(3) and (c)(4);

(ii) Delineation of the hydraulic zone of influence for your cooling water intake structure;

(iii) New facilities required to install design and construction technologies and/or operational measures must develop a plan explaining the technologies and measures you have selected based on information collected for the Source Water Biological Baseline Characterization required by 40 CFR 122.21(r)(3). (Examples of appropriate technologies include, but are not limited to, wedgewire screens, fine mesh screens, fish handling and return systems, barrier nets, aquatic filter barrier systems, etc. Examples of appropriate operational measures include, but are not limited to, seasonal shutdowns or reductions in flow, continuous operations of screens, etc.) The plan must contain the following information:

(A) A narrative description of the design and operation of the design and construction technologies, including fish-handling and return systems, that you will use to maximize the survival of those species expected to be most susceptible to impingement. Provide species-specific information that demonstrates the efficacy of the technology;

(B) A narrative description of the design and operation of the design and construction technologies that you will use to minimize entrainment of those species expected to be the most susceptible to entrainment. Provide species-specific information that demonstrates the efficacy of the technology; and

(C) Design calculations, drawings, and estimates to support the descriptions provided in paragraphs (b)(4)(iii)(A) and (B) of this section.

(c) *Application requirements for Track II.* If you have chosen to comply with the requirements of Track II in §125.84(d) you must collect and submit the following information:

(1) *Source waterbody flow information.* You must submit to the Director the following information to demonstrate that your cooling water intake structure meets the source water body requirements in §125.84(d)(2):

(i) If your cooling water intake structure is located in a freshwater river or stream, you must provide the annual mean flow and any supporting documentation and engineering calculations to show that your cooling water intake structure meets the flow requirements;

(ii) If your cooling water intake structure is located in an estuary or tidal river, you must provide the mean low water tidal excursion distance and any supporting documentation and engineering calculations to show that your cooling water intake structure facility meets the flow requirements; and

(iii) If your cooling water intake structure is located in a lake or reservoir, you must provide a narrative description of the water body thermal stratification, and any supporting documentation and engineering calculations to show that the natural thermal stratification and thermal or turnover pattern will not be disrupted by the total design intake flow. In cases where the disruption is determined to be beneficial to the management of fisheries for fish and shellfish you must provide supporting documentation and include a written concurrence from any fisheries management agency(ies) with responsibility for fisheries potentially affected by your cooling water intake structure(s).

(2) *Track II Comprehensive Demonstration Study*. You must perform and submit the results of a Comprehensive Demonstration Study (Study). This information is required to characterize the source water baseline in the vicinity of the cooling water intake structure(s), characterize operation of the cooling water intake(s), and to confirm that the technology(ies) proposed and/or implemented at your cooling water intake structure reduce the impacts to fish and shellfish to levels comparable to those you would achieve were you to implement the requirements in § 125.84(b)(1) and (2) of Track I. To meet the “comparable level” requirement, you must demonstrate that:

(i) You have reduced both impingement mortality and entrainment of all life stages of fish and shellfish to 90 percent or greater of the reduction that would be achieved through § 125.84(b)(1) and (2); or

(ii) If your demonstration includes consideration of impacts other than impingement mortality and entrainment, that the measures taken will maintain the fish and shellfish in the waterbody at a substantially similar level to that which would be achieved through § 125.84(b)(1) and (2); and

(iii) You must develop and submit a plan to the Director containing a proposal for how information will be collected to support the study. The plan must include:

(A) A description of the proposed and/or implemented technology(ies) to be evaluated in the Study;

(B) A list and description of any historical studies characterizing the physical and biological conditions in the vicinity of the proposed or actual intakes and their relevancy to the proposed Study. If you propose to rely on existing source water body data, it must be no more than 5 years old, you must demonstrate that the existing data are sufficient to develop a scientifically valid estimate of potential impingement and entrainment impacts, and provide documentation showing that the data were collected using appropriate quality assurance/quality control procedures;

(C) Any public participation or consultation with Federal or State agen-

cies undertaken in developing the plan; and

(D) A sampling plan for data that will be collected using actual field studies in the source water body. The sampling plan must document all methods and quality assurance procedures for sampling, and data analysis. The sampling and data analysis methods you propose must be appropriate for a quantitative survey and based on consideration of methods used in other studies performed in the source water body. The sampling plan must include a description of the study area (including the area of influence of the cooling water intake structure and at least 100 meters beyond); taxonomic identification of the sampled or evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods; and

(iv) You must submit documentation of the results of the Study to the Director. Documentation of the results of the Study must include:

(A) *Source Water Biological Study*. The Source Water Biological Study must include:

(1) A taxonomic identification and characterization of aquatic biological resources including: a summary of historical and contemporary aquatic biological resources; determination and description of the target populations of concern (those species of fish and shellfish and all life stages that are most susceptible to impingement and entrainment); and a description of the abundance and temporal/spatial characterization of the target populations based on the collection of multiple years of data to capture the seasonal and daily activities (e.g., spawning, feeding and water column migration) of all life stages of fish and shellfish found in the vicinity of the cooling water intake structure;

(2) An identification of all threatened or endangered species that might be susceptible to impingement and entrainment by the proposed cooling water intake structure(s); and

(3) A description of additional chemical, water quality, and other anthropogenic stresses on the source waterbody.

Environmental Protection Agency

§ 125.87

(B) *Evaluation of potential cooling water intake structure effects.* This evaluation will include:

(1) Calculations of the reduction in impingement mortality and entrainment of all life stages of fish and shellfish that would need to be achieved by the technologies you have selected to implement to meet requirements under Track II. To do this, you must determine the reduction in impingement mortality and entrainment that would be achieved by implementing the requirements of §125.84(b)(1) and (2) of Track I at your site.

(2) An engineering estimate of efficacy for the proposed and/or implemented technologies used to minimize impingement mortality and entrainment of all life stages of fish and shellfish and maximize survival of impinged life stages of fish and shellfish. You must demonstrate that the technologies reduce impingement mortality and entrainment of all life stages of fish and shellfish to a comparable level to that which you would achieve were you to implement the requirements in §125.84(b)(1) and (2) of Track I. The efficacy projection must include a site-specific evaluation of technology(ies) suitability for reducing impingement mortality and entrainment based on the results of the Source Water Biological Study in paragraph (c)(2)(iv)(A) of this section. Efficacy estimates may be determined based on case studies that have been conducted in the vicinity of the cooling water intake structure and/or site-specific technology prototype studies.

(C) *Evaluation of proposed restoration measures.* If you propose to use restoration measures to maintain the fish and shellfish as allowed in §125.84(d)(1)(i), you must provide the following information to the Director:

(1) Information and data to show that you have coordinated with the appropriate fishery management agency(ies); and

(2) A plan that provides a list of the measures you plan to implement and how you will demonstrate and continue to ensure that your restoration measures will maintain the fish and shellfish in the waterbody to a substantially similar level to that which would

be achieved through §125.84(b)(1) and (2).

(D) *Verification monitoring plan.* You must include in the Study the following:

(1) A plan to conduct, at a minimum, two years of monitoring to verify the full-scale performance of the proposed or implemented technologies, operational measures. The verification study must begin at the start of operations of the cooling water intake structure and continue for a sufficient period of time to demonstrate that the facility is reducing the level of impingement and entrainment to the level documented in paragraph (c)(2)(iv)(B) of this section. The plan must describe the frequency of monitoring and the parameters to be monitored. The Director will use the verification monitoring to confirm that you are meeting the level of impingement mortality and entrainment reduction required in §125.84(d), and that the operation of the technology has been optimized.

(2) A plan to conduct monitoring to verify that the restoration measures will maintain the fish and shellfish in the waterbody to a substantially similar level as that which would be achieved through §125.84(b)(1) and (2).

§ 125.87 As an owner or operator of a new facility, must I perform monitoring?

As an owner or operator of a new facility, you will be required to perform monitoring to demonstrate your compliance with the requirements specified in §125.84.

(a) *Biological monitoring.* You must monitor both impingement and entrainment of the commercial, recreational, and forage base fish and shellfish species identified in either the Source Water Baseline Biological Characterization data required by 40 CFR 122.21(r)(3) or the Comprehensive Demonstration Study required by §125.86(c)(2), depending on whether you chose to comply with Track I or Track II. The monitoring methods used must be consistent with those used for the Source Water Baseline Biological Characterization data required in 40 CFR 122.21(r)(3) or the Comprehensive Demonstration Study required by

§ 125.88

40 CFR Ch. I (7–1–13 Edition)

§125.86(c)(2). You must follow the monitoring frequencies identified below for at least two (2) years after the initial permit issuance. After that time, the Director may approve a request for less frequent sampling in the remaining years of the permit term and when the permit is reissued, if supporting data show that less frequent monitoring would still allow for the detection of any seasonal and daily variations in the species and numbers of individuals that are impinged or entrained.

(1) *Impingement sampling.* You must collect samples to monitor impingement rates (simple enumeration) for each species over a 24-hour period and no less than once per month when the cooling water intake structure is in operation.

(2) *Entrainment sampling.* You must collect samples to monitor entrainment rates (simple enumeration) for each species over a 24-hour period and no less than biweekly during the primary period of reproduction, larval recruitment, and peak abundance identified during the Source Water Baseline Biological Characterization required by 40 CFR 122.21(r)(3) or the Comprehensive Demonstration Study required in §125.86(c)(2). You must collect samples only when the cooling water intake structure is in operation.

(b) *Velocity monitoring.* If your facility uses surface intake screen systems, you must monitor head loss across the screens and correlate the measured value with the design intake velocity. The head loss across the intake screen must be measured at the minimum ambient source water surface elevation (best professional judgment based on available hydrological data). The maximum head loss across the screen for each cooling water intake structure must be used to determine compliance with the velocity requirement in §125.84(b)(2) or (c)(1). If your facility uses devices other than surface intake screens, you must monitor velocity at the point of entry through the device. You must monitor head loss or velocity during initial facility startup, and thereafter, at the frequency specified in your NPDES permit, but no less than once per quarter.

(c) *Visual or remote inspections.* You must either conduct visual inspections

or employ remote monitoring devices during the period the cooling water intake structure is in operation. You must conduct visual inspections at least weekly to ensure that any design and construction technologies required in §125.84(b)(4) and (5), or (c)(3) and (4) are maintained and operated to ensure that they will continue to function as designed. Alternatively, you must inspect via remote monitoring devices to ensure that the impingement and entrainment technologies are functioning as designed.

§ 125.88 As an owner or operator of a new facility, must I keep records and report?

As an owner or operator of a new facility you are required to keep records and report information and data to the Director as follows:

(a) You must keep records of all the data used to complete the permit application and show compliance with the requirements, any supplemental information developed under §125.86, and any compliance monitoring data submitted under §125.87, for a period of at least three (3) years from the date of permit issuance. The Director may require that these records be kept for a longer period.

(b) You must provide the following to the Director in a yearly status report:

(1) Biological monitoring records for each cooling water intake structure as required by §125.87(a);

(2) Velocity and head loss monitoring records for each cooling water intake structure as required by §125.87(b); and

(3) Records of visual or remote inspections as required in §125.87(c).

§ 125.89 As the Director, what must I do to comply with the requirements of this subpart?

(a) *Permit application.* As the Director, you must review materials submitted by the applicant under 40 CFR 122.21(r)(3) and §125.86 at the time of the initial permit application and before each permit renewal or reissuance.

(1) After receiving the initial permit application from the owner or operator of a new facility, the Director must determine applicable standards in §125.84

Environmental Protection Agency

§ 125.89

to apply to the new facility. In addition, the Director must review materials to determine compliance with the applicable standards.

(2) For each subsequent permit renewal, the Director must review the application materials and monitoring data to determine whether requirements, or additional requirements, for design and construction technologies or operational measures should be included in the permit.

(3) For Track II facilities, the Director may review the information collection proposal plan required by §125.86(c)(2)(iii). The facility may initiate sampling and data collection activities prior to receiving comment from the Director.

(b) *Permitting requirements.* Section 316(b) requirements are implemented for a facility through an NPDES permit. As the Director, you must determine, based on the information submitted by the new facility in its permit application, the appropriate requirements and conditions to include in the permit based on the track (Track I or Track II) the new facility has chosen to comply with. The following requirements must be included in each permit:

(1) *Cooling water intake structure requirements.* At a minimum, the permit conditions must include the performance standards that implement the requirements of §125.84(b)(1), (2), (3), (4) and (5); §125.84(c)(1), (2), (3) and (4); or §125.84(d)(1) and (2). In determining compliance with proportional flow requirement in §§125.84(b)(3)(ii); (c)(2)(ii); and (d)(2)(ii), the director must consider anthropogenic factors (those not considered “natural”) unrelated to the new facility’s cooling water intake structure that can influence the occurrence and location of a thermocline. These include source water inflows, other water withdrawals, managed water uses, wastewater discharges, and flow/level management practices (e.g., some reservoirs release water from below the surface, close to the deepest areas).

(i) For a facility that chooses Track I, you must review the Design and Construction Technology Plan required in §125.86(b)(4) to evaluate the suitability and feasibility of the technology proposed to minimize impingement mor-

tality and entrainment of all life stages of fish and shellfish. In the first permit issued, you must put a condition requiring the facility to reduce impingement mortality and entrainment commensurate with the implementation of the technologies in the permit. Under subsequent permits, the Director must review the performance of the technologies implemented and require additional or different design and construction technologies, if needed to minimize impingement mortality and entrainment of all life stages of fish and shellfish. In addition, you must consider whether more stringent conditions are reasonably necessary in accordance with §125.84(e).

(ii) For a facility that chooses Track II, you must review the information submitted with the Comprehensive Demonstration Study information required in §125.86(c)(2), evaluate the suitability of the proposed design and construction technologies and operational measures to determine whether they will reduce both impingement mortality and entrainment of all life stages of fish and shellfish to 90 percent or greater of the reduction that could be achieved through Track I. If you determine that restoration measures are appropriate at the new facility for consideration of impacts other than impingement mortality and entrainment, you must review the Evaluation of Proposed Restoration Measures and evaluate whether the proposed measures will maintain the fish and shellfish in the waterbody at a substantially similar level to that which would be achieved through §125.84(b)(1) and (2). In addition, you must review the Verification Monitoring Plan in §125.86(c)(2)(iv)(D) and require that the proposed monitoring begin at the start of operations of the cooling water intake structure and continue for a sufficient period of time to demonstrate that the technologies, operational measures and restoration measures meet the requirements in §125.84(d)(1). Under subsequent permits, the Director must review the performance of the additional and /or different technologies or measures used and determine that they reduce the level of adverse environmental impact from the cooling

§ 125.90

40 CFR Ch. I (7–1–13 Edition)

water intake structures to a comparable level that the facility would achieve were it to implement the requirements of § 125.84(b)(1) and (2).

(2) *Monitoring conditions.* At a minimum, the permit must require the permittee to perform the monitoring required in § 125.87. You may modify the monitoring program when the permit is reissued and during the term of the permit based on changes in physical or biological conditions in the vicinity of the cooling water intake structure. The Director may require continued monitoring based on the results of the Verification Monitoring Plan in § 125.86(c)(2)(iv)(D).

(3) *Record keeping and reporting.* At a minimum, the permit must require the permittee to report and keep records as required by § 125.88.

[66 FR 65338, Dec. 18, 2001]

Subpart J—Requirements Applicable to Cooling Water Intake Structures for Phase II Existing Facilities Under Section 316(b) of the Act

SOURCE: 69 FR 41683, July 9, 2004, unless otherwise noted.

§ 125.90 What are the purpose and scope of this subpart?

(a) This subpart establishes requirements that apply to the location, design, construction, and capacity of cooling water intake structures at existing facilities that are subject to this subpart (*i.e.*, Phase II existing facilities). The purpose of these requirements is to establish the best technology available for minimizing adverse environmental impact associated with the use of cooling water intake structures. These requirements are implemented through National Pollutant Discharge Elimination System (NPDES) permits issued under section 402 of the Clean Water Act (CWA).

(b) Existing facilities that are not subject to requirements under this or another subpart of this part must meet requirements under section 316(b) of the CWA determined by the Director on a case-by-case, best professional judgment (BPJ) basis.

(c) *Alternative regulatory requirements.* Notwithstanding any other provision of this subpart, if a State demonstrates to the Administrator that it has adopted alternative regulatory requirements in its NPDES program that will result in environmental performance within a watershed that is comparable to the reductions of impingement mortality and entrainment that would otherwise be achieved under § 125.94, the Administrator must approve such alternative regulatory requirements.

(d) Nothing in this subpart shall be construed to preclude or deny the right of any State or political subdivision of a State or any interstate agency under section 510 of the CWA to adopt or enforce any requirement with respect to control or abatement of pollution that is not less stringent than those required by Federal law.

EFFECTIVE DATE NOTE: At 72 FR 37109, July 9, 2007, § 125.90(a), (c), and (d) were suspended.

§ 125.91 What is a “Phase II Existing Facility”?

(a) An existing facility, as defined in § 125.93, is a Phase II existing facility subject to this subpart if it meets each of the following criteria:

- (1) It is a point source.
- (2) It uses or proposes to use cooling water intake structures with a total design intake flow of 50 million gallons per day (MGD) or more to withdraw cooling water from waters of the United States;
- (3) As its primary activity, the facility both generates and transmits electric power, or generates electric power but sells it to another entity for transmission; and
- (4) It uses at least 25 percent of water withdrawn exclusively for cooling purposes, measured on an average annual basis.

(b) In the case of a Phase II existing facility that is co-located with a manufacturing facility, only that portion of the combined cooling water intake flow that is used by the Phase II facility to generate electricity for sale to another entity will be considered for purposes of determining whether the 50 MGD and 25 percent criteria in paragraphs (a)(2) and (4) of this section have been exceeded.