7052.0270 SITE-SPECIFIC WATER QUALITY STANDARDS OR CRITERIA.

Subpart 1. **Applicability.** This part applies when a discharger requests a site-specific criterion or a site-specific modification to a standard, or the agency determines that a site-specific criterion or modification is necessary to protect endangered or threatened species under subpart 5, or highly exposed subpopulations under subpart 7. Site-specific criteria or modifications to standards must be protective of designated uses and aquatic life, wildlife, and human health. Site-specific criteria or modifications must be preceded by a site-specific study of the effects of local environmental conditions on aquatic life, human health, or wildlife toxicity, and how these effects relate to the calculation of standards or criteria. The study must be conducted according to the EPA methods in chapter 3 of the U.S. EPA Water Quality Standards Handbook, Second Edition (EPA-823-B-94-005a, August 1994), which is adopted and incorporated by reference in part 7052.0015, item G. The agency must approve the site-specific study and, upon approval, the agency must use the study data to develop each site-specific criterion or standard, which then must be submitted to EPA for approval.

Subp. 2. **Considerations for endangered and threatened species.** The agency must apply the provisions in items A to C when modifying a standard or developing a site-specific criterion.

A. Any site-specific modifications that result in less stringent standards or site-specific criteria must not jeopardize the continued existence of endangered or threatened species listed or proposed under chapter 6134 or section 4 of the Endangered Species Act (ESA), United States Code, title 16, section 1533, or result in the destruction or adverse modification of such species' critical habitat.

B. More stringent modifications or site-specific criteria must be developed to protect endangered or threatened species listed or proposed under chapter 6134 or section 4 of the ESA where the water quality jeopardizes the continued existence of such species or results in the destruction or adverse modification of such species' critical habitat.

C. More stringent modifications or site-specific criteria must also be developed to protect candidate (C1) species being considered by the United States Fish and Wildlife Service for listing under section 4 of the ESA, where such modifications are necessary to protect such species.

Subp. 3. **Aquatic life.** The agency must modify an aquatic life standard to a more stringent or less stringent site-specific standard, or determine a site-specific criterion, based upon the results of a site-specific study completed according to subpart 1 if the study demonstrates that:

A. the local water quality characteristics, such as pH, hardness, temperature, and color, alter the biological availability or toxicity of a GLI pollutant;

B. local physical and hydrological conditions exist that alter the toxicity of a GLI pollutant; or

C. the sensitivity of the aquatic organisms that occur at that site differs from the species actually used in developing the standards or criteria. The taxa that occur at the site cannot be determined merely by sampling downstream and/or upstream of the site at one point in time. The phrase "occur at the site" does not include taxa that were once present at the site but cannot exist at the site now due to permanent physical alteration of the habitat at the site. It does include the species, genera, families, orders, classes, and phyla that:

(1) are usually present at the site;

(2) are present at the site only seasonally due to migration;

(3) are present intermittently because they periodically return to or extend their ranges into the site;

(4) were present at the site in the past, are not currently present at the site due to degraded conditions, and are expected to return to the site when conditions improve; or

(5) are present in nearby bodies of water, are not currently present at the site due to degraded conditions, and are expected to be present at the site when conditions improve.

If item A, B, or C indicates that the GLI pollutant is more toxic at the site or organisms are more sensitive, or if additional protection is necessary to maintain designated aquatic life uses, the agency must calculate a more stringent site-specific standard or criterion. If item A, B, or C indicates that the GLI pollutant is less toxic at the site or organisms are less sensitive than those used in the calculation of the standard or criterion, and neither item A, B, nor C indicate greater toxicity, the agency must calculate a less stringent site-specific standard or criterion.

Subp. 4. **Wildlife.** The agency must modify a wildlife standard to a more stringent or less stringent site-specific standard, or determine a site-specific criterion, based upon the results of a site-specific study completed according to subpart 1. More stringent site-specific water quality standards or criteria must be developed when a site-specific bioaccumulation factor (BAF) is derived which is higher than the systemwide BAF derived under part 7052.0110. Less stringent site-specific water quality standards or criteria must be developed when a site-specific BAF is derived which is lower than the systemwide BAF derived under part 7052.0110. The agency's modification evaluation must evaluate both the mobility of the prey organisms and wildlife populations in defining the site for which the criteria or modified standards are developed. In addition, for less stringent site-specific

water quality standards or criteria to be applied in a permit there must be a demonstration by either the discharger or the agency that:

A. any increased uptake of the toxicant by prey species utilizing the site will not cause adverse effects in wildlife populations; and

B. wildlife populations utilizing the site or downstream surface waters of the state will continue to be fully protected.

Subp. 5. **Site-specific modifications to protect threatened or endangered species.** The agency must modify both aquatic life and wildlife standards or develop criteria on a site-specific basis to protect threatened or endangered species where the water quality jeopardizes the continued existence of such species or results in the destruction or adverse modification of such species' critical habitat. The provisions in items A and B apply to site-specific standards or criteria to protect endangered or threatened species.

A. Site-specific modifications to aquatic life standards, or site-specific criteria, must be calculated by the agency when one of the following methods is applicable:

(1) If the species mean acute value for a listed or proposed species, or an applicable surrogate of such species, is lower than the calculated FAV, the lower species mean acute value must be used instead of the calculated FAV in developing the site-specific criterion or standard.

(2) The site-specific criterion or standard must be calculated using the recalculation procedure for site-specific modifications when the sensitivities of organisms used to derive the GLI pollutant standard or criterion are different from the sensitivities of the organisms that occur at the site. The recalculation procedure is described in chapter 3 of the U.S. EPA Water Quality Standards Handbook, Second Edition (EPA-823-B-94-005a, August 1994), which is adopted and incorporated by reference in part 7052.0015, item G.

(3) If the methods in subitems (1) and (2) are both applicable, the agency must follow both methods to calculate site-specific modifications to aquatic life standards or site-specific criteria, then compare the results and apply the more stringent standards or criteria.

B. For any modifications to wildlife standards or criteria, the agency must evaluate both the mobility of prey organisms and wildlife populations in defining the site for which standards or criteria are developed and must use the following method to calculate site-specific standards or criteria:

(1) substitute appropriate species-specific toxicological, epidemiological, or exposure information, including changes to the BAF, used in the GLI Guidance methodology referenced in part 7052.0110, subpart 5;

(2) use an interspecies uncertainty factor of 1 where epidemiological data are available for the species in question. If applicable, species-specific exposure parameters must be derived using the GLI Guidance methodology referenced in part 7052.0110, subpart 5;

(3) apply an intraspecies sensitivity factor to the denominator in the effect part of the wildlife equation in the GLI Guidance methodology referenced in part 7052.0110, subpart 5, in accordance with the other uncertainty factors described in that method; and

(4) compare the resulting wildlife criterion or standard for the species in question to the class-specific avian and mammalian wildlife values previously calculated under part 7052.0110, subpart 5, and apply the lowest of the three as the site-specific standard or criterion.

Subp. 6. **Bioaccumulation factors.** The agency must modify BAFs on a site-specific basis to larger values if data from the study approved under subpart 1 show that a bioaccumulation value derived from local bioaccumulation data is greater than the systemwide value. Site-specific BAFs must be derived using the GLI Guidance methodology referenced in part 7052.0110, subpart 3. The agency must modify BAFs on a site specific basis to lower values if:

A. the fraction of the total chemical freely dissolved in the ambient water is less than that used to derive the systemwide BAFs;

B. input parameters of the Gobas model, such as the input structure of the aquatic food web and the disequilibrium constant, are different at the site than those used to derive the systemwide BAFs;

C. the percent lipid of the aquatic organisms that are consumed and occur at the site is lower than that used to derive the systemwide BAFs; or

D. site-specific, field measured BAFs or biota-sediment accumulation factors are determined.

Subp. 7. **Human health.** The agency must modify human health standards or determine criteria on a site-specific basis to provide additional protection necessary for highly exposed subpopulations. A subpopulation is highly exposed if the dosage of the GLI pollutant is greater for the subpopulation due to increased fish consumption rates, increased water ingestion rates, or an increased BAF. The agency must develop less stringent site-specific human health standards or criteria if the study approved under subpart 1 demonstrates that:

A. local fish consumption rates are lower than the rate used in deriving human health standards or criteria in part 7052.0110, subpart 4; or

B. a site-specific BAF is derived under subpart 6 which is lower than that used in deriving human health standards or criteria in part 7052.0110, subpart 4.

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