

Environmental Protection Agency

§ 721.91

(c) Any predictable or purposeful release of a use stream containing the substance associated with any use of the substance from any site:

(1) Into the waters of the United States.

(2) Into the waters of the United States without application of one or more of the following treatment technologies as specified in subpart E of this part either by the discharger or, in the case of a release through publicly-owned treatment works, by a combination of treatment by the discharger and the publicly-owned treatment works:

(i) Chemical precipitation and settling.

(ii) Biological treatment (activated sludge or equivalent) plus clarification.

(iii) Steam stripping.

(iv) Resin or activated carbon adsorption.

(v) Chemical destruction or conversion.

(vi) Primary wastewater treatment.

(3) Into the waters of the United States without primary wastewater treatment, and secondary wastewater treatment as defined in 40 CFR part 133.

(4) Into the waters of the United States if the quotient from:

$$\frac{\text{number of kilograms/day/site released}}{\text{receiving stream flow (million liters/day)}} \times 1000 = N \text{ parts per billion}$$

exceeds the level specified in subpart E of this part, when calculated using the methods described in § 721.91. In lieu of calculating the above quotient, however, monitoring or alternative calculations may be used to predict the surface water concentration expected to result from intended release of the substance, if the monitoring procedures or calculations have been approved for such purpose by EPA. EPA will review and act on written requests to approve monitoring procedures or alternative calculations within 90 days after such requests are received. EPA will inform submitters of the disposition of such requests in writing, and will explain the reasons therefor when they are denied.

§ 721.91 Computation of estimated surface water concentrations: Instructions.

These instructions describe the use of the equation specified in § 721.90(a)(4) and (b)(4) to compute estimated surface water concentrations which will result from release of a substance identified in subpart E of this part. The equation shall be computed for each site using the stream flow rate appropriate for the site according to paragraph (b) of this section, and the highest number of kilograms calculated to be released for that site on a given day according to

paragraph (a) of this section. Two variables shall be considered in computing the equation, the number of kilograms released, and receiving stream flow.

(a) *Number of kilograms released.* (1) To calculate the number of kilograms of substance to be released from manufacturing, processing, or use operations, as specified in the numerator of the equation, develop a process description diagram which describes each manufacturing, processing, or use operation involving the substance. The process description must include the major unit operation steps and chemical conversions. A unit operation is a functional step in a manufacturing, processing, or use operation where substances undergo chemical changes and/or changes in location, temperature, pressure, physical state, or similar characteristics. Include steps in which the substance is formulated into mixtures, suspensions, solutions, etc.

(2) Indicate on each diagram the entry point of all feedstocks (e.g., reactants, solvents, and catalysts) used in the operation. Identify each feedstock and specify its approximate weight regardless of whether the process is continuous or batch.

(3) Identify all release points from which the substance or wastes containing the substance will be released into air, land, or water. Indicate these

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release points on the diagram. Do not include accidental releases or fugitive emissions.

(4) For releases identified in the diagram that are destined for water, estimate the amount of substance that will be released before the substance enters control technology. The kilograms of substance released may be estimated based on:

(i) The mass balance of the operation, i.e., totaling inputs and outputs, including wastes for each part of the process such that outputs equal inputs. The amount released to water may be the difference between the amount of the substance in the starting material (or formed in a reaction) minus the amount of waste material removed from each part of the process and not released to water and the amount of the substance in the final product.

(ii) Physical properties such as water solubility where a known volume of water being discharged is assumed to contain the substance at concentrations equal to its solubility in water. This approach is particularly useful where the waste stream results from separation of organic/water phases or filtration of the substance from an aqueous stream to be discharged.

(iii) Measurements of flow rates of the process/use stream and known concentrations of the substance in the stream.

(5) After releases of a substance to water are estimated for each operation on a site, total the releases of the substance to water from all operations at that site. The value (number of kilograms) specified in the numerator of the equation should reflect total kilograms of substance released to water per day from all operations at a single site.

(6) Use the highest expected daily release of the substance for each site.

(b) *Receiving stream flow.* (1) The receiving stream flow shall be expressed in million liters per day (MLD). The flow rate data to be used must be for the point of release on the water body that first receives release of the substance whether by direct discharge from a site, or by indirect discharge through a Publicly-Owned Treatment Works (POTW) for each site. The flow rate reported shall be the lowest 7-day

average stream flow with a recurrence interval of 10 years (7-Q-10). If the 7-Q-10 flow rate is not available for the actual point of release, the stream flow rate should be used from the U.S. Geological Survey (USGS) gauging station that is nearest the point of release that is expected to have a flow rate less than or equal to the receiving stream flow at the point of release.

(2) Receiving stream flow data may be available from the National Pollutant Discharge Elimination System (NPDES) permit for the site or the POTW releasing the substance to surface water, from the NPDES permit-writing authority for the site or the POTW, or from USGS publications, such as the water-data report series.

(3) If receiving stream flow data are not available for a stream, either the value of 10 MLD or the daily flow of wastewater from the site or the POTW releasing the substance must be used as an assumed minimum stream flow. Similarly, if stream flow data are not available because the location of the point of release of the substance to surface water is a lake, estuary, bay, or ocean, then the flow rate to be used must be the daily flow of wastewater from the site or the POTW releasing the substance to surface water. Wastewater flow data may be available from the NPDES permit or NPDES authority for the site or the POTW releasing the substance to water.

Subpart C—Recordkeeping Requirements

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This subpart C identifies certain additional recordkeeping requirements applicable to manufacturers, importers, and processors of substances identified in subpart E of this part for each specific substance. The provisions of this subpart C apply only when referenced in subpart E of this part for a substance and significant new use identified in that subpart E. If the provisions in this subpart C conflict with general provisions of subpart A of this part, the provisions of this subpart C shall apply.

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