(a) Discharge conditions have not changed; and

(b) No surface water impacts attributable to the facility have been identified.

.02-2 Minimum Levels for Discharge Permit Limits.

Some permit limits expressed as concentrations of specific chemicals may be below the minimum levels for those chemicals. For these permit limits, the level of compliance shall be the minimum level.

.02-3 Discharge Permit Limits Based on Biological Translator.

A. General. Biologically available equivalence addresses the potential for an effluent constituent, present primarily in the particulate or relatively non-bioavailable form, to become transformed by mixing with the receiving water to a bioavailable form. The biological translator utilizes the relationship between effluent-receiving water toxicity testing results and the laboratory standard dilution water toxicity data to relate an instream aquatic life criterion to the impact of a specific effluent. This ratio provides discharge-specific information concerning the assimilative capacity of the surface water for a specific pollutant when contained in a particular discharge.

B. Discharge Requirements for Use of the Biological Translator.

(1) Before the use of a biological translator in a waste load allocation to determine specific discharge permit limits, a discharger shall demonstrate:

(a) For acute aquatic life criteria, a history of repeated whole effluent toxicity testing at four consecutive quarterly intervals where the effluent, upon allowance for confirmation tests on failures, consistently exhibits an LC_{50} greater than 100 percent;

(b) For chronic aquatic life criteria, a history of repeated whole effluent toxicity testing at four consecutive quarterly intervals where the effluent, upon allowance for confirmation tests on failures, consistently exhibits an IC_{25} greater than the instream waste concentration at the edge of the chronic mixing zone; and

(c) Achievement of best available technology with satisfactory operation and maintenance.

(2) The discharger shall continue to demonstrate, as appropriate, through whole effluent toxicity testing at quarterly intervals, as required by the discharge permit:

(a) An LC_{50} which, upon allowance for confirmation tests for failures, consistently exceeds 100 percent; or

(b) An IC_{25} which, upon allowance for confirmation tests for failures, consistently exceeds the instream waste concentration at the edge of the chronic mixing zone.

(3) To have the Department continue using a biological translator to derive permit limits, a discharger shall repeat the process of data collection and effects ratio calculation each time the permit is renewed or changed to assure that all factors influencing the effluent-receiving water effects ratio remain the same.

(4) The discharger shall demonstrate that no new BAT is available at each permit renewal.

(5) The discharger shall provide all the necessary data to support the biological translator to the satisfaction of the Department.

C. Procedure.

(1) Notification. A discharger who wants permit limits developed using the biological translator shall notify the Department in writing in accordance with Regulation .01-2B of this chapter. This notification shall include:

(a) The substance or substances for which biologically available equivalence limits are to be developed;

(b) The data demonstrating that the preconditions specified in §B of this regulation have been met; and

(c) The proposed methodology for deriving the biological translator, including sampling times and locations, effluent dilutions, species to be tested, and laboratory quality assurance/quality control procedures.

(2) Time for Completion of Studies. A discharger, having notified the Department as required by §C(1) of this regulation, shall complete all studies supporting use of the biological translator and apply to the Department for approval of the biological translator within 12 months after this notification.

(3) Application. An application for the biological translator shall include the:

(a) Substance or substances for which biologically available equivalence limits are to be developed;

(b) Most recent data collected to satisfy the preconditions in §B of this regulation; and

(c) Data supporting the biological translator.

(4) Development of the Biological Translator. The biological translator shall be developed in accordance with "Guidelines for the Use of a Biological Translator in Wasteload Allocations", (MDE-WMA-003, March 16, 1992), which is incorporated by reference.

(5) Time for Department Action on Application. The Department shall complete its review and either approve or deny use of the biological translator within 6 months after receipt of the application.

(6) Use of the Biological Translator. When the Department has completed its review and determined that the supporting data are satisfactory, the Department shall use the resulting ratio with the appropriate water quality criterion to obtain a revised value for use in the derivation of a permit limit.

(7) Unsatisfactory Biological Translator. If the Department determines that the data supporting the biological translator are unsatisfactory, the Department may not use the resulting ratio. The discharger shall be required by the Department to revise the application or select an alternative approach for establishing permit limits.

(8) Public Participation. Those permit limits developed using the biological translator shall be included in the draft NPDES permit and in the public participation process for permit review.

.02-4 Discharge Permit Limits Based on Chemical Translator.

A. General.

(1) The chemical translator is a mechanism for establishing the relationship between the dissolved concentration used in determining compliance with the instream aquatic life water quality criteria for metals and the measurement required for permit limits and waste load allocation.

(2) The chemical translator may not be used to establish discharge permit limits if the discharger has completed studies, under Regulation .02-3 of this chapter, which support the use of the biological translator.

B. Discharge Requirements for Use of the Chemical Translator.

(1) Before the use of a chemical translator in a waste load allocation to determine specific discharge permit limits, a discharger shall demonstrate:

(a) For acute aquatic life criteria, a history of repeated whole effluent toxicity testing at four consecutive quarterly intervals where the effluent, upon allowance for confirmation tests of failures, consistently exhibits an LC_{50} greater than 100 percent;

(b) For chronic aquatic life criteria, a history of repeated whole effluent toxicity testing at four consecutive quarterly intervals where the effluent, upon allowance for confirmation tests on failures, consistently exhibits an IC_{25} greater than the instream waste concentration at the edge of the chronic mixing zone; and

(c) Achievement of best available technology with satisfactory operation and maintenance.

(2) The discharger shall continue to demonstrate, as appropriate, through whole effluent toxicity testing at quarterly intervals throughout the period of the permit:

(a) An LC_{50} which, upon allowance for confirmation tests for failures, consistently exceeds 100 percent; or

(b) An IC_{25} which, upon allowance for confirmation tests for failures, consistently exceeds the instream waste concentration at the edge of the chronic mixing zone.

(3) To have the Department continue using a chemical translator to derive permit limits, a discharger shall repeat the process of data collection and calculation each time the permit is renewed or changed to assure that all factors influencing the chemical translator remain the same.

(4) The discharger shall demonstrate that no new BAT is available at each permit renewal.

(5) The discharger shall provide all the necessary data to support the chemical translator to the satisfaction of the Department.

C. Procedure.

(1) Notification. A discharger who wants permit limits developed using the chemical translator shall notify the Department in writing in accordance with Regulation .01-2B(4) of this chapter. This notification shall include:

(a) The metal or metals for which chemical translator limits are to be developed;

(b) The data demonstrating that the preconditions in §B of this regulation have been met; and

(c) The proposed methodology for deriving the chemical translator, including sampling times and locations, analytical methods, and all quality assurance/quality control procedures.

(2) Time For Completion of Studies. A discharger, having notified the Department as required by §C(1) of this regulation, shall complete all necessary studies supporting the use of the chemical translator and apply to the Department for approval of the chemical translator within 12 months of this notification.

(3) Application. An application for the chemical translator shall include the:

(a) Substance or substances for which the chemical translator limits are to be developed;

(b) Most recent data collected to satisfy the preconditions in §B of this regulation; and

(c) Data supporting the chemical translator developed permit limits.

(4) Development of Chemical Translator. The chemical translator is a ratio designed to estimate concentrations of total recoverable metal from a water quality criterion applied as dissolved metal. This ratio shall be developed using one of the following methods:

(a) The discharger demonstrates, to the satisfaction of the Department, the ratio between dissolved and total recoverable metal concentrations through the collection and evaluation of appropriate field data; or

(b) For fresh receiving waters only, the discharger uses the following ratio of total recoverable (C_T) to dissolved (C) metal concentrations:

$$\frac{C_T}{T} = 1 + K_p[ss] \times 10^{-6}, \text{ where}$$

(i) K_p is the linear partition coefficient in the units Kg^{-1};

(ii) [ss] is the concentration of suspended solids in the units mg/L; and

(iii) $K_p = K_{po}[ss]^a$, where the values for K_{po} and a are given in the following table:

Linear Partition Coefficients for Priority Metals in Streams and Lakes

	Streams		*Lakes*	
Metal	K_{po}	a	K_{po}	a
Arsenic	0.48×10^6	-0.73	(Assumed to be equal to streams)	
Cadmium	4.00×10^6	-1.13	3.52×10^6	-0.92
Chromium	3.36×10^6	-0.93	2.17×10^6	-0.27
Copper	1.04×10^6	-0.74	2.85×10^6	-0.90
Lead	0.31×10^6	-0.19	2.04×10^6	-0.53
Mercury	2.90×10^6	-1.14	1.97×10^6	-1.17
Nickel	0.49×10^6	-0.57	2.21×10^6	-0.76
Zinc	1.25×10^6	-0.70	3.34×10^6	-0.68

(5) Time for Department Action on Application. The Department shall complete its review and either approve or deny use of the chemical translator within 6 months of receipt of the application.

(6) Use of the Chemical Translator. When the Department has completed its review and determined that the supporting data are satisfactory, the Department shall use the resulting ratio with the appropriate water quality criterion to obtain a revised value for use in the derivation of a permit limit.

(7) Unsatisfactory Chemical Translator. If the Department determines that the data are unsatisfactory, the Department may not use the resulting ratio supporting the chemical translator. The discharger shall be required by the Department to revise the application or select an alternative approach for establishing permit limits.

(8) Public Participation. Permit limits developed using the chemical translator shall be included in the draft NPDES permit and in the public participation process for permit review.

.03 Monitoring, Recording, and Reporting for Discharge Permits.

A. Monitoring.

(1) A discharge authorized by a discharge permit shall be subject to any monitoring requirements the Department deems necessary, including:

(a) The installation, use, and maintenance of monitoring equipment or methods; and

(b) When appropriate, biological monitoring methods.

(2) Each permit shall specify the sampling and analysis requirements, including the frequency and type of sampling and analysis.

(3) Each permittee shall submit the name and address of the laboratory performing analyses within 30 days of the issuance of the State discharge or NPDES permit. If the permittee changes laboratories during the operating permit, the Department shall be notified within 30 days in writing.

B. Record Keeping.

(1) The permittee shall retain for a minimum of 3 years any records of monitoring activities and results including all:

(a) Raw data and original strip chart recordings;

(b) Calibration and maintenance records; and

(c) Reports.

(2) This period of retention shall be extended during the course of unresolved litigation regarding the discharge of pollutants, or when requested by the Department.

(3) All records of monitoring shall include for all samples:

(a) The date, exact place, time, and method of sampling;

(b) The dates of analyses;

(c) Who performed the analyses;

(d) The analytical techniques and methods used; and

(e) The results of the analyses.

C. Reporting.

(1) The permittee shall submit the monitoring results to the Department on the proper discharge monitoring report form.

(2) The report shall be submitted in the time frame required by each permit.

(3) The reporting period may not be less than once per year.

(4) Measurements below the minimum level may be reported as BML (below minimum level).