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ONTARIO REGULATION 64/95

EFFLUENT MONITORING AND EFFLUENT LIMITS — INORGANIC CHEMICAL SECTOR

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This Regulation is made in English only.

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PART I  
GENERAL

Interpretation

**1.**(1)  In this Regulation,

“assessment parameter”, in relation to a plant, means a parameter that is listed for the plant in Schedule 6;

“cooling water effluent monitoring stream” means a stream on which a sampling point is established under subsection 8 (4);

“cooling water effluent sampling point” means a sampling point established under subsection 8 (4);

“Director”, in relation to obligations of a discharger, means a Director appointed under section 5 of the Act and responsible for the region in which the discharger’s plant is located and includes an alternate named by the Director;

“discharger” means an owner or person in occupation or having the charge, management or control of a plant to which this Regulation applies;

“limited parameter”,

(a) in relation to a plant named in Schedule 4, means a parameter for which a limit is specified in Column 3 of the Table for the plant in Schedule 4, and

(b) in relation to a plant not named in Schedule 4, means a parameter for which a limit is specified in Column 3 or 4 of the Table for the plant in Schedule 2;

“merged effluent monitoring stream” means a stream on which a sampling point is established under subsection 8 (3);

“merged effluent sampling point” means a sampling point established under subsection 8 (3);

“merged parameter”, in relation to a plant, means a parameter that is listed for the plant in Schedule 5;

“pick up”, in relation to a sample, means pick up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;

“plant” means an industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;

“process change” means a change in equipment, production processes, process materials or treatment processes;

“process effluent batch monitoring stream” means a stream on which a sampling point is established under subsection 8 (2);

“process effluent batch sampling point” means a sampling point established under subsection 8 (2);

“process effluent monitoring stream” means a stream on which a sampling point is established under subsection 8 (1);

“process effluent sampling point” means a sampling point established under subsection 8 (1);

“process materials”, in relation to a discharger’s plant, means raw materials for use in an industrial process at the plant, manufacturing intermediates produced at the plant, or products or by-products of an industrial process at the plant, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;

“quarter” means all or part of a period of three consecutive months beginning on the first day of January, April, July or October;

“semi-annual period” means all or part of a period of six months beginning on the first day of January or July;

“specific parameter” means 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran and 2,3,7,8 substituted dioxin and furan congeners. O. Reg. 311/17, s. 1.

(2)  For greater certainty, this Regulation applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

(3)  An obligation on a discharger to do a thing under this Regulation is discharged if another person has done it on the discharger’s behalf. O. Reg. 64/95, s. 1.

Purpose

**2.**The purpose of this Regulation is to monitor and control the quality of effluent discharged from the plants listed in Schedule 1. O. Reg. 64/95, s. 2.

Application

**3.**(1)  This Regulation applies only with respect to the plants listed in Schedule 1.

(2)  This Regulation does not apply with respect to the discharge of effluent to a municipal sanitary sewer. O. Reg. 64/95, s. 3.

Obligations under Approvals, Orders, etc.

**4.**For greater certainty, subject to subsection 186 (4) of the Act, the requirements of this Regulation are in addition to and independent of requirements in an approval, order, direction or other instrument issued under any Act. O. Reg. 64/95, s. 4.

Non-application of the General Effluent Monitoring Regulation

**5.**This Regulation is not a Sectoral Effluent Monitoring Regulation within the meaning of Ontario Regulation 695/88. O. Reg. 64/95, s. 5.

By-passes

**6.**Beginning on February 16, 1998, a discharger shall not permit effluent that would ordinarily flow past a sampling point established under this Regulation to be discharged from the discharger’s plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event. O. Reg. 64/95, s. 6.

Sampling and Analytical Procedures

**7.**(1)  Each discharger shall carry out the establishment of sampling point obligations of this Regulation and the sampling and analysis obligations of this Regulation, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry of the Environment publication entitled “Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater”, as amended from time to time. O. Reg. 238/07, s. 1.

(2)  Each discharger shall maintain the sampling equipment used at the discharger’s plant for sampling required by this Regulation in a way that ensures that the samples collected at the plant under this Regulation accurately reflect the level of discharge of each limited parameter, merged parameter, assessment parameter and specific parameter from the plant. O. Reg. 64/95, s. 7 (2).

PART II  
SAMPLING POINTS

Establishment and Elimination of Sampling Points

**8.**(1)  Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent sampling point in the Table for the discharger’s plant in Schedule 2. O. Reg. 311/17, s. 2 (1).

(2)  Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a process effluent batch sampling point in the Table for the discharger’s plant in Schedule 4. O. Reg. 311/17, s. 2 (2).

(3)  Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a merged effluent sampling point in the Table for the discharger’s plant in Schedule 5. O. Reg. 311/17, s. 2 (3).

(4)  Each discharger shall, by May 15, 1995, establish a sampling point at each sampling point location designated as a cooling water effluent sampling point in the Table for the discharger’s plant in Schedule 6. O. Reg. 311/17, s. 2 (4).

(5)  If the Director is satisfied, on the basis of written submissions from a discharger, that one or more of the circumstances described in subsection (6) exist at the discharger’s plant, with the result that it is impractical to maintain or use a sampling point established at the plant under this Regulation, the Director may give the discharger written permission to eliminate the sampling point.

(6)  For the purposes of subsection (5), the circumstances at the discharger’s plant that might make it impractical to maintain or use a sampling point are the following:

1. A process change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the discharger’s plant.

2. Equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.

3. The effluent flowing in the stream on which the sampling point was established under this Regulation has been or is expected to be permanently eliminated.

(7)  Where a discharger is permitted to eliminate a sampling point because of a circumstance described in paragraph 1 or 2 of subsection (6), the discharger shall, within 90 days after the day on which the sampling point is eliminated, establish a replacement sampling point.

(8)  The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the Director.

(9)  The Director shall not approve a location for the replacement sampling point unless he or she is satisfied that monitoring at the new location would yield results that would reflect the level of discharge of each limited parameter, merged parameter and assessment parameter from the discharger’s plant as reliably as did monitoring at the eliminated sampling point.

(10)  A discharger who replaces a sampling point under subsection (7) has all the same obligations in connection with the replacement sampling point that the discharger had in connection with the eliminated sampling point. O. Reg. 64/95, s. 8.

Reports on Sampling Points

**9.**(1)  By May 25, 1995, each discharger shall submit to the Director a list and plot plan showing the sampling points established under this Regulation at the discharger’s plant as of May 15, 1995.

(2)  Each discharger who eliminates a sampling point at the discharger’s plant under subsection 8 (5) but is not required to replace the sampling point under subsection 8 (7) shall, within 30 days after the day on which a sampling point is eliminated, give the Director a written notice describing where the sampling point used to be, together with a revised list and plot plan without the sampling point.

(3)  Within 30 days after replacing a sampling point under subsection 8 (7), the discharger shall give the Director a written notice describing the location of the replacement sampling point, together with a revised list and plot plan showing the replacement sampling point. O. Reg. 64/95, s. 9.

Use of Sampling Points Established under This Part

**10.**Except as permitted or required under section 25, each discharger shall use the sampling points established under this Part for all sampling required by this Regulation. O. Reg. 64/95, s. 10.

PART III  
CALCULATION OF LOADINGS

Calculation of Loadings — General

**11.**(1)  For the purposes of performing a calculation under sections 12, 13, 14 and 15, a discharger shall use the actual analytical result obtained by the laboratory. O. Reg. 64/95, s. 11 (1).

(2)  Despite subsection (1), where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry of the Environment publication entitled “Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater”, as amended from time to time, the discharger shall use the value zero for the purpose of performing a calculation under sections 12, 13, 14 and 15. O. Reg. 238/07, s. 2.

(3)  Each discharger shall ensure that each calculation of a process effluent loading required by section 12, each calculation of a process effluent batch loading required by section 13 and each calculation of a merged effluent loading required by section 14 is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the discharger. O. Reg. 64/95, s. 11 (3).

(4)  Each discharger shall ensure that each calculation of a cooling water effluent loading required by section 15 is performed in time to comply with subsection 41 (4). O. Reg. 64/95, s. 11 (4).

Calculation of Loadings — Process Effluent

**12.**(1)  Each discharger shall calculate, in kilograms, a daily process effluent stream loading for each limited parameter in each process effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2)  When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3)  Each discharger shall calculate, in kilograms, a daily process effluent plant loading for each limited parameter for each day for which the discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1).

(4)  For the purposes of subsection (3), a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5)  Where a discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1), the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily process effluent stream loading for the parameter for the day.

(6)  Each discharger shall calculate, in kilograms, a monthly average process effluent plant loading for each limited parameter for each month in which a sample is collected under this Regulation more than once from a process effluent monitoring stream at the discharger’s plant for analysis for the parameter.

(7)  For the purposes of subsection (6), a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 12.

Calculation of Loadings — Process Effluent — Batch

**13.**(1)  In addition to complying with section 12, each discharger shall calculate, in kilograms, a process effluent batch stream loading for each limited parameter in each process effluent batch monitoring stream of the discharger for each process effluent batch for which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2)  When calculating a batch stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the batch volume of effluent, as determined under section 34, for the stream for the batch. O. Reg. 64/95, s. 13.

Calculation of Loadings — Merged Effluent

**14.**(1)  Each discharger shall calculate, in kilograms, a daily merged effluent stream loading for each merged parameter in each merged effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2)  When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3)  Each discharger shall calculate, in kilograms, a daily merged effluent plant loading for each merged parameter for each day for which the discharger is required to calculate a merged effluent stream loading for the parameter under subsection (1).

(4)  For the purposes of subsection (3), a daily merged effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5)  Where a discharger calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1), the daily merged effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily merged effluent stream loading for the parameter for the day.

(6)  Each discharger shall calculate, in kilograms, a monthly average merged effluent plant loading for each merged parameter for each month in which a sample is collected under this Regulation more than once from a merged effluent monitoring stream at the discharger’s plant for analysis for the parameter.

(7)  For the purposes of subsection (6), a monthly average merged effluent plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 14.

Calculation of Loadings — Cooling Water

**15.**(1)  Each discharger shall calculate, in kilograms, a daily cooling water effluent stream loading for each assessment parameter in each cooling water effluent monitoring stream of the discharger for each day on which a sample is collected under this Regulation from the stream for analysis for the parameter.

(2)  When calculating a daily stream loading under subsection (1), the discharger shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under section 34, for the stream for the day.

(3)  Each discharger shall calculate, in kilograms, a daily cooling water effluent plant loading for each assessment parameter for each day for which the discharger is required to calculate a daily cooling water effluent stream loading for the parameter under subsection (1).

(4)  For the purposes of subsection (3), a daily cooling water effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for the parameter calculated under subsection (1) for the day.

(5)  Where a discharger calculates only one daily cooling water effluent stream loading for a parameter for a day under subsection (1), the daily cooling water effluent plant loading for the parameter for the day for the purposes of subsection (3) is the single daily cooling water effluent stream loading for the parameter for the day.

(6)  Each discharger shall calculate, in kilograms, a monthly average cooling water effluent plant loading for each  assessment parameter for each month in which a sample is collected under this Regulation more than once from a cooling water effluent monitoring stream at the discharger’s plant for analysis for the parameter.

(7)  For the purposes of subsection (6), a monthly average cooling water effluent plant loading for a parameter for a month is the arithmetic mean of the daily cooling water effluent plant loadings for the parameter calculated under subsection (3) for the month. O. Reg. 64/95, s. 15.

PART IV  
PARAMETER AND LETHALITY LIMITS

Parameter Limits

**16.**(1)  Each discharger shall ensure that each daily process effluent plant loading calculated for a parameter under section 12 in connection with the discharger’s plant does not exceed the daily plant loading limit specified for the parameter and the plant in Column 3 of the Table for the discharger’s plant in Schedule 2. O. Reg. 64/95, s. 16 (1); O. Reg. 311/17, s. 3 (1).

(2)  Each discharger shall ensure that each monthly average process effluent plant loading calculated for a parameter under section 12 in connection with the discharger’s plant does not exceed the monthly average plant loading limit specified for the parameter and the plant in Column 4 of the Table for the discharger’s plant in Schedule 2. O. Reg. 64/95, s. 16 (2); O. Reg. 311/17, s. 3 (2).

(3)  Each discharger shall ensure that each process effluent batch stream loading calculated for a parameter under section 13 in connection with the discharger’s plant does not exceed the batch loading limit specified for the parameter and the plant in Column 3 of the Table for the discharger’s plant in Schedule 4. O. Reg. 64/95, s. 16 (3); O. Reg. 311/17, s. 3 (3).

(4)  Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger’s plant to ensure that the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin and the concentration of 2,3,7,8-tetrachlorodibenzofuran are both non-measurable in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant. O. Reg. 64/95, s. 16 (4).

(5)  For the purposes of subsection (4), the concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzo-para-dioxin of less than 20 picograms per litre and the concentration of 2,3,7,8-tetrachlorodibenzofuran in a sample is non-measurable if analysis of the sample shows a concentration of 2,3,7,8-tetrachlorodibenzofuran of less than 50 picograms per litre. O. Reg. 64/95, s. 16 (5).

(6)  Each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger’s plant to ensure that the total toxic equivalent concentration of 2,3,7,8 substituted dioxin and furan congeners in any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant, calculated in accordance with the methods described in the Ministry of the Environment publication entitled “Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater”, as amended from time to time, does not exceed 60 picograms per litre. O. Reg. 238/07, s. 3.

(7)  Subject to subsections (8) to (10), each discharger shall control the quality of each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger’s plant to ensure that the pH value of any sample collected at a process effluent sampling point or a process effluent batch sampling point at the plant is within the range of 6.0 to 9.5. O. Reg. 64/95, s. 16 (7).

(8)  Throughout any day on which a discharger has used an alternate sampling point on a process effluent monitoring stream for sampling required by section 25, as permitted by subsections 25 (7) and (8), the discharger,

(a) shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and

(b) need not comply with subsection (7) with respect to the stream. O. Reg. 64/95, s. 16 (8).

(9)  Subsection (7) does not apply to any process effluent monitoring stream for which no sampling point is listed in Schedule 7 or 8. O. Reg. 64/95, s. 16 (9).

(10)  Each discharger shall control the quality of each process effluent monitoring stream described in subsection (9) to ensure that the pH value of any sample collected under this Regulation from the stream is within the range of 6.0 to 12.0. O. Reg. 64/95, s. 16 (10).

Lethality Limits

**17.**Each discharger shall control the quality of each stream at the discharger’s plant for which a sampling point is listed in Schedule 7 to ensure that each rainbow trout acute lethality test and each Daphnia magna acute lethality test performed on any grab sample collected at a sampling point listed in Schedule 7 for the plant results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 64/95, s. 17.

PART V  
MONITORING

Monitoring — General

**18.**(1)  Where a discharger is required by this Regulation to pick up a set of samples and analyze it for certain parameters, the discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

(2)  A discharger shall use all reasonable efforts to ensure that all analyses required by this Regulation are completed as soon as reasonably possible and that the results of those analyses are made available to the discharger as soon as reasonably possible.

(3)  Subject to subsection (4), each discharger shall pick up all sets of samples required to be picked up at the discharger’s plant under sections 19, 20, 21, 23 and 32 between the hours of 7 a.m. and 10 a.m.

(4)  If the Director is satisfied, on the basis of written submissions from a discharger, that the circumstances at the discharger’s plant are such that it would be impractical to pick up a set of samples from each sampling point established at the plant under this Regulation within the time period specified in subsection (3), the Director may give the discharger a written notice in respect of the plant, varying the time period specified in subsection (3).

(5)  Subject to subsections (6) and (7), where a discharger is required by section 19, 20, 21, 23 or 32 to pick up a set of samples the discharger shall pick up a set collected over the 24-hour period immediately preceding the pick-up.

(6)  The 24-hour period referred to in subsection (5) may be shortened or enlarged by up to three hours to permit a discharger to take advantage of the three-hour range specified in subsection (3) or of a different three-hour period specified in a notice under subsection (4).

(7)  Where a notice has been given under subsection (4) in respect of a plant specifying a time period longer than three hours, the 24-hour period referred to in subsection (5) may be shortened or enlarged by up to that longer amount of time to permit the discharger to take advantage of the time period specified in the notice.

(8)  If the circumstances at a plant change so that the Director is satisfied that the circumstances described in subsection (4) no longer apply at the plant, the Director may revoke a notice given in respect of a plant under subsection (4) by giving a notice of revocation in writing to a discharger for the plant. O. Reg. 64/95, s. 18.

Monitoring — Process Effluent — Daily

**19.**(1)  Each discharger shall, on each day, pick up a set of samples collected at each process effluent sampling point at the discharger’s plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of the Table for the discharger’s plant in Schedule 2, is daily. O. Reg. 311/17, s. 4 (1).

(2)  A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an “x” in the column for that sampling point in the Table for the discharger’s plant in Schedule 3. O. Reg. 311/17, s. 4 (2).

(3)  A discharger is relieved of the obligations under subsection (1) relating to a parameter and shall instead, on three days in each week, pick up a set of samples collected at each process effluent sampling point at the discharger’s plant and analyze each set of samples for the parameter where,

(a) the discharger has performed monitoring under subsection (1) for 12 consecutive months; and

(b) the monthly average process effluent plant loading for the parameter, for each of the 12 months, as calculated under subsection 12 (6), is equal to or less than 75 per cent of the monthly average plant loading limit for the parameter as set out in Column 4 of the Table for the discharger’s plant in Schedule 2. O. Reg. 311/17, s. 4 (3).

(4)  There shall be an interval of at least 24 hours between successive pick-up days at the plant under subsection (3).

(5)  All samples picked up under subsection (3) in a week shall be picked up on the same three days in the week.

(6)  Subsection (3) ceases to apply in relation to a parameter and a discharger shall instead comply with the requirements of subsection (1) in relation to the parameter where, during any 12 consecutive months,

(a) a daily process effluent plant loading for the parameter, as calculated under subsection 12 (3), exceeds the daily plant loading limit for the parameter as set out in Column 3 of the Table for the discharger’s plant in Schedule 2, on any three occasions; or

(b) a monthly average process effluent plant loading for the parameter, as calculated under subsection 12 (6), exceeds the monthly average plant loading limit as set out in Column 4 of the Table for the discharger’s plant in Schedule 2, on any two occasions. O. Reg. 311/17, s. 4 (4, 5).

(7)  A discharger shall notify the Director in writing of any change in the frequency of monitoring under this section at the discharger’s plant within 30 days after the day on which the change occurs.

(8)  A discharger need not meet the requirements of subsection (1) where it is impossible to do so because of sampling by a provincial officer. O. Reg. 64/95, s. 19.

Monitoring — Process Effluent — Weekly

**20.**(1)  Each discharger shall, on one day in each week, pick up a set of samples collected at each process effluent sampling point at the discharger’s plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of the Table for the discharger’s plant in Schedule 2, is weekly. O. Reg. 311/17, s. 5 (1).

(2)  A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an “x” in the column for that sampling point in the Table for the discharger’s plant in Schedule 3. O. Reg. 311/17, s. 5 (2).

(3)  There shall be an interval of at least four days between successive pick-up days at the plant under subsection (1).

(4)  All samples picked up under subsection (1) in a week shall be picked up on the same day in the week. O. Reg. 64/95, s. 20.

Monitoring — Process Effluent — Quarterly

**21.**(1)  Each discharger shall, on one day in each quarter, on a day on which samples are picked up at the plant under subsection 20 (1), or, in a quarter in which no samples are picked up at the plant under section 20, on any day in the quarter, pick up a set of samples collected at each process effluent sampling point at the discharger’s plant and shall, subject to subsection (2), analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of the Table for the discharger’s plant in Schedule 2, is quarterly. O. Reg. 523/95, s. 2; O. Reg. 311/17, s. 6 (1).

(2)  A discharger for a plant referred to in Schedule 3 need not analyze any set of samples collected at a process effluent sampling point for any parameter not marked with an “x” in the column for that sampling point in the Table for the discharger’s plant in Schedule 3. O. Reg. 311/17, s. 6 (2).

(3)  There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (1).

(4)  All samples picked up under subsection (1) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 21 (2-4).

Monitoring — Process Effluent — Batch

**22.**(1)  Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger’s plant, pick up a set of samples collected at the sampling point and shall analyze the set of samples for the parameters listed in Column 1 of the Table for the discharger’s plant in Schedule 4. O. Reg. 311/17, s. 7.

(2)  Where a discharger is required by subsection (1) to pick up a set of samples collected at a process effluent batch sampling point, the discharger shall pick up a set collected throughout the period during which the batch flowed past the sampling point. O. Reg. 64/95, s. 22.

Monitoring — Merged Effluent — Weekly

**23.**(1)  Each discharger shall, on one day in each week, pick up a set of samples collected at each merged effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of the Table for the discharger’s plant in Schedule 5. O. Reg. 311/17, s. 8.

(2)  All samples collected and picked up at a plant under subsection (1) shall be collected and picked up on a day on which samples are picked up at the plant under subsection 20 (1) or, in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under subsection 22 (1). O. Reg. 64/95, s. 23.

Monitoring — Process Effluent — Quality Control

**24.**(1)  On one day in each year after 1995, on a day on which samples are picked up at the plant under subsection 20 (1), each discharger shall collect and pick up a duplicate sample for each sample picked up on that day under subsection 20 (1) at one process effluent sampling point at the discharger’s plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of the Table for the discharger’s plant in Schedule 2, is weekly or quarterly. O. Reg. 64/95, s. 24 (1); O. Reg. 311/17, s. 9.

(2)  Despite subsection (1), a discharger need not analyse any sample under subsection (1) for 2,3,7,8-tetrachlorodibenzo-para-dioxin, 2,3,7,8-tetrachlorodibenzofuran or 2,3,7,8 substituted dioxin and furan congeners. O. Reg. 64/95, s. 24 (2).

(3)  Each discharger shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry of the Environment publication entitled “Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater”, as amended from time to time. O. Reg. 238/07, s. 4.

(4)  There shall be an interval of at least six months between successive pick-up days at the plant under subsection (1). O. Reg. 64/95, s. 24 (4).

Monitoring — Process Effluent — pH Measurement

**25.**(1)  Each discharger shall, on each day, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each process effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH.

(2)  Each discharger shall, within each 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) on each day, collect two more grab samples from each process effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH.

(3)  There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4)  Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5)  Instead of complying with subsections (1) to (4) with respect to a sampling point, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection in each day.

(6)  There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period.

(7)  For the purposes of subsections (1) to (6), a discharger shall use either the sampling point established under subsection 8 (1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another plant.

(8)  Before using an alternate sampling point under subsection (7), a discharger shall give the Director,

(a) a written notice that,

(i) sets out the name of the alternate sampling point,

(ii) describes its location, and

(iii) assigns a number to it; and

(b) a revised version of the list and plot plan submitted under section 9 showing the alternate sampling point.

(9)  Each discharger shall, each time a batch of effluent flows past a process effluent batch sampling point at the discharger’s plant, collect three grab samples from the sampling point and shall analyze each sample for the parameter pH.

(10)  Where a discharger is required by subsection (9) to collect three grab samples in respect of a batch of effluent, the discharger shall make every reasonable effort to ensure,

(a) that the first grab sample is collected as soon as possible after the batch begins to flow past the sampling point;

(b) that the third grab sample is collected as little before the batch ceases to flow past the sampling point as possible; and

(c) that the interval between the collection of the first and second grab samples is as equal as possible to the interval between the collection of the second and third grab samples. O. Reg. 64/95, s. 25.

Monitoring — Acute Lethality Testing — Rainbow Trout

**26.**(1)  Where a discharger is required by this section to perform a rainbow trout acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled “Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout”, as amended from time to time. O. Reg. 238/07, s. 5.

(2)  Each rainbow trout acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent. O. Reg. 64/95, s. 26 (2).

(3)  On one day in each month, each discharger shall collect and immediately pick up a grab sample at each process effluent sampling point listed in Schedule 7 for the discharger’s plant and shall perform a rainbow trout acute lethality test on each sample. O. Reg. 64/95, s. 26 (3).

(4)  All samples collected and picked up at a plant under subsection (3) shall be collected and picked up,

(a) on a day on which samples are picked up at the plant under subsection 20 (1);

(b) in a month in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under section 21; or

(c) in a month in which no samples are picked up at the plant under subsection 20 (1) or 21 (1), on any day in the month. O. Reg. 523/95, s. 3 (1).

(5)  There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3). O. Reg. 64/95, s. 26 (5).

(6)  All samples picked up under subsection (3) in a month shall be picked up on the same day in the month. O. Reg. 64/95, s. 26 (6).

(7)  Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a rainbow trout acute lethality test on each sample. O. Reg. 64/95, s. 26 (7).

(8)  Samples picked up at a plant under subsection (7) shall be picked up on a day on which samples are picked up at the plant under subsection (3). O. Reg. 64/95, s. 26 (8).

(9)  If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (7) shall be picked up,

(a) on a day on which samples are picked up at the plant under subsection 20 (1); or

(b) in a quarter in which no samples are picked up at the plant under subsection 20 (1), on a day on which samples are picked up at the plant under section 21. O. Reg. 523/95, s. 3 (2).

(10)  There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (7). O. Reg. 64/95, s. 26 (10).

(11)  All samples picked up under subsection (7) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 26 (11).

(12)  If a rainbow trout acute lethality test performed under subsection (7) on any sample from a sampling point results in mortality of more than 50 per cent of the test rainbow trout, subsections (7) to (11) cease to apply in relation to samples from that sampling point, and a discharger shall instead comply with the requirements of subsection (3) relating to the sampling point, until the tests performed under subsection (3) on all samples collected from the sampling point for a further 12 consecutive months result in mortality for no more than 50 per cent of the rainbow trout for each test. O. Reg. 64/95, s. 26 (12).

(13)  A discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Regulation at the discharger’s plant, within 30 days after the day on which the change begins. O. Reg. 64/95, s. 26 (13).

(14), (15)  Revoked: O. Reg. 64/95, s. 26 (16).

(16)  Spent: O. Reg. 64/95, s. 26 (16).

(17)  Subsections (2) to (16) apply with necessary modifications to each process effluent batch sampling point listed in Schedule 7 for the discharger’s plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each process effluent batch sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 22 (1). O. Reg. 64/95, s. 26 (17).

(18)  Subsections (2) to (16) apply with necessary modifications to each merged effluent sampling point listed in Schedule 7 for the discharger’s plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each merged effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to subsection 23 (1). O. Reg. 64/95, s. 26 (18).

(19)  Subsections (2) to (13) apply with necessary modifications to each cooling water effluent sampling point listed in Schedule 7 for the discharger’s plant and, for the purpose, the reference in subsection (3) to each process effluent sampling point listed in Schedule 7 shall be deemed to be a reference to each cooling water effluent sampling point listed in Schedule 7 and the reference in subsections (4) and (9) to subsection 20 (1) shall be deemed to be a reference to section 32. O. Reg. 64/95, s. 26 (19).

Monitoring — Acute Lethality Testing — *Daphnia magna*

**27.**(1)  Where a discharger is required by this section to perform a Daphnia magna acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled “Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna”, as amended from time to time. O. Reg. 238/07, s. 6.

(2)  Subsections 26 (2) to (19) apply with necessary modifications to Daphnia magna acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to Daphnia magna. O. Reg. 64/95, s. 27 (2).

(3)  Each discharger shall pick up each set of samples required to be collected from a sampling point at the discharger’s plant under this section on a day on which the discharger collects a sample from the sampling point under section 26, to the extent possible having regard to the frequency of monitoring required at the sampling point under this section and section 26. O. Reg. 64/95, s. 27 (3).

Monitoring — Acute Lethality Testing — Rainbow Trout — Sampling Points Listed in Schedule 8

**28.**(1)  Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger’s plant and shall perform a rainbow trout acute lethality test on each sample.

(2)  Subsections 26 (1) and (2) apply with necessary modifications to each sample picked up at the discharger’s plant under subsection (1).

(3)  There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (1).

(4)  All samples picked up under subsection (1) in a month shall be picked up on the same day in the month.

(5)  Where a discharger has performed tests under subsection (1) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (1) relating to the sampling point and shall instead, on one day in each quarter, on a day on which samples are picked up at the plant under section 23, collect and immediately pick up a grab sample at the sampling point and perform a rainbow trout acute lethality test on each sample.

(6)  There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (5).

(7)  All samples picked up under subsection (5) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 28.

Monitoring — Acute Lethality — *Daphnia magna* — Sampling Points Listed in Schedule 8

**29.**(1)  Where a discharger is required by this section to perform a Daphnia magna acute lethality test, the discharger shall perform the test according to the procedures described in the Environment Canada publication entitled “Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna”, as amended from time to time. O. Reg. 238/07, s. 7.

(2)  Each Daphnia magna acute lethality test required by this section shall be carried out as a single concentration test using 100 per cent effluent. O. Reg. 64/95, s. 29 (2).

(3)  Beginning on February 16, 1998, on one day in each month, on a day on which samples are picked up at the plant under section 23, each discharger shall collect and immediately pick up a grab sample at each sampling point that is listed in Schedule 8 for the discharger’s plant and shall perform a Daphnia magna acute lethality test on each sample. O. Reg. 64/95, s. 29 (3).

(4)  There shall be an interval of at least 15 days between successive pick-up days at the plant under subsection (3). O. Reg. 64/95, s. 29 (4).

(5)  All samples picked up under subsection (3) in a month shall be picked up on the same day in the month. O. Reg. 64/95, s. 29 (5).

(6)  Where a discharger has performed tests under subsection (3) for 12 consecutive months on samples collected from the same sampling point, the discharger is relieved of the obligations under subsection (3) relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each quarter and perform a Daphnia magna acute lethality test on each sample. O. Reg. 64/95, s. 29 (6).

(7)  Samples picked up at a plant under subsection (6) shall be picked up on a day on which samples are picked up at the plant under subsection (3). O. Reg. 64/95, s. 29 (7).

(8)  If no samples are being picked up at a plant under subsection (3) during a quarter, samples picked up at the plant during the quarter under subsection (6) shall be picked up on a day on which samples are picked up at the plant under section 23. O. Reg. 64/95, s. 29 (8).

(9)  There shall be an interval of at least 45 days between successive pick-up days at the plant under subsection (6). O. Reg. 64/95, s. 29 (9).

(10)  All samples picked up under subsection (6) in a quarter shall be picked up on the same day in the quarter. O. Reg. 64/95, s. 29 (10).

Monitoring — Acute Lethality — Toxicity Elimination Reports

**30.**(1)  If three consecutive rainbow trout acute lethality tests performed under subsection 28 (1) or (5) or under a combination of subsections 28 (1) and (5) on samples picked up at a sampling point result in the mortality of more than 50 per cent of the test rainbow trout, the discharger shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.

(2)  A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:

1. A detailed analysis of the causes and sources of the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

2. A synopsis of any studies conducted to support the analysis.

3. A detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

4. An evaluation of the technical feasibility of implementing, at the discharger’s plant, each method described under paragraph 3 and a statement of which of the methods are technically feasible.

5. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 3.

(3)  Where a discharger is required by subsection (1) to submit a toxicity elimination report to the Director, the discharger shall submit the report to the Director no later than 12 months after the day on which the third of three consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than 50 per cent of the test rainbow trout at the sampling point on the stream.

(4)  In addition, where a discharger is required by subsection (1) to submit a toxicity elimination report with respect to a stream, the discharger shall submit to the Director annual toxicity elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3).

(5)  A toxicity elimination progress report with respect to a stream shall set out the following information:

1. A detailed description of any methods, in addition to those described under paragraph 3 of subsection (2) with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than 50 per cent of the test rainbow trout at the sampling point.

2. An evaluation of the technical feasibility of implementing, at the discharger’s plant, each method described under paragraph 1 and a statement of which of the methods are technically feasible.

3. An estimate of the financial cost to the discharger of implementing each method identified as technically feasible under paragraph 2.

(6)  Where a discharger has performed three consecutive quarterly tests under subsection 28 (5) on samples collected from a stream in relation to which the discharger has obligations under subsection (4) and the mortality of the rainbow trout in each test did not exceed 50 per cent, the discharger is relieved of the obligations under subsection (4) in relation to that stream.

(7)  Where a discharger has been relieved by subsection (6) of the obligation to submit toxicity elimination progress reports in relation to a stream and three consecutive quarterly tests under subsection 28 (5) on samples collected from that stream result in the mortality of more than 50 per cent of the test rainbow trout, subsection (6) ceases to apply and the discharger shall instead comply with the requirements of subsection (4) relating to the stream, until a further three consecutive quarterly tests under subsection 28 (5) on samples collected from the stream result in mortality for no more than 50 per cent of the rainbow trout in each test.

(8)  Subsections (1) to (7) apply with necessary modifications to Daphnia magna acute lethality tests performed under section 29 and, for the purpose,

(a) a reference to rainbow trout shall be deemed to be a reference to Daphnia magna; and

(b) a reference to subsection 28 (1) shall be deemed to be a reference to subsection 29 (3) and a reference to subsection 28 (5) shall be deemed to be a reference to subsection 29 (6). O. Reg. 64/95, s. 30.

Monitoring — Chronic Toxicity Testing — Fathead Minnow and Ceriodaphnia dubia

**31.**(1)  Where a discharger is required to perform a seven-day fathead minnow growth inhibition test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled “Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows”, as amended from time to time. O. Reg. 238/07, s. 8.

(2)  Where a discharger is required to perform a seven-day Ceriodaphnia dubia reproduction inhibition and survivability test, the discharger shall perform the test according to the procedure described in the Environment Canada publication entitled “Biological Test Method: Test of Reproduction and Survival Using the Cladoceran Ceriodaphnia dubia”, as amended from time to time. O. Reg. 238/07, s. 8.

(3)  On one day in each semi-annual period, each discharger shall collect and immediately pick up a grab sample from each sampling point listed in Schedule 9 for the discharger’s plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-day Ceriodaphnia dubia reproduction inhibition and survivability test on each sample. O. Reg. 523/95, s. 4.

(3.1)  All samples collected and picked up at a plant under subsection (3) shall be collected and picked up,

(a) on a day on which samples are picked up at the plant under section 20;

(b) in a semi-annual period in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22; or

(c) in a semi-annual period in which no samples are picked up at the plant under section 20 or 22, on a day on which samples are picked up at the plant under section 21. O. Reg. 523/95, s. 4.

(4)  There shall be an interval of at least 90 days between successive pick-up days at the plant under subsection (3). O. Reg. 64/95, s. 31 (4).

(5)  All samples picked up under subsection (3) in a semi-annual period shall be picked up on the same day in the semi-annual period. O. Reg. 64/95, s. 31 (5).

(6)  A discharger need not collect a sample from a sampling point in accordance with subsection (3) until 12 consecutive monthly rainbow trout acute lethality tests and 12 consecutive monthly Daphnia magna acute lethality tests performed on samples collected at the sampling point at a discharger’s plant result in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent. O. Reg. 64/95, s. 31 (6).

Monitoring — Cooling Water Effluent — Weekly Assessment

**32.**(1)  Each discharger shall, one day in each week, pick up a set of samples collected at each cooling water effluent sampling point at the plant and shall analyze each set of samples for the parameters listed in Column 1 of the Table for the discharger’s plant in Schedule 6. O. Reg. 311/17, s. 10.

(2)  All samples picked up at a plant under subsection (1) shall be picked up,

(a) on the day on which samples are picked up at the plant under section 20;

(b) in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22; or

(c) in a week in which no samples are picked up at the plant under section 20 or 22, on any day in the week.

(3)  There shall be an interval of at least four days between successive pick-up days at the plant under clause (2) (c).

(4)  All samples picked up under clause (2) (c) in a week shall be picked up on the same day in the week. O. Reg. 523/95, s. 5.

Monitoring — Merged Effluent — pH and Specific Conductance Measurement

**33.**(1)  Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 20 or, in a week in which no samples are picked up at the plant under section 20, on a day on which samples are picked up at the plant under section 22, during the time period applicable to the plant under subsection 18 (3) or (4), collect a grab sample from each merged effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2)  Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each merged effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3)  There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4)  Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5)  Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under subsection 20 (1), during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6)  There shall be an interval of at least four hours between  each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 64/95, s. 33 (1-6).

(7)  Revoked: O. Reg. 523/95, s. 6 (2).

Monitoring — Cooling Water Effluent — pH and Specific Conductance Measurement

**33.1**(1)  Each discharger shall, on one day in each week, on the day on which samples are picked up at the plant under section 32, collect a grab sample from each cooling water effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(2)  Within the 24-hour period beginning with the collection of the first grab sample at the plant under subsection (1) in each week, the discharger shall collect two more grab samples from each cooling water effluent sampling point at the discharger’s plant and shall analyze each sample for the parameter pH and the parameter specific conductance.

(3)  There shall be an interval of at least four hours between each of the three collections at a sampling point under subsections (1) and (2) in each 24-hour period.

(4)  Each grab sample collected under subsections (1) and (2) shall be picked up within 24 hours of when it was collected.

(5)  Instead of complying with subsections (1) to (4) with respect to a stream, a discharger may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH and the parameter specific conductance on one day in each week, on the day on which samples are picked up at the plant under section 32, during the time period applicable to the plant under subsection 18 (3) or (4), and two more times in each 24-hour period beginning with the first analysis at the plant under this subsection for the week.

(6)  There shall be an interval of at least four hours between each of the three analyses at a sampling point under subsection (5) in each 24-hour period. O. Reg. 523/95, s. 7.

PART VI  
EFFLUENT VOLUME

Flow Measurement

**34.**(1)  Subject to subsection (6), for the purposes of this section, a volume of effluent for a stream for a day is the volume that flowed past the sampling point established under section 8 on the stream during the 24-hour period preceding the pick-up of the first sample picked up from the stream for the day.

(2)  Each discharger shall determine in cubic metres a daily volume of effluent for each process effluent monitoring stream at the discharger’s plant for each day on which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(3)  Despite subsection (2), where a process effluent monitoring stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.

(4)  Each discharger shall use flow measurement methods that allow the daily volumes for process effluent monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(5)  Each discharger shall determine in cubic metres a batch volume of effluent for each process effluent batch monitoring stream at the discharger’s plant, for each batch of effluent for which a sample is collected under this Regulation from the stream, by integration of continuous flowrate measurements.

(6)  For the purposes of subsection (5), a batch volume of effluent for a process effluent batch monitoring stream for a batch is the volume of effluent that flows past the process effluent batch sampling point established under section 8 on the stream throughout the period of flow of the batch.

(7)  Each discharger shall use flow measurement methods that allow the batch volumes for process effluent batch monitoring streams to be determined to an accuracy of within plus or minus 15 per cent.

(8)  Each discharger shall determine in cubic metres a daily volume of effluent for each merged effluent monitoring stream at the discharger’s plant for each day on which a sample is collected under this Regulation from the stream.

(9)  Each discharger shall use flow measurement methods that allow the daily volumes for merged effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(10)  Each discharger shall determine in cubic metres a daily volume of effluent for each cooling water effluent monitoring stream at the discharger’s plant for each day on which a sample is collected under this Regulation from the stream.

(11)  Each discharger shall use flow measurement methods that allow the daily volumes for cooling water effluent monitoring streams to be determined to an accuracy of within plus or minus 20 per cent.

(12)  Each discharger shall, no later than the day that this section comes into force, determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,

(a) each flow measurement method used under subsections (2) and (3) meets the accuracy requirements of subsection (4);

(b) each flow measurement method used under subsection (5) meets the accuracy requirements of subsection (7);

(c) each flow measurement method used under subsection (8) meets the accuracy requirements of subsection (9); and

(d) each flow measurement method used under subsection (10) meets the accuracy requirements of subsection (11).

(13)  Where a discharger uses a new flow measurement method or alters an existing flow measurement method, the discharger shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsections (4), (7), (9) or (11), as the case may be, within two weeks after the day on which the new or altered method or system is used.

(14)  Each discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the discharger’s plant and shall maintain each flow measurement system according to good operating practices.

(15)  Each discharger shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer. O. Reg. 64/95, s. 34.

Calculation of Plant Volumes

**35.**(1)  Each discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

(2)  For the purposes of subsection (1), a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under section 34 for the day.

(3)  Each discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) for the month.

(4)  Each discharger shall calculate, in cubic metres, a daily merged effluent plant volume for each day.

(5)  For the purposes of subsection (4), a merged effluent plant volume for a day is the sum of the daily merged effluent volumes determined under section 34 for the day.

(6)  Each discharger shall calculate, in cubic metres, a monthly average merged effluent plant volume for each month, by taking the arithmetic mean of the daily merged effluent plant volumes calculated under subsection (4) for the month.

(7)  Each discharger shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.

(8)  For the purposes of subsection (7), a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under section 34 for the day.

(9)  Each discharger shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection (7) for the month. O. Reg. 64/95, s. 35.

PART VII  
STORM WATER CONTROL

Storm Water Control Study

**36.**(1)  Each discharger shall complete a storm water control study in respect of the discharger’s plant, in accordance with the requirements of the Ministry of Environment and Energy publication entitled “Protocol for Conducting a Storm Water Control Study”, dated August, 1994. O. Reg. 64/95, s. 36 (1).

(1.1)  Despite subsection (1), the requirements in respect of parameters for analysis required for process effluent and cooling water effluent, set out at page 5 of the Ministry of Environment and Energy publication entitled “Protocol for Conducting a Storm Water Control Study”, dated August, 1994 do not apply in relation to the following plants:

1. Columbian Chemicals Canada Ltd.

2. Partek Insulations Ltd.

(1.2)  For the purposes of subsection (1), the discharger shall complete a storm water control study using the parameters set out in Column 1 of the Table for the discharger’s plant in Schedule 10. O. Reg. 523/95, s. 8; O. Reg. 311/17, s. 11.

(2)  A discharger need not comply with subsection (1) in respect of the discharger’s plant if,

(a) the plant meets the exemption criteria set out in the Ministry of Environment and Energy publication entitled “Protocol for Conducting a Storm Water Control Study”, dated August, 1994; and

(b) the discharger notifies the Director in writing, by February 15, 1996, that the plant meets the exemption criteria referred to in clause (a).

(3)  Subject to subsection (4), a discharger shall complete the storm water control study in respect of the discharger’s plant by February 17, 1997.

(4)  A discharger may postpone completion of the storm water control study in respect of the discharger’s plant until February 15, 1999 if,

(a) in order to meet the requirements of Part IV, the discharger plans to make process changes, install wastewater treatment facilities, implement management practices or make any other changes at the plant that would likely alter the quantity or quality of storm water discharged from the plant; and

(b) the discharger notifies the Director in writing, by February 17, 1997, of the plans referred to in clause (a).

(5)  Each discharger shall ensure that a copy of each study completed under this section is available to Ministry staff at the discharger’s plant, on request during the plant’s normal office hours. O. Reg. 64/95, s. 36 (2-5).

PART VIII  
RECORDS AND REPORTS

Record Keeping

**37.**(1)  Each discharger shall keep records, in an electronic format acceptable to the Director, of all analytical results obtained under sections 19 to 23, 25, 32, 33 and 33.1, all calculations performed under sections 12 to 15, and all determinations and calculations made or performed under sections 34 and 35. O. Reg. 64/95, s. 37 (1); O. Reg. 523/95, s. 9 (1).

(2)  Each discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of section 7, including, for each sample, the date, the time of pick-up, the sampling procedures used and any incidents likely to affect the analytical results.

(3)  Each discharger shall keep records of the results of all monitoring performed under sections 24, 26, 27 and 31.

(4)  Each discharger shall keep records of all maintenance and calibration procedures performed under section 34.

(5)  Each discharger shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Regulation, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.

(6)  Each discharger shall keep records of any incident in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger’s plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.

(7)  Each discharger shall keep records of all process changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point established under this Regulation at the discharger’s plant.

(8)  Beginning on March 1, 1995, each discharger shall calculate and keep records of the reference daily rate of production, in tonnes, for each material listed in the Table for the discharger’s plant in Schedule 10. O. Reg. 64/95, s. 37 (2-8); O. Reg. 311/17, s. 12.

(9)  Beginning on March 1, 1995, each discharger shall calculate and keep records of monthly average daily production, in tonnes, of each material listed in Schedule 11 for the discharger’s plant, for each month. O. Reg. 64/95, s. 37 (9); O. Reg. 523/95, s. 9 (2).

(10)  For the purposes of subsection (9), the monthly average daily production of a material for a month at the discharger’s plant is the amount of the material, calculated in tonnes, that is produced at the discharger’s plant during the month, divided by the number of days in the month.

(11)  For the purposes of subsection (8), the reference daily rate of production for a material at the discharger’s plant is the arithmetic mean of the amounts calculated under subsection (9) for the material for the first 12 months for which the discharger is required to keep a record for the material under subsection (9).

(12)  Subject to subsection (13), each discharger shall make each record required by this section as soon as reasonably possible and shall keep each such record for a period of three years.

(13)  Each discharger shall keep each record required by subsections (8) and (9) for a period of 10 years.

(14)  Each discharger shall ensure that all records kept under this section are available to Ministry staff at the discharger’s plant, on request during the plant’s normal office hours. O. Reg. 64/95, s. 37 (10-14).

Reports Available to the Public

**38.**(1)  On or before June 1 in each year, each discharger shall prepare a report relating to the previous calendar year and including,

(a) a summary of plant loadings calculated under sections 12 to 15;

(b) a summary of batch stream loadings calculated under section 13;

(c) a summary of the results of monitoring performed under sections 19 to 23, 25 to 27 and 31 to 33.1;

(d) a summary of calculations performed under subsections 35 (1), (4) and (7);

(e) a summary of the loadings or other results that exceeded a limit under section 16 or 17; and

(f) a summary of the incidents in which effluent that would ordinarily flow past a sampling point established under this Regulation is discharged from the discharger’s plant without flowing past that sampling point. O. Reg. 64/95, s. 38 (1); O. Reg. 523/95, s. 10.

(2)  Each discharger shall ensure that each report prepared under subsection (1) is available to any person at the discharger’s plant, on request, during the plant’s normal office hours.

(3)  Each discharger shall provide the Director, upon request, with a copy of any report that the discharger has prepared under subsection (1).

(4)  Each discharger shall ensure that each report prepared under section 30 is available to any person at the discharger’s plant, on request, during the plant’s normal office hours. O. Reg. 64/95, s. 38 (2-4).

Reports to the Director — General

**39.**(1)  Each discharger shall notify the Director in writing of any change of name or ownership of the discharger’s plant occurring after February 14, 1995, within 30 days after the end of the month in which the change occurs.

(2)  Each discharger shall notify the Director in writing of any process change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point established under this Regulation at the discharger’s plant, within 30 days of the change or redirection.

(3)  A discharger need not comply with subsection (2) where the effect of the change or redirection on effluent quality is of less than one week’s duration. O. Reg. 64/95, s. 39 (1-3).

(4)  Each discharger shall notify the Director in writing if the discharger’s plant has, for 90 consecutive days, produced a material listed in Schedule 11 for the discharger’s plant at less than 75 per cent of the reference daily rate of production calculated under subsection 37 (8) for the material, within 30 days of the end of the 90-day period. O. Reg. 64/95, s. 39 (4); O. Reg. 523/95, s. 11.

Reports to the Director — Compliance with Section 6 and Part IV

**40.**(1)  Each discharger shall report to the Director any incident in which effluent that would ordinarily flow past a point established under this Regulation is discharged from the discharger’s plant without flowing past that sampling point.

(2)  Each discharger shall report to the Director any loading or other result that exceeds a limit prescribed by section 16 or 17.

(3)  A report required under subsection (1) or (2) shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible. O. Reg. 64/95, s. 40.

Quarterly Reports to the Director

**41.**(1)  No later than 45 days after the end of each quarter, each discharger shall submit a report to the Director containing information relating to the discharger’s plant throughout the quarter as required by subsections (3) to (8).

(2)  A report under this section shall be submitted both in an electronic format acceptable to the Director and in hard copy generated from the electronic format and signed by the discharger.

(3)  A report under this section shall include all information included in a report given under section 40 during the quarter.

(4)  Each discharger shall report, for each month in the quarter,

(a) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 12 for each limited parameter;

(b) the highest and lowest batch stream loadings calculated under section 13 for each limited parameter;

(c) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 14 for each merged parameter;

(d) the monthly average plant loadings and the highest and lowest daily plant loadings calculated under section 15 for each assessment parameter.

(5)  Each discharger shall report, for each month in the quarter,

(a) the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under section 35;

(b) the highest and lowest process effluent batch volumes calculated under subsection 34 (5);

(c) the monthly average merged effluent plant volume and the highest and lowest daily merged effluent plant volumes calculated under section 35; and

(d) the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under section 35.

(6)  Each discharger shall, for each sampling point established under this Regulation at the discharger’s plant, report the number of days in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 64/95, s. 41 (1-6).

(6.1)  Each discharger shall, for each process effluent batch sampling point established under this Regulation at the discharger’s plant, report the number of times in each month in the quarter on which effluent flowed past the sampling point. O. Reg. 523/95, s. 12 (1).

(7)  Each discharger shall report, for each month in the quarter, the highest and lowest pH results obtained under section 25 for each process effluent monitoring stream and each process effluent batch monitoring stream at the discharger’s plant. O. Reg. 64/95, s. 41 (7).

(8)  Each discharger shall report, for each month in the quarter, the highest and lowest pH results and the highest and lowest specific conductance results obtained under,

(a) section 33 for each merged effluent monitoring stream at the discharger’s plant; and

(b) section 33.1 for each cooling water effluent monitoring stream at the discharger’s plant.

(9)  Each discharger shall report, for each quarter, the results obtained under subsection 21 (1) in respect of each specific parameter for each process effluent sampling point at the discharger’s plant. O. Reg. 523/95, s. 12 (2).

Reports to the Director — Chronic Toxicity Testing

**42.**(1)  Each discharger shall report to the Director the results of all monitoring performed under section 31, together with the date on which each sample was picked up, no later than 60 days after the end of each semi-annual period in which the monitoring was performed.

(2)  A report under subsection (1) shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a 25 per cent reduction in growth or reproduction would occur. O. Reg. 64/95, s. 42.

**43.**  Omitted (revokes other Regulations). O. Reg. 64/95, s. 43.

**44.**  Omitted (provides for coming into force of provisions of this Regulation). O. Reg. 64/95, s. 44.

Schedule 1  
list of regulated plants

|  |  |  |
| --- | --- | --- |
| Plant Name | Location | Owner as of January 1, 1998 |
| Albright & Wilson Americas Inc. | Port Maitland | Albright & Wilson Americas Inc. |
| AlliedSignal | Amherstburg | AlliedSignal Canada Inc. |
| Cabot Canada Ltd. | Sarnia | Cabot Canada Ltd. |
| Columbian Chemicals Canada Ltd. | Hamilton | Columbian Chemicals Canada Ltd. |
| Cytec Canada Inc. | Niagara Falls | Cytec Canada Inc. |
| The Exolon-ESK Company of Canada, Ltd. | Niagara Falls | The Exolon-ESK Company of Canada Ltd. |
| ETI Explosives Technologies International (Canada), Ltd. | North Bay | ETI Explosives Technologies International (Canada), Ltd. |
| General Chemical Canada Ltd. | Amherstburg | General Chemical Canada Ltd. |
| Hydro-Agri (formerly: Nutrite Inc.) | Maitland | Hydro Agri Canada |
| ICI Canada Inc. | Cornwall | ICI Canada Inc. |
| ICI Canada Inc. - Conpak | Cornwall | ICI Canada Inc. |
| International Minerals & Chemical Corporation (Canada) Limited | Port Maitland | International Minerals & Chemical Corporation (Canada) Limited |
| Liquid Carbonic Inc. | Maitland | Liquid Carbonic Inc. |
| Norton Advanced Ceramics of Canada Inc. | Niagara Falls | Norton Advanced Ceramics of Canada Inc. |
| Partek Insulations Ltd. | Sarnia | Partek Insulations Ltd. |
| Praxair Canada Inc. | Mooretown | Praxair Canada Inc. |
| Praxair Canada Inc. | Sarnia | Praxair Canada Inc. |
| Praxair Canada Inc. | Sault Ste. Marie | Praxair Canada Inc. |
| Puritan Bennett Corporation | Maitland | Puritan-Bennett Canada Ltd. |
| Sulco Chemicals Limited | Elmira | Sulco Chemicals Limited |
| Terra International (Canada) Inc. | Courtright | Terra International (Canada) Inc. |
| UCAR Inc. | Welland | UCAR Inc. |
| Washington Mills Electro Minerals Corporation | Niagara Falls | Washington Mills Electro Minerals Corporation |
| Washington Mills Limited | Niagara Falls | Washington Mills Limited |
| Welland Chemical Limited | Sarnia | Welland Chemical Limited |

O. Reg. 51/98, s. 1.

SCHEDULE 2  
PROCESS EFFLUENT: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

Table 1  
PLANT: Albright & Wilson Americas Inc. (Port Maitland)

Designated Process Effluent Sampling Point:

0100, Final Discharge to Canal

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 210 | 30 |
| 2. | 6 | Total phosphorus | Daily | 2.4 | 0.93 |
| 3. | 8 | Total suspended solids | Daily | 170 | 48 |
| 4. | 12 | Mercury | Quarterly | 0.0025 | Not applicable |
| 5. | 14 | Phenolics | Weekly | 0.12 | 0.048 |

Table 2  
PLANT: Cabot Canada Ltd. (Sarnia)

Designated Process Effluent Sampling Point:

0100, Discharge from Filter Bed to Cole Drain

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical  Test Group | Column 1  Parameter | Column 2  Monitoring  Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4b | Nitrate plus Nitrite | Quarterly | 3.2 | Not applicable |
| 2. | 5a | DOC | Weekly | 29 | 10 |
| 3. | 6 | Total phosphorus | Quarterly | 0.87 | Not applicable |
| 4. | 8 | Total suspended solids | Daily | 48 | 15 |
| 5. | 9 | Aluminum | Weekly | 3.5 | 2.2 |
| 6. | 9 | Zinc | Quarterly | 1.4 | Not applicable |
| 7. | 25 | Oil and grease | Quarterly | 17 | Not applicable |
| 8. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 9. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 10. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 3  
PLANT: Cytec Canada Inc. (Niagara Falls)

Designated Process Effluent Sampling Point:

0400, Sludge Pond to Final Discharge

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 2 | Cyanide Total | Weekly | 0.13 | 0.05 |
| 2. | 4a | Ammonia plus Ammonium | Weekly | 10 | 3.4 |
| 3. | 4b | Nitrate plus Nitrite | Weekly | 32 | 10 |
| 4. | 4a | Total Kjeldahl nitrogen | Weekly | 9.7 | 3.6 |
| 5. | 5a | DOC | Weekly | 75 | 27 |
| 6. | 6 | Total phosphorus | Daily | 5.0 | 1.9 |
| 7. | 8 | Total suspended solids | Daily | 150 | 21 |
| 8. | 17 | Toluene | Weekly | 0.12 | 0.046 |
| 9. | 25 | Oil and grease | Quarterly | 8.4 | Not applicable |
| 10. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 11. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 12. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 4  
PLANT: The Exolon-ESK Company of Canada, Ltd. (Niagara Falls)

Designated Process Effluent Sampling Point:

0100, 24 Inch Outfall at Beaver Dam Road

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 99 | 14 |
| 2. | 6 | Total phosphorus | Weekly | 2.8 | 1.0 |
| 3. | 8 | Total suspended solids | Daily | 160 | 79 |
| 4. | 9 | Aluminum | Weekly | 2.6 | 1.1 |

Table 5  
PLANT: General Chemical Canada Ltd. (Amherstburg)

Designated Process Effluent Sampling Points:

0100, North Drain Effluent to Detroit River

0200, Main Drain Effluent to Detroit River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 2 | Cyanide Total | Quarterly | 6.3 | Not applicable |
| 2. | 4a | Ammonia plus Ammonium | Daily | 2900 | 650 |
| 3. | 4b | Nitrate plus Nitrite | Quarterly | 750 | Not applicable |
| 4. | 4a | Total Kjeldahl nitrogen | Weekly | 2400 | 890 |
| 5. | 5a | DOC | Weekly | 2900 | 1200 |
| 6. | 6 | Total phosphorus | Quarterly | 64 | Not applicable |
| 7. | 8 | Total suspended solids | Daily | 43,000 | 11,000 |
| 8. | 9 | Molybdenum | Quarterly | 10 | Not applicable |
| 9. | 10 | Arsenic | Quarterly | 5.2 | Not applicable |
| 10. | 12 | Mercury | Quarterly | 0.026 | Not applicable |
| 11. | 15 | Sulphide | Quarterly | 6.3 | Not applicable |
| 12. | 16 | Chloroform | Quarterly | 0.24 | Not applicable |
| 13. | 25 | Oil and grease | Quarterly | 1400 | Not applicable |
| 14. | 30 | Chloride | Weekly | 1,360,000 | 1,100,000 |
| 15. | 30 | Fluoride | Weekly | 131 | 95 |
| 16. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 17. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 18. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 6  
PLANT: Hydro Agri Maitland (formerly Nutrite Inc.) Maitland

Designated Process Effluent Sampling Point:

0400, Final Effluent to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4a | Ammonia plus Ammonium | Daily | 82 | 26 |
| 2. | 4b | Nitrate plus Nitrite | Daily | 80 | 27 |
| 3. | 4a | Total Kjeldahl nitrogen | Daily | 83 | 27 |
| 4. | 5a | DOC | Weekly | 28 | 15 |
| 5. | 6 | Total phosphorus | Weekly | 5.5 | 1.1 |
| 6. | 8 | Total suspended solids | Daily | 128 | 28 |
| 7. | 9 | Aluminum | Weekly | 2.1 | 0.38 |
| 8. | 9 | Copper | Quarterly | 0.14 | Not applicable |
| 9. | 9 | Vanadium | Quarterly | 1.21 | Not applicable |
| 10. | 9 | Zinc | Weekly | 0.14 | 0.03 |
| 11. | 12 | Mercury | Quarterly | 0.0006 | Not applicable |
| 12. | 14 | Phenolics (4AAP) | Weekly | 0.0087 | 0.0045 |
| 13. | 16 | Tetrachloroethylene | Quarterly | 0.16 | Not applicable |
| 14. | 25 | Oil and grease | Weekly | 12 | 5 |
| 15. | 27 | PCBT | Quarterly | 0.00036 | Not applicable |
| 16. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 17. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 18. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 7  
PLANT: ICI Canada Inc. (Cornwall)

Designated Process Effluent Sampling Point:

0400, Effluent in Manhole #15 to LEL-2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4b | Nitrate plus Nitrite | Quarterly | 0.90 | Not applicable |
| 2. | 5a | DOC | Weekly | 9.6 | 4.2 |
| 3. | 6 | Total phosphorus | Quarterly | 1.1 | Not applicable |
| 4. | 8 | Total suspended solids | Daily | 24 | 4.3 |
| 5. | 9 | Aluminum | Weekly | 0.43 | 0.078 |
| 6. | 9 | Copper | Quarterly | 0.016 | Not applicable |
| 7. | 9 | Lead | Quarterly | 0.23 | Not applicable |
| 8. | 9 | Nickel | Quarterly | 0.010 | Not applicable |
| 9. | 9 | Zinc | Quarterly | 0.056 | Not applicable |
| 10. | 10 | Arsenic | Quarterly | 0.0050 | Not applicable |
| 11. | 12 | Mercury | Daily | 0.0058 | 0.0012 |
| 12. | 14 | Phenolics (4AAP) | Quarterly | 0.0042 | Not applicable |
| 13. | 23 | 1,2,4-Trichlorobenzene | Weekly | 0.00034 | 0.00013 |
| 14. | 23 | Hexachlorobenzene | Weekly | 0.00016 | 0.000060 |
| 15. | 23 | Hexachlorobutadiene | Weekly | 0.00029 | 0.00010 |
| 16. | 23 | Hexachloroethane | Weekly | 0.0011 | 0.00040 |
| 17. | 23 | Octachlorostyrene | Quarterly | 0.000070 | Not applicable |
| 18. | 23 | Pentachlorobenzene | Quarterly | 0.000010 | Not applicable |
| 19. | 25 | Oil and grease | Quarterly | 6.7 | Not applicable |
| 20. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 21. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 22. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 8  
PLANT: ICI Canada Inc. - Conpak (Cornwall)

Designated Process Effluent Sampling Point:

0100, Effluent from Conpak to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4a | Ammonia plus Ammonium | Weekly | 0.55 | 0.19 |
| 2. | 4b | Nitrate plus Nitrite | Weekly | 1.3 | 0.29 |
| 3. | 4a | Total Kjeldahl nitrogen | Weekly | 0.55 | 0.21 |
| 4. | 5a | DOC | Weekly | 2.7 | 0.57 |
| 5. | 6 | Total phosphorus | Weekly | 0.29 | 0.044 |
| 6. | 8 | Total suspended solids | Daily | 6.7 | 1.1 |
| 7. | 9 | Aluminum | Weekly | 0.27 | 0.042 |
| 8. | 9 | Cadmium | Weekly | 0.00046 | 0.00011 |
| 9. | 9 | Chromium | Weekly | 0.055 | 0.0087 |
| 10. | 9 | Copper | Weekly | 0.013 | 0.0023 |
| 11. | 9 | Lead | Weekly | 0.027 | 0.0034 |
| 12. | 9 | Nickel | Weekly | 0.12 | 0.0023 |
| 13. | 9 | Zinc | Weekly | 0.0019 | 0.00038 |
| 14. | 10 | Selenium | Quarterly | 0.0027 | Not applicable |
| 15. | 12 | Mercury | Weekly | 0.00057 | 0.00011 |
| 16. | 14 | Phenolics (4AAP) | Weekly | 0.0012 | 0.00032 |
| 17. | 16 | Carbon tetrachloride | Weekly | 0.0055 | 0.0021 |
| 18. | 16 | Chloroform | Weekly | 0.015 | 0.00030 |
| 19. | 23 | Hexachlorobenzene | Weekly | 0.000076 | 0.000019 |
| 20. | 23 | Hexachloroethane | Weekly | 0.00038 | 0.00013 |
| 21. | 25 | Oil and grease | Quarterly | 1.3 | Not applicable |
| 22. | 30 | Chloride | Weekly | 323 | 82 |
| 23. | 30 | Sulphate | Weekly | 228 | 34 |
| 24. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 25. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 26. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 9  
PLANT: International Minerals & Chemical Corporation (Canada) (Port Maitland)

Designated Process Effluent Sampling Point:

0300, Final Effluent to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4a | Ammonia plus Ammonium | Quarterly | 41 | Not applicable |
| 2. | 4b | Nitrate plus Nitrite | Quarterly | 25 | Not applicable |
| 3. | 4a | Total Kjeldahl nitrogen | Quarterly | 30 | Not applicable |
| 4. | 5a | DOC | Quarterly | 68 | Not applicable |
| 5. | 6 | Total phosphorus | Daily | 7.9 | 4.5 |
| 6. | 8 | Total suspended solids | Daily | 250 | 51 |
| 7. | 14 | Phenolics (4AAP) | Quarterly | 0.16 | Not applicable |
| 8. | 25 | Oil and grease | Quarterly | 10 | Not applicable |
| 9. | 30 | Fluoride | Daily | 76 | 57 |
| 10. | 30 | Sulphate | Quarterly | 13,000 | Not applicable |

Table 10  
PLANT: Liquid Carbonic Inc. (Maitland)

Designated Process Effluent Sampling Point:

0100, Effluent to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4b | Nitrate plus Nitrite | Weekly | 22 | 15 |
| 2. | 5a | DOC | Weekly | 190 | 46 |
| 3. | 6 | Total phosphorus | Quarterly | 0.87 | Not applicable |
| 4. | 8 | Total suspended solids | Daily | 44 | 22 |
| 5. | 25 | Oil and grease | Weekly | 35 | 13 |

Table 11  
PLANT: Norton Advanced Ceramics of Canada Inc. (Niagara Falls)

Designated Process Effluent Sampling Points:

0300, Sewer C to Welland River

0400, Sewer D to Welland River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 34 | 16 |
| 2. | 6 | Total phosphorus | Quarterly | 2.4 | Not applicable |
| 3. | 8 | Total suspended solids | Daily | 450 | 100 |
| 4. | 9 | Aluminum | Weekly | 15 | 3.9 |
| 5. | 25 | Oil and grease | Quarterly | 24 | Not applicable |
| 6. | 30 | Sulphate | Weekly | 1900 | 770 |

Table 12  
PLANT: Praxair Canada Inc. (Mooretown)

Designated Process Effluent Sampling Point:

0100, Final Effluent to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 1.1 | 0.17 |
| 2. | 6 | Total phosphorus | Weekly | 0.095 | 0.015 |
| 3. | 8 | Total suspended solids | Daily | 0.90 | 0.14 |
| 4. | 9 | Aluminum | Weekly | 0.014 | 0.0052 |
| 5. | 9 | Copper | Quarterly | 0.0038 | Not applicable |
| 6. | 9 | Zinc | Weekly | 0.020 | 0.0066 |
| 7. | 25 | Oil and grease | Weekly | 0.11 | 0.047 |
| 8. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 9. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 10. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 13  
PLANT: Praxair Canada Inc. (Sarnia)

Designated Process Effluent Sampling Point:

0100, Effluent from Cooling Towers to Cole Drain

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 1.3 | 0.42 |
| 2. | 6 | Total phosphorus | Weekly | 0.24 | 0.043 |
| 3. | 8 | Total suspended solids | Daily | 2.8 | 0.46 |
| 4. | 9 | Aluminum | Weekly | 0.058 | 0.022 |
| 5. | 9 | Copper | Weekly | 0.0070 | 0.0031 |
| 6. | 9 | Zinc | Weekly | 0.013 | 0.0065 |
| 7. | 25 | Oil and grease | Weekly | 0.33 | 0.14 |
| 8. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 9. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 10. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 14  
PLANT: Praxair Canada Inc. (Sault Ste. Marie)

Designated Process Effluent Sampling Point:

0100, Outfall at Safety Drive to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 9.0 | 2.9 |
| 2. | 6 | Total phosphorus | Weekly | 1.7 | 0.30 |
| 3. | 8 | Total suspended solids | Daily | 20 | 3.3 |
| 4. | 9 | Aluminum | Weekly | 0.42 | 0.15 |
| 5. | 9 | Copper | Weekly | 0.045 | 0.020 |
| 6. | 9 | Zinc | Weekly | 0.090 | 0.046 |
| 7. | 25 | Oil and grease | Weekly | 2.1 | 0.92 |
| 8. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | Quarterly | Not applicable | Not applicable |
| 9. | 24 | 2,3,7,8-tetrachlorodibenzofuran | Quarterly | Not applicable | Not applicable |
| 10. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | Quarterly | Not applicable | Not applicable |

Table 15  
PLANT: Puritan Bennett Corporation (Maitland)

Designated Process Effluent Sampling Point:

0100, Effluent to Creek

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4a | Ammonia plus Ammonium | Weekly | 3.9 | 1.3 |
| 2. | 4b | Nitrate plus Nitrite | Weekly | 2.9 | 1.8 |
| 3. | 4a | Total Kjeldahl nitrogen | Weekly | 3.1 | 1.2 |
| 4. | 5a | DOC | Weekly | 1.6 | 1.0 |
| 5. | 6 | Total phosphorus | Quarterly | 0.11 | Not applicable |
| 6. | 8 | Total suspended solids | Daily | 5.4 | 2.7 |

Table 16  
PLANT: Sulco Chemicals Limited (Elmira)

Designated Process Effluent Sampling Point:

0100, Final Effluent to Creek

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 2 | Cyanide Total | Quarterly | 0.014 | Not applicable |
| 2. | 5a | DOC | Weekly | 1.4 | 0.63 |
| 3. | 6 | Total phosphorus | Weekly | 0.20 | 0.082 |
| 4. | 8 | Total suspended solids | Daily | 2.9 | 1.2 |
| 5. | 9 | Aluminum | Quarterly | 0.085 | Not applicable |
| 6. | 9 | Cadmium | Quarterly | 0.0016 | Not applicable |
| 7. | 9 | Copper | Quarterly | 0.013 | Not applicable |
| 8. | 9 | Nickel | Quarterly | 0.022 | Not applicable |
| 9. | 9 | Vanadium | Quarterly | 0.040 | Not applicable |
| 10. | 9 | Zinc | Quarterly | 0.075 | Not applicable |
| 11. | 10 | Arsenic | Quarterly | 0.0014 | Not applicable |
| 12. | 14 | Phenolics (4AAP) | Quarterly | 0.0024 | Not applicable |
| 13. | 25 | Oil and grease | Quarterly | 0.96 | Not applicable |
| 14. | 30 | Chloride | Weekly | 270 | 140 |
| 15. | 30 | Fluoride | Weekly | 1.6 | 0.42 |
| 16. | 30 | Sulphate | Weekly | 610 | 150 |

Table 17  
PLANT: Terra International (Canada) Inc. (Courtright)

Designated Process Effluent Sampling Points:

0500, Effluent from 30 inch concrete pipe flowing into Plant Final Discharge to St. Clair River

0700, Effluent in Manhole #55 flowing into Plant Final Discharge to St. Clair River

0800, Effluent in 42 inch Line from A11 flowing into Plant Final Discharge to St. Clair River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 4a | Ammonia plus Ammonium | Daily | 290 | 140 |
| 2. | 4b | Nitrate plus Nitrite | Daily | 650 | 150 |
| 3. | 4a | Total Kjeldahl nitrogen | Daily | 540 | 250 |
| 4. | 5a | DOC | Weekly | 1100 | 510 |
| 5. | 6 | Total phosphorus | Quarterly | 46 | Not applicable |
| 6. | 8 | Total suspended solids | Daily | 3500 | 880 |
| 7. | 9 | Aluminum | Quarterly | 8.9 | Not applicable |
| 8. | 9 | Zinc | Quarterly | 12 | Not applicable |
| 9. | 14 | Phenolics (4AAP) | Weekly | 7.4 | 2.6 |
| 10. | 30 | Fluoride | Quarterly | 4.0 | Not applicable |
| 11. | 30 | Sulphate | Quarterly | 2700 | Not applicable |

Table 18  
PLANT: Washington Mills Electro Minerals Corporation (Niagara Falls)

Designated Process Effluent Sampling Points:

0100, Effluent from Queen Lagoon to Welland River

0200, Effluent from the Old Lagoon to Welland River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 81 | 33 |
| 2. | 6 | Total phosphorus | Quarterly | 2.2 | Not applicable |
| 3. | 8 | Total suspended solids | Daily | 395 | 127 |
| 4. | 9 | Aluminum | Weekly | 6.1 | 2.7 |
| 5. | 25 | Oil and grease | Quarterly | 19 | Not applicable |

Table 19  
PLANT: Washington Mills Limited (Niagara Falls)

Designated Process Effluent Sampling Point:

0100, Final Effluent to River

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Daily plant loading limit in kilograms per day | Column 4  Monthly Average Plant Loading Limit in kilograms per day |
| 1. | 5a | DOC | Weekly | 24 | 7.8 |
| 2. | 6 | Total phosphorus | Quarterly | 0.58 | Not applicable |
| 3. | 8 | Total suspended solids | Daily | 60 | 18 |
| 4. | 9 | Aluminum | Weekly | 3.0 | 1.1 |
| 5. | 25 | Oil and grease | Weekly | 14 | 5.8 |

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SCHEDULE 3  
ANALYTICAL REQUIREMENTS AT PLANTS WITH MORE THAN ONE PROCESS EFFLUENT SAMPLING POINT

Table 1  
PLANT: General Chemical Canada Ltd. (Amherstburg)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Control Point: 0100 | Column 3  Control Point: 0200 |
| 1. | 2 | Cyanide Total | Not applicable | X |
| 2. | 4a | Ammonia plus Ammonium | X | X |
| 3. | 4b | Nitrate plus Nitrite | Not applicable | X |
| 4. | 4a | Total Kjeldahl nitrogen | X | X |
| 5. | 5a | DOC | X | X |
| 6. | 6 | Total phosphorus | X | X |
| 7. | 8 | Total suspended solids | X | X |
| 8. | 9 | Molybdenum | X | Not applicable |
| 9. | 10 | Arsenic | X | Not applicable |
| 10. | 12 | Mercury | X | Not applicable |
| 11. | 15 | Sulphide | X | Not applicable |
| 12. | 16 | Chloroform | X | Not applicable |
| 13. | 25 | Oil and grease | X | X |
| 14. | 30 | Chloride | X | X |
| 15. | 30 | Fluoride | X | Not applicable |
| 16. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin | X | X |
| 17. | 24 | 2,3,7,8-tetrachlorodibenzofuran | X | X |
| 18. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners | X | X |

Explanatory Note:

X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

Table 2  
PLANT: Norton Advanced Ceramics of Canada Inc. (Niagara Falls)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Control Point: 0300 | Column 3  Control Point: 0400 |
| 1. | 5a | DOC | X | X |
| 2. | 6 | Total phosphorus | X | X |
| 3. | 8 | Total suspended solids | X | X |
| 4. | 9 | Aluminum | X | X |
| 5. | 25 | Oil and grease | X | X |
| 6. | 30 | Sulphate | X | Not applicable |

Explanatory Note:

X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

Table 3  
PLANT: Washington Mills Electro Minerals Corporation (Niagara Falls)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Control Point: 0100 | Column 3  Control Point: 0200 |
| 1. | 5a | DOC | X | X |
| 2. | 6 | Total phosphorus | X | X |
| 3. | 8 | Total suspended solids | X | X |
| 4. | 9 | Aluminum | X | X |
| 5. | 25 | Oil and grease | X | X |

Explanatory Notes:

X means that the corresponding parameter in Column 1 is specified for the sampling point and is required to be monitored at the sampling point

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SCHEDULE 4  
PROCESS EFFLUENT BATCH: DESIGNATED SAMPLING POINTS, LIMITS, MONITORING FREQUENCY

Table 1  
PLANT: Welland Chemical Limited (Sarnia)

Designated Process Effluent Batch Sampling Point:

0200, Effluent from #1 Lagoon

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency | Column 3  Batch Loading Limit in kilograms per batch |
| 1. | 4b | Nitrate plus Nitrite | Once for each batch | 0.57 |
| 2. | 5a | DOC | Once for each batch | 9.8 |
| 3. | 6 | Total phosphorus | Once for each batch | 0.051 |
| 4. | 8 | Total suspended solids | Once for each batch | 5.5 |
| 5. | 9 | Aluminum | Once for each batch | 0.12 |
| 6. | 16 | Chloroform | Once for each batch | 0.27 |

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SCHEDULE 5  
MERGED EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

Table 1  
PLANT: Cytec Canada Inc. (Niagara Falls)

Designated Merged Effluent Sampling Point:

0200, Miller’s Creek Final Discharge to River

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency |
| 1. | 4a | Ammonia plus Ammonium | Weekly |
| 2. | 4b | Total Kjeldahl Nitrogen | Weekly |
| 3. | 4b | Nitrate plus Nitrite | Weekly |
| 4. | 6 | Total phosphorus | Weekly |
| 5. | 8 | Total suspended solids | Weekly |
| 6. | 25 | Oil and grease | Weekly |

Table 2  
PLANT: ICI Canada Inc. (Cornwall)

Designated Merged Effluent Sampling Point:

0300, Effluent in LEL-2 to River

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring  Frequency |
| 1. | 8 | Total suspended solids | Weekly |
| 2. | 25 | Oil and grease | Weekly |

Table 3  
PLANT: Terra International (Canada) Inc. (Courtright)

Designated Merged Effluent Sampling Point:

0200, Main Effluent to River

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring  Frequency |
| 1. | 4a | Ammonia plus Ammonium | Weekly |
| 2. | 4b | Total Kjeldahl Nitrogen | Weekly |
| 3. | 4b | Nitrate plus Nitrite | Weekly |
| 4. | 6 | Total phosphorus | Weekly |
| 5. | 8 | Total suspended solids | Weekly |
| 6. | 9 | Aluminum | Quarterly |
| 7. | 9 | Zinc | Quarterly |
| 8. | 14 | Phenolics | Weekly |
| 9. | 25 | Oil and grease | Weekly |
| 10. | 30 | Fluoride | Quarterly |
| 11. | 30 | Sulphate | Quarterly |

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SCHEDULE 6  
COOLING WATER EFFLUENT: DESIGNATED SAMPLING POINTS, MONITORING FREQUENCY

Table 1  
PLANT: ETI Explosives Technologies International (Canada), Ltd. (North Bay)

Designated Cooling Water Effluent Sampling Point:

0100, Discharge at Weir to Lake

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency |
| 1. | 4a | Ammonia plus Ammonium | Weekly |
| 2. | 4a | Total Kjeldahl Nitrogen | Weekly |
| 3. | 4b | Nitrate plus Nitrite | Weekly |
| 4. | 8 | Total suspended solids | Weekly |
| 5. | 25 | Oil and grease | Weekly |

Table 2  
PLANT: UCAR Inc. (Welland)

Designated Cooling Water Effluent Sampling Point:

0100, #2 Weir Effluent to Canal

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency |
| 1. | 8 | Total suspended solids | Weekly |
| 2. | 25 | Oil and grease | Weekly |

table 3  
PLANT: Welland Chemical Limited (Sarnia)

Designated Cooling Water Sampling Points:

0300, Effluent from Chlorine Filling Unit

0400, Effluent from East Wall of Aluminum Chloride Building

0500, Effluent from South Wall of Aluminum Chloride Building

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter | Column 2  Monitoring Frequency |
| 1. | 8 | Total suspended solids | Weekly |
| 2. | 25 | Oil and grease | Weekly |

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Schedule 7  
Acute Lethality: Sampling Points

|  |  |
| --- | --- |
| Plant Name | Sampling Point - Number and Description |
| Albright & Wilson Americas Inc. | 0100 , Final Discharge to Canal (Process Effluent) |
| AlliedSignal | 0300 , Discharge to General Chemical Settling basins (Process Effluent) |
| Cabot Canada Ltd. | 0100 , Discharge from Filter Bed to Cole Drain (Process Effluent) |
| Cytec Canada Inc. | 0200 , Miller’s Creek Final Discharge to River (Merged Effluent) |
| The Exolon-ESK Company of Canada, Ltd. | 0100 , 24 Inch Outfall at Beaver Dam Road (Process Effluent) |
| ETI Explosives Technologies International (Canada), Ltd. | 0100 , Discharge at Weir to Lake (Cooling Water) |
| General Chemical Canada Ltd. | 0200 , Main Drain Effluent to Detroit River (Process Effluent) |
| Hydro Agri (Maitland) | 0400 , Final Effluent to River (Process Effluent) |
| ICI Canada Inc. | 0300 , Effluent in LEL-2 to River (Merged Effluent) |
| ICI Canada Inc. - Conpak | 0100 , Effluent from Conpak to River (Process Effluent) |
| International Minerals & Chemical Corporation (Canada) Limited | 0300 , Final Effluent to River (Process Effluent) |
| Liquid Carbonic Inc. (Maitland) | 0100 , Effluent to River (Process Effluent) |
| Norton Advanced Ceramics of Canada Inc. | 0300 , Sewer C to Welland River (Process Effluent)  0400 , Sewer D to Welland River (Process Effluent) |
| Praxair Canada Inc. (Mooretown) | 0100 , Final Effluent to River (Process Effluent) |
| Praxair Canada Inc. (Sarnia) | 0100 , Effluent from Cooling Towers to Cole Drain (Process Effluent) |
| Praxair Canada Inc. (Sault Ste. Marie) | 0100 , Outfall at Safety Drive to River (Process Effluent) |
| Puritan Bennett Corporation | 0100 , Effluent to Creek (Process Effluent) |
| Sulco Chemical Limited | 0100 , Final Effluent to Creek (Process Effluent) |
| Terra International (Canada) Inc. | 0200 , Main Effluent to River (Merged Effluent) |
| UCAR Inc. | 0100 , #2 Weir Effluent to Canal (Cooling Water) |
| Washington Mills Electro Minerals Corporation | 0100 , Effluent from Queen Lagoon to Welland River (Process Effluent)  0200 , Effluent from the Old Lagoon to Welland River (Process Effluent) |
| Washington Mills Limited | 0100 , Final Effluent to River (Process Effluent) |
| Welland Chemical Limited | 0200 , Effluent from #1 Lagoon (Process Effluent Batch)  0300 , Effluent from Chlorine Filling Unit (Cooling Water)  0400 , Effluent from East Wall of Aluminum Chloride Building (Cooling Water)  0500 , Effluent from South Wall of Aluminum Chloride Building (Cooling Water) |

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Schedule 8  
Acute Lethality Testing: Sampling Points

|  |  |
| --- | --- |
| Plant Name | Sampling Point - Number and Description |
| Cytec Canada Inc. | 0400 , Sludge Pond to Final Discharge |
| ICI Canada Inc. | 0400 , Effluent in Manhole #15 flowing into LEL-2 |
| Terra International (Canada) Inc | 0500 , Effluent from 30 inch Concrete Pipe flowing into Plant Final Discharge  0700 , Effluent in Manhole #55 flowing into Plant Final Discharge  0800 , Effluent in 42 inch Line from A-11 flowing into Plant Final Discharge |

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Schedule 9  
Chronic Toxicity Testing: Sampling Points

|  |  |
| --- | --- |
| Plant Name | Sampling Point - Number and Description |
| Albright & Wilson Americas Inc. | 0100 , Final Discharge to Canal (Process Effluent) |
| Cabot Canada Ltd. | 0100 , Discharge from Filter Bed to Cole Drain (Process Effluent) |
| Cytec Canada Inc. | 0200 , Miller’s Creek Final Discharge (Merged Effluent) |
| The Exolon-ESK Company of Canada, Ltd. | 0100 , 24 Inch Outfall at Beaver Dam Road (Process Effluent) |
| General Chemical Canada Ltd. | 0200 , Main Drain Effluent to Detroit River (Process Effluent) |
| ICI Canada Inc. | 0300 , Effluent in LEL-2 to River (Merged Effluent) |
| ICI Canada Inc. - Conpak | 0100 , Effluent from Conpak to River (Process Effluent) |
| International Minerals & Chemical Corporation (Canada) Limited | 0300 , Final Effluent to River (Process Effluent) |
| Liquid Carbonic Inc. (Maitland) | 0100 , Effluent to River (Process Effluent) |
| Norton Advanced Ceramics of Canada Inc. | 0300 , Sewer C to Welland River (Process Effluent)  0400 , Sewer D to Welland River (Process Effluent) |
| Nutrite Inc. (Maitland) | 0400 , Final Effluent to River (Process Effluent) |
| Praxair Canada Inc. (Mooretown) | 0100 , Final Effluent to River (Process Effluent) |
| Praxair Canada Inc. (Sarnia) | 0100 , Effluent from Cooling Towers to Cole Drain (Process Effluent) |
| Praxair Canada Inc. (Sault Ste. Marie) | 0100 , Outfall at Safety Drive to River (Process Effluent) |
| Puritan Bennett Corporation | 0100 , Effluent to Creek (Process Effluent) |
| Sulco Chemical Limited | 0100 , Final Effluent to Creek (Process Effluent) |
| Terra International (Canada) Inc. | 0200 , Main Effluent to River (Merged Effluent) |
| Washington Mills Electro Minerals Corporation | 0100 , Effluent from Queen Lagoon to Welland River (Process Effluent)  0200 , Effluent from the Old Lagoon to Welland River (Process Effluent) |
| Washington Mills Limited | 0100 , Final Effluent to River (Process Effluent) |
| Welland Chemical Limited | 0200 , Effluent from #1 Lagoon (Process Effluent Batch) |

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SCHEDULE 10  
STORM WATER CONTROL STUDY PARAMETERS

Table 1  
PLANT: Columbian Chemicals Canada Ltd. (Hamilton)

|  |  |  |
| --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter |
| 1. | 3 | pH |
| 2. | 4a | Ammonia plus Ammonium |
| 3. | 4a | Total Kjeldahl Nitrogen |
| 4. | 4b | Nitrate plus Nitrite |
| 5. | 5a | Dissolved Organic Carbon |
| 6. | 6 | Total phosphorus |
| 7. | 8 | Total suspended solids |
| 8. | 9 | Aluminum |
| 9. | 9 | Boron |
| 10. | 9 | Lead |
| 11. | 9 | Zinc |
| 12. | 14 | Phenolics (4AAP) |
| 13. | 15 | Sulphides |
| 14. | 24 | 2,3,7,8-tetrachlorodibenzo-para-dioxin |
| 15. | 24 | 2,3,7,8-tetrachlorodibenzofuran |
| 16. | 24 | TEQ - total toxic equivalent of 2,3,7,8 substituted dioxin and furan congeners |
| 17. | 25 | Oil and grease |

Table 2  
PLANT: Partek Insulations Ltd., Sarnia

|  |  |  |
| --- | --- | --- |
| Item | Analytical Test Group | Column 1  Parameter |
| 1. | 8 | Total suspended solids |
| 2. | 25 | Oil and grease |

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Schedule 11  
Reference Materials

|  |  |
| --- | --- |
| Plant Name | Materials |
| Albright & Wilson Americas Inc. | •Phosphoric Acid  •Sodium and Potassium Phosphates |
| AlliedSignal | •Hydrofluoric Acid |
| Cabot Canada Ltd. | •Carbon Black |
| Cytec Canada Inc. | •Phosphine and Derivatives |
| The Exolon-ESK Company of Canada, Ltd. | •Abrasives |
| General Chemical Canada Ltd. | •Soda Ash •Calcium Chloride |
| ICI Canada Inc. | •Chlorine |
| ICI Canada Inc. - Conpak | •Packaged Acids, Bases, Ammonia,  and Chlorine |
| International Minerals & Chemical Corporation (Canada) Limited | •Shutdown Phosphate Fertilizer Facility  - Storage Pond Drainage |
| Liquid Carbonic Inc. (Maitland) | •Carbon Dioxide |
| Norton Advanced Ceramics of Canada Inc. | •Abrasives |
| Nutrite Inc. | •Nitric Acid •Ammonium Nitrate  •“Nitrogen” Solutions |
| Praxair Canada Inc.(Mooretown) | •Nitrogen Gas |
| Praxair Canada Inc.(Sarnia) | •Nitrogen Gas |
| Praxair Canada Inc.(Sault Ste. Marie) | •Oxygen, Nitrogen and Argon Gases |
| Puritan Bennett Corporation | •Nitrous Oxide |
| Sulco Chemicals Limited | •Sulphuric Acid  •Packaged Acids |
| Terra International (Canada) Inc. | •Ammonia •Ammonium Nitrate •Urea  •Nitric Acid •“Nitrogen” Solutions |
| Washington Mills Electro Minerals Corporation | •Abrasives |
| Washington Mills Limited | •Abrasives |
| Welland Chemical Limited | •Aluminum Chloride •Sodium Hypochlorite  •Packaged Chlorine |

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