



# INDUSTRIAL USER BASELINE MONITORING REPORT

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## GENERAL INSTRUCTIONS

Please complete the attached form and return it by \_\_\_\_\_ to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have any questions, please contact the following person(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SPECIFIC INSTRUCTIONS

- Item 1. A.-H. Provide all requested information about the facility producing the discharge of wastewaters.
- Item 2. A.-8. Provide a listing of all primary raw materials and chemicals used in the facility's operations. Avoid use of trade names of chemicals. If trade names are used, provide information regarding the active ingredients.
  - C. Self-explanatory
  - D. List each regulated process, the production rate (i.e., 10,000 lbs. of (product name)/year), the category and subpart of the applicable Categorical Pretreatment Standard as well as the SIC code for each process.
- Item 3. A. Provide the total plant flow rate (average and maximum) to the sanitary sewer in gallons per day (gpd). If accurate flow measurements are unavailable, provide the best estimate.
  - B. Provide a breakdown of the sources of the total plant flow to the sanitary sewer including regulated and nonregulated flows, sanitary wastewater, cooling water, etc. Also indicate the flow rate (gpcl) and the type of discharge (batch, continuous or none).
  - C. In order to provide the reviewing agency a complete understanding of the facility's processes, location of pretreatment facilities and sampling points, the discharger is required to submit a schematic of each process and a schematic of wastewater flows. Flow rates may be estimated. Refer to Figures 1 and 2 for example schematics. Be sure to indicate on the flow or process schematic where samples are taken.
  - D. Self-explanatory
- Item 4. A. The facility *must* sample, analyze and report the concentration of all regulated pollutants for the regulated processes. If the flow of the wastestream being sampled is less than or equal to 250,000 gallons per day, at least three samples within a two-week period must be collected and analyzed. If the flow is greater than 250,000 gallons per day, at least six samples must be collected and analyzed within a two week period. [In any case, all samples must be representative of normal operations and be of sufficient number to allow comparison with the applicable Categorical Pretreatment Standard. Samples should be collected immediately after the regulated process (after treatment, if applicable) before being combined with other wastestreams. Type of sample (i.e., grab, composite), sample location, number of samples and methods of analysis should be adequately described. If analytical data is provided for more than one sampling point, identify the location of all sampling points in the schematic diagram required in question 3.C above.
  - B. If the facility is unable to sample the wastewater from the regulated processes before being mixed with other wastewater flows, the facility may sample the total plant flow and calculate an equivalent concentration limit using the combined wastestream formula. These results may be shown in Part 48. Figure 3 provides information on the use of the combined wastestream formula.
- Item 5, 6, 7, 8 and 9 - Self-explanatory
- Item 10. This report must be signed by an authorized representative, which may include a principal executive officer of at least the level of vice president; a general partner or proprietor; or a duly authorized representative that is responsible for the overall operation of the facility.

# INDUSTRIAL USER BASELINE MONITORING REPORT

Instructions: Please complete this form in as much detail as possible. Include additional information on attached sheets as necessary. Refer to supplemental instructions and return this report to the address shown in the instructions.

**1. COMPANY INFORMATION**

- A. Legal Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ Zip \_\_\_\_\_
- B. Facility Name: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 \_\_\_\_\_ Zip \_\_\_\_\_
- C. Name of Owner(s) \_\_\_\_\_
- D. Name of Operators \_\_\_\_\_
- E. Facility Contact (provide the name, title and phone number of a designated person to contact if additional information is necessary.)  
 \_\_\_\_\_
- F. Number of Employees \_\_\_\_\_ G. Number of Shifts \_\_\_\_\_ H. Number of Months in Operation \_\_\_\_\_
- I. Provide the name of the publicly owned treatment works (sewerage authority, municipality, etc.) that receives the wastewater discharges from this facility (If this facility is not connected to a sewerage system describe where wastewater is discharged.)  
 \_\_\_\_\_

**2. NATURE OF OPERATION**

- A. List Raw Materials Used: \_\_\_\_\_  
 \_\_\_\_\_
- B. List Chemicals Used: \_\_\_\_\_  
 \_\_\_\_\_
- C. Describe Manufacturing or Service Activities Conducted and the Final Products: \_\_\_\_\_  
 \_\_\_\_\_
- D. Summarize Each Regulated Process:

Process Description	Production Rate	Pretreatment Standard Category	Subpart	SIC Code

**3. WASTEWATER FLOW**

- A. Total Plant Flow in Gallons Per Day (gpd)      Average \_\_\_\_\_      Maximum \_\_\_\_\_
- B. Individual Process Flows in Gallons Per Day (gpd)

<u>Regulated Process</u>	<u>Average Flow Rate (gpd)</u>	<u>Maximum Flow Rate (gpd)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

<u>Unregulated Process</u>	<u>Average Flow Rate (gpd)</u>	<u>Maximum Flow Rate (gpd)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	_____	_____	_____
_____	_____	_____	_____
Cooling Water	_____	_____	_____
Sanitary Wastewater	_____	_____	_____

C. Provide on a separate sheet:

- 1) a schematic drawing or flow chart of each regulated process that generates wastewater
- 2) a schematic drawing showing all wastewater flows (regulated and unregulated), location of any treatment system, and sampling locations.

4. NATURE AND CONCENTRATION OF POLLUTANTS

A. Analysis of Regulated Flows

The industrial user must perform sampling and analysis of the effluent from all regulated processes (after treatment, if applicable). Provide the analytical data for the regulated processes in the space provided below. Attach additional sheets if necessary. Only those pollutants specifically regulated by the applicable category need be reported.

Regulated Process: \_\_\_\_\_

mg/l	Ag	Cd	CN,A	CN,T	Cr	Cu	Ni	Pb	pH	TM	Zn	TTO				
Maximum																
Average																

Sample Location: \_\_\_\_\_

Sample Type (composite samples are required except where not feasible): \_\_\_\_\_

Number of Samples and Frequency Collected: \_\_\_\_\_

Analytical Methods Used: \_\_\_\_\_

B. Analysis of Total Plant Flow (if appropriate)

An Industrial User may sample and analyze the total plant flow and calculate an equivalent concentration limit using the combined wastestream formula if regulated process flows are mixed with other flows prior to treatment and/or sampling. Record the analytical results for all regulated pollutants below. Record the calculated concentration limits as well as the actual measured concentrations.

mg/l	Ag	Cd	CN,A	CN,T	Cr	Cu	Ni	Pb	pH	TM	Zn	TTO				
MEC*																
AEC*																
AMMC*																
AAAC*																

Sample Location: \_\_\_\_\_

Sample Type : \_\_\_\_\_

Number of Samples and Frequency Collected: \_\_\_\_\_

Analytical Methods Used: \_\_\_\_\_

\* MEC– Maximum Equivalent Concentration (derived through the combined wastestream formula)

\*AEC – Average Equivalent Concentration (derived through the combined wastestream formula)

\*AMMC – Actual Measured Maximum Concentration

\*AAAC – Actual Measured Average

**5. WASTEWATER TREATMENT**

Briefly describe any and all wastewater treatment utilized (show treatment system location in relation to process flows on schematic drawings required by Questions 3.C.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**6. ENVIRONMENTAL CONTROL PERMITS**

Describe all environmental control permits held by or for the facility:

Describe Title of the Permit	Permit Number	Issuing Agency	Expiration Date

**7. COMPLIANCE CERTIFICATION**

A. Is the facility meeting applicable categorical pretreatment standards on a consistent basis? YES \_\_\_\_\_ NO \_\_\_\_\_

B. If no, do you require:

- 1) additional operation and maintenance (O&M) to achieve compliance? YES \_\_\_\_\_ NO \_\_\_\_\_
- 2) new or additional pretreatment facilities to achieve compliance? YES \_\_\_\_\_ NO \_\_\_\_\_

C. If additional O&M or new or additional pretreatment will be required to meet categorical pretreatment standards on a consistent basis, attach a schedule on a separate sheet projecting increments of progress indicating dates for the commencement and completion of major events leading to compliance with the standard. Note: the final compliance date in this schedule shall not be later than the compliance date for the applicable pretreatment standard. Written progress reports within 14 days of each of the compliance dates specified in the compliance schedule.

**8. SIGNATURE REQUIREMENT**

I certify under penalty of law that I have personally examined and am familiar with the information in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application. I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information

\_\_\_\_\_  
NAME - AUTHORIZED REPRESENTATIVE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
OFFICIAL TITLE

\_\_\_\_\_  
DATE

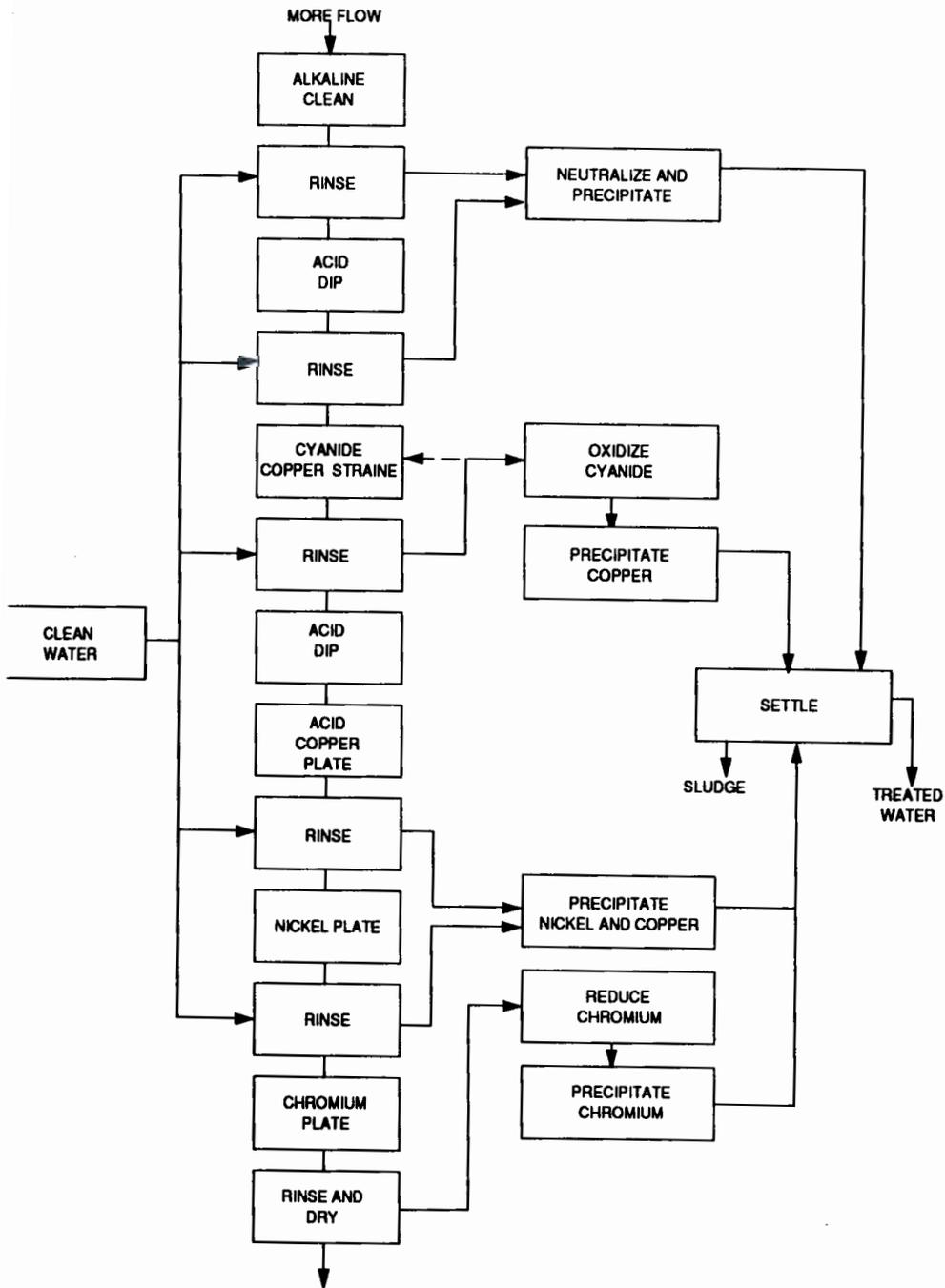
## APPENDIX I

### Baseline Monitoring Report Requirements

The following information is required by 40 CFR 403.12 to be included in the Baseline Monitoring Report:

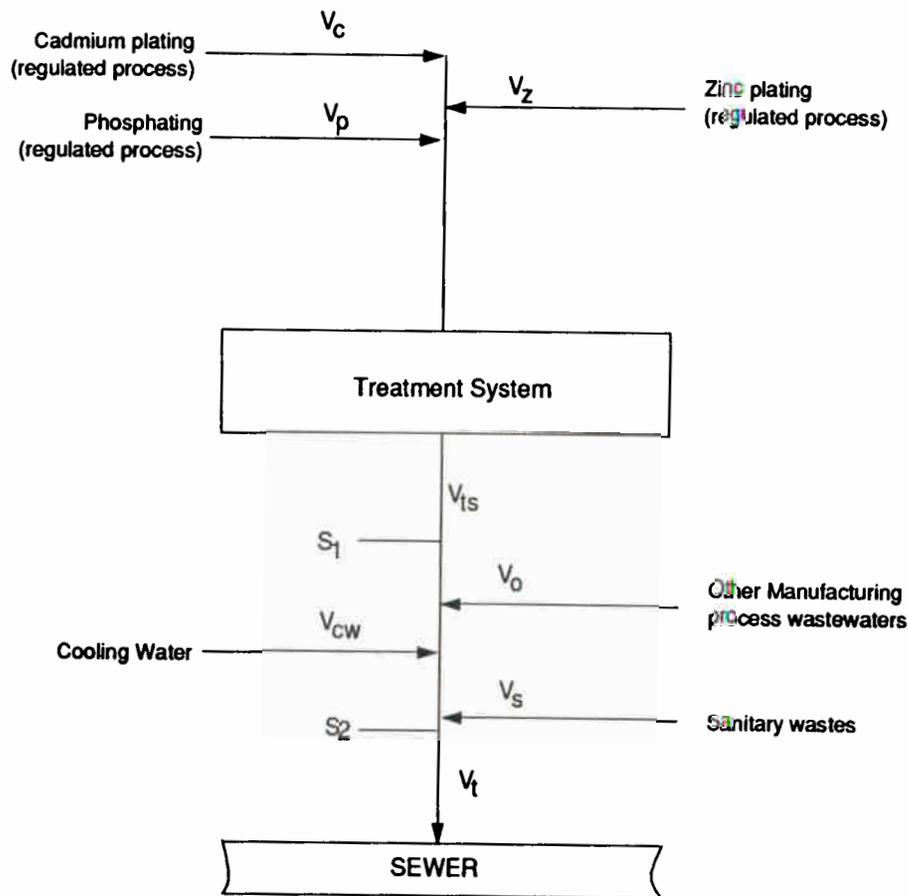
1. **Identifying information:** Name and address of the facility including the names of the operators and owners.
2. **Permits:** List all environmental control permits held by, or for, the facility.
3. **Description of operations:** Briefly describe the nature of your production and SIC Code of the operation(s) carried out by the facility. Include a schematic process diagram indicating points of discharge to the POTW from the regulated processes.
4. **Flow measurement:** Provide information concerning the average daily flow and maximum daily flow, in gallons per day, to the POTW from each of the regulated process streams and other streams as necessary to allow use of the combined wastestream formula defined in 40 CFR Part 403.6 (e).
5. **Measurement of Pollutants:** Identify the Pretreatment Standard applicable to each regulated process. In addition, provide the following:
  - a. Sample analyses identifying the nature and concentrations of regulate process wastes (both daily maximum and average concentration should be reported).
  - b. Where feasible, sample must be obtained through the flow proportional composite sampling techniques specified in the applicable pretreatment standard. Where composite sampling is not feasible, a grab sample is permissible. Sampling and analysis shall be in accordance with procedures presented in 40 CFR Part 136.
  - c. If the flow of the waste stream being sampled is less than or equal to 950,000 liters/day (approximately 250,000 gpd), three samples shall be taken over a two week period. If the flow is greater than 250,000 gpd, six samples shall be taken over a two week period.
  - d. Samples shall be taken immediately downstream from pretreatment facilities, if such exist; or immediately downstream from pretreatment facilities, if such exist; or immediately downstream from the regulated process if no pretreatment system exists. If other wastewaters are mixed with regulated wastewater prior to pretreatment, the Industrial User shall measure the flows and concentrations necessary to allow use of the combined wastestream formula of 403.6 (e).
  - e. Indicate the time, date and place of sampling, and methods of analysis and certify that such sampling and analysis is representative of normal work cycles and expected pollutant discharge to the POTW.
6. **Certification:** A statement, reviewed by an authorized representative of the facility, and certified by a qualified representative of the facility, and certified by a qualified professional engineer, indicating whether pretreatment standards are being met on a consistent basis and, if not, whether additional O&M and/or additional pretreatment is required for the facility to meet pretreatment standards and requirements.
7. **Compliance Schedule:** If additional pretreatment and/or O&M will be required to meet the pretreatment standards, the shortest schedule by which the facility will provide such additional pretreatment and/or improved O&M should be provided. The completion date in this schedule shall not be later than the compliance date established in the applicable pretreatment standard.

### EXAMPLE 1 – EXAMPLE SCHEMATIC OF REGULATED PROCESS



**NOTE:** If mass-based standards (as opposed to concentration-based) are used according to agreements set up with the control authority or specified in the categorical pretreatment standard, the production rate in units specified by the standard should be included in the schematic above.

### EXAMPLE 2 – EXAMPLE WASTEWATER FLOW SCHEMATIC



Where:  $V_x$  = Flowrates,  $S_x$  = Sampling Locations

**TOTAL PLANT FLOW** ( $V_t$ ) =  $V_{ts} + V_{cw} + V_o + V_s$  ( $V_{ts} = V_c + V_p + V_z$ )

**REPRESENTATIVE SAMPLING** In this example:

- If regulated lines are treated only, samples should be taken after treatment, but prior to mixing with other wastewaters at point S1.
- If samples cannot be taken at S1 and other wastewaters are mixed with the regulated wastestreams, then S2 could be used as a sampling point. However, an alternative equivalent concentration limit would have to be calculated using the combined wastestream formula as shown in Figure 3.

**NOTE:** For purposes of the baseline monitoring report, estimates of total plant flow can be obtained from the facility's water meter.

## FIGURE 3 APPLICATION OF THE COMBINED WASTESTREAM FORMULA

Industrial users (IUs) frequently have several production lines that produce different wastestreams. Some of the wastestreams may be regulated by one categorical pretreatment standard, while others are regulated by a different categorical standard or not regulated at all. The IU may combine all the process wastestreams and treat them in a single wastewater treatment facility.

The combined wastestream formula (CWF), described in Section 403.6(e) of the General Pretreatment Regulations, is a mechanism for adjusting the effluent limits (concentration or mass) in categorical pretreatment standards for use when a regulated process wastestream is combined, prior to treatment and sampling, with another process wastestream (either regulated or unregulated), resulting in a mixed effluent from the treatment facility. The CWF should only be used in instances where sampling cannot take place at the end of a regulated process (after treatment) and before mixing with other wastestreams. The CWF is applied to the mixed effluent to account for the presence of the additional flow not contributed by the regulated process wastestream. The combined wastestream formulas for concentration and mass limits, along with example applications of each, are provided.

### Definitions

**Regulated Process Wastestream** – An industrial process wastestream regulated by a national Categorical Pretreatment Standard.

**Unregulated Process Wastestream** – An industrial process wastestream that is not regulated by a Categorical Standard.

**Dilute Wastestream** – Boiler blowdown, sanitary wastewater, noncontact cooling water or blowdown, and Paragraph 8 excluded wastestream containing none of the regulate pollutant or only a trace amount of it.

**Note:** Definitions apply to individual pollutants. A wastestream from a process may be "regulated" for one pollutant and "unregulated" for another pollutant.

### COMBINED WASTESTREAM FORMULAS

#### Alternative Concentration Limit Formula:

$$C_t = \left( \frac{\sum_{i=1}^N C_i F_i}{\sum_{i=1}^N F_i} \right) \times \left( \frac{F_t - F_D}{F_t} \right)$$

$C_t$  = alternative concentration limit for the pollutant

$C_i$  = Categorical Pretreatment Standard concentration limit for the pollutant in regulated stream i

$F_i$  = average daily flow (at least 30 day average) of regulated stream i

$F_d$  = average daily flow (at least 30 day average) of dilute wastestream(s)

$F_t$  = average daily flow (at least 30 day average) through the combined treatment facility (including regulated, unregulated and dilute wastestream)

$N$  = total number of regulated streams

#### Alternative Mass Limit Formula:

$$M_t = \left( \frac{\sum_{i=1}^N M_i}{\sum_{i=1}^N F_i} \right) \times \left( \frac{F_t - F_D}{F_t} \right)$$

$M_t$  = alternative mass limit for the pollutant

$M_i$  = Categorical Pretreatment Standard mass limit for the pollutant in regulated stream i (the categorical pretreatment mass limit multiplied by the appropriate measure of production)

$F_i$  = average daily flow (at least 30 day average) of regulated stream i

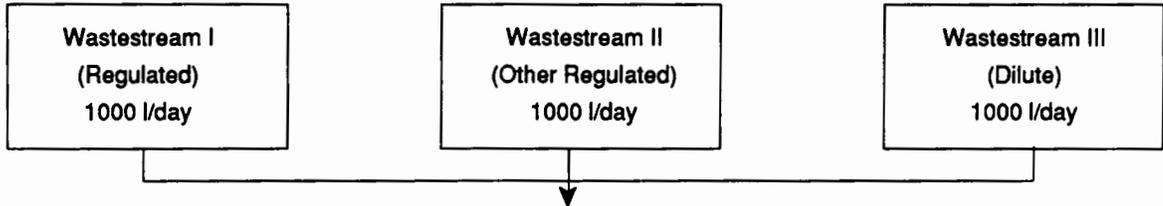
$F_d$  = average daily flow (at least 30 day average) of dilute wastestream(s)

$F_t$  = average daily flow (at least 30 day average) through the combined treatment facility (including regulated, unregulated and dilute wastestream)

$N$  = total number of regulated streams

**Example Calculation of an Alternative Concentration Limit for a Pollutant**

	<u>Average Daily Flow (l/day)</u>	<u>Categorical Standard for Pollutant (mg/l)</u>
Wastestream I (Regulated)	1,000	2.0
Wastestream II (Other Regulated)	1,000	3.0
Wastestream III (Dilute)	1,000	—



If the IU Combines wastestream I, II and III:

$$C_t = \frac{(2.0 \text{ mg/l} \times 1,000 \text{ l/day}) + (3.0 \text{ mg/l} \times 1,000 \text{ l/day})}{2,000 \text{ l/day}} \times \frac{3,000 \text{ l/day} - 1,000 \text{ l/day}}{3,000 \text{ l/day}}$$

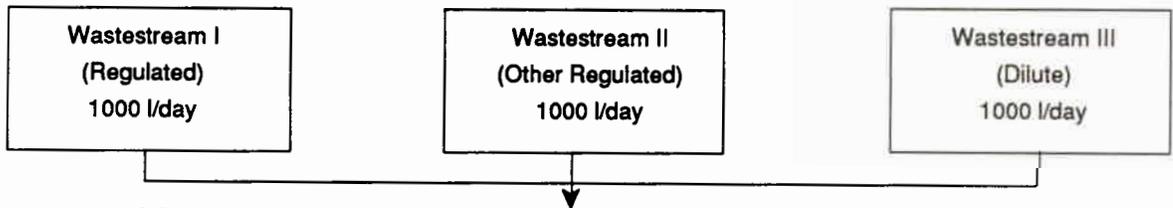
$$C_t = 2.5 \text{ mg/l} \times .66$$

$$C_t = 1.65 \text{ mg/l}$$

The alternative concentration limit ( $C_t$ ) is to be used when determining compliance with an applicable pretreatment standard and completing the BMR form.

**Example Calculation of an Alternative Mass Limit for a Pollutant**

	<u>Average Daily Flow (l/day)</u>	<u>Categorical Standard for Pollutant (mg/ sq m operation)</u>	<u>Production Rate (sq m operation/day)</u>
Wastestream I (Regulated)	1,000	100	500
Wastestream II (Other Regulated)	1,000	150	500
Wastestream III (Dilute)	1,000	—	—



If the IU Combines wastestream I, II and III:

$$M_t = (100 \text{ mg/sq m} \times 500 \text{ sq m/d}) + (150 \text{ mg/sq m} \times 500 \text{ sq m/d}) \times \frac{3,000 \text{ l/day} - 1,000 \text{ l/day}}{2,000 \text{ l/day}}$$

$$M_t = 125,000 \text{ mg/d} \times 1$$

$$M_t = 125 \text{ g/d}$$

The alternative concentration limit ( $M_t$ ) is to be used when determining compliance with an applicable pretreatment standard and completing the BMR form.

For more information concerning the combined wastestream formula, contact the EPA Regional office, State, or local POTW.