

RESPONSE TO PUBLIC COMMENTS

August 23, 2006 to September 21, 2006, the United States Environmental Protection Agency (EPA) solicited Public Comments on a draft NPDES permit, developed pursuant to an application from City of Claremont, New Hampshire for the Claremont Wastewater Treatment Facility in Claremont, NH. After a review of the comments received on the current draft permit, EPA has made the decision to issue the final permit authorizing the discharge. The following response to public comments describes the changes and briefly describes and responds to the comments on the draft permit. A copy of the final permit may be obtained by writing or calling Michele Cobban Barden, United States Environmental Protection Agency, 1 Congress Street, Suite 1100 (CMP) Boston, Massachusetts, 02114-2023; Telephone (617) 918-1539.

- A) Comments submitted by Rob Lauricella, Plant Manager, Aquarion Services Company, dated September 1, 2006

Comment #1: *Address of the applicant should be 58 Opera House Square.*

Response: This correction applies to the fact sheet. However, because the fact sheet is issued in conjunction with the draft permit and is not part of the final permit issuance, it will not be modified. This comment is part of the administrative record for the final permit pursuant to 40 CFR Part 124.18

Comment #2: *The draft permit stated that the annual Pretreatment Report needs to be submitted by November 1st of each year, but the reporting period is July 1st – June 30th. The fact sheet states November 1st to submit the report for the twelve month period ending 60 days prior to the due date. The annual pretreatment reports have been reported for the period of October 1st to September 30th and submitted before November 1st for the past 20 years.*

Response: The permit has been revised so that the reporting period is October 1st to September 30th, which consistent with the fact sheet language of 60 days prior to the due date of November 1st.

Comment #3: *The draft Fact Sheet reports the West Claremont gage 7Q10 value to be 37.23 cfs and calculates the WWTF 7Q10 value to be 37.39 cfs based on the additional drainage area of 1.6 mi². There is a math error in this calculation. The WWTF 7Q10 value should be 37.46 cfs.*

Response: EPA agrees; the 7Q10 value of the Sugar River at the point of the WWTF discharge calculates to be 37.46 cfs.

$$\{Q_{\text{Claremont gage}}\} + \{(Q_{\text{Claremont gage}}) * [(\text{drainage area between Claremont gage and the WWTF} / \text{(total drainage area for the Claremont gage)})]\} =$$

$$\{37.23\} + \{(37.23) * (1.6 \text{ mi}^2) / (269 \text{ mi}^2)\} \\ = 37.46 \text{ cfs}$$

Comment #4: *The current discharge permit issued on September 29, 2000 calculated the dilution factor with the treatment plant's design flow in the numerator. The fact sheet for the draft discharge permit does not include the treatment plant's design flow in the numerator.*

Response: EPA agrees that there was an error in the fact sheet. The dilution factor, using a 7Q10 value of 37.46, should be calculated as follows:

$$\text{Dilution Factor} = \frac{(Q_{001}) + (Q_{\text{WWTF}} * 1.547)}{(Q_{\text{WWTF}} * 1.547)} * 0.9$$

Where:

Q_{001} = Estimated 7Q10 flow at Outfall 001, in cfs
0.9 = Factor to reserve 10% assimilative capacity
 Q_{WWTF} = Treatment plant design flow, in mgd
1.547 = Factor to convert mgd to cfs

$$\text{Dilution Factor} = \frac{(37.46) + (3.89 * 1.547)}{(3.89 * 1.547)} * 0.9$$

$$= \frac{(37.46) + (6.02)}{6.02} * 0.9$$

$$= 7.22 * 0.9$$

$$= 6.5$$

The recalculated dilution factor must be applied to the water quality limits for Total Residual Chlorine, Copper, and the C-NOEC. Corrected values will be:

Total Residual Chlorine Limitations:

(acute criteria * dilution factor) = Acute (Maximum Daily)
(19 ug/l x 6.5) = 123.5 ug/l = 0.12 mg/l

(chronic criteria * dilution factor) = Chronic (Monthly Average)
(11 ug/l x 6.5) = 71.5 ug/l = 0.072 mg/l

Total Recoverable Copper:

Water Quality Criteria for hardness-dependent metals:

Acute criteria (dissolved) = $\exp\{ m_a [\ln(\text{hardness})] + b_a \}$ (CF)

m_a = pollutant specific coefficient

b_a = pollutant specific coefficient

h = hardness

\ln = natural logarithm

CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of acute limit for copper:

$$m_a = 0.9422 \quad b_a = -1.700 \quad CF = 0.960 \quad h = 25$$

Acute criteria (dissolved) = $\exp\{0.9422 [\ln(25)] + -1.700\} * (0.960) = 3.64 \text{ ug/l}$

Dilution factor = 6.5

Effluent limitation for dissolved copper = $6.5 * 3.64 \text{ ug/l} = 23.66 \text{ ug/l}$

Effluent limitation for total recoverable copper = $23.66/0.96 = 24.64 \text{ ug/l}^*$

The maximum daily water quality based limitation for total recoverable copper is 24.64 ug/l

Chronic criteria (dissolved) = $\exp\{ m_c [\ln(\text{hardness})] + b_c \}$ (CF)

m_c = pollutant specific coefficient

b_c = pollutant specific coefficient

h = hardness

\ln = natural logarithm

CF = pollutant specific conversion factor used to convert total recoverable to dissolved metal

Calculation of chronic limit for copper:

$$m_c = 0.8545 \quad b_c = -1.702 \quad CF = 0.960 \quad h = 25$$

Chronic criteria (dissolved) = $\exp\{0.8545 [\ln(25)] + -1.702\} * (0.960) = 2.74 \text{ ug/l}$

Dilution factor = 6.5

Effluent limitation for dissolved copper = $6.5 * 2.74 \text{ ug/l} = 17.81 \text{ ug/l}$

Effluent limitation for total recoverable copper = $17.81/0.96 = 18.55 \text{ ug/l}^*$

The monthly average water quality based limitation for total recoverable copper is 18.55 ug/l.

Comment #5: *The C-NOEC limit should be changed from 17.8 percent to 15.4 percent due to the changed dilution factor.*

Response: EPA agrees and a correction has been made in the final permit.

$$1/6.5 = 15.4\%$$

B) EPA was also contacted by the New Hampshire Department of Environmental Services (NHDES), Wastewater Engineering Bureau, Permit and Compliance, regarding several inaccuracies and omissions in the fact sheet and draft permit. These were:

1. Inaccuracies and omissions in Section J of the fact sheet (Sludge Conditions).

a. NHDES noted that the following language should have been in the fact sheet regarding state administrative rules regulating sludge management:

“In addition to federal regulations the permittee is also subject to New Hampshire’s administrative rules, Env-Ws 800. State sludge management regulations are considerably more stringent than federal requirements in terms of sludge quality and land application models.”

b. NHDES noted that in addition to the permittee’s composted sludge being used in municipal projects, the compost is also used in agriculture and topsoil manufacturing.

Because the fact sheet is issued in conjunction with the draft permit and is not part of the final permit issuance, it will not be modified. These comments are, however, part of the administrative record for the final permit pursuant to 40 CFR Part 124.18. No changes to the permit were required based on the state’s comments.

2. Error in the dilution factor calculation:

NHDES noted the same error in the dilution factor calculation that was noted by the permittee in comment number A.3. This error has been corrected in response to the permittee’s comments and the effluent limits recalculated accordingly. (see responses to comments A.3 and A.4).

3. Discrepancy in minimum levels:

There is a slight discrepancy between the minimum level for total copper specified in Footnote #8 of the Permit and the level specified in Attachment A of the Permit. EPA has changed Footnote #14 of the final permit to clarify that the minimum level specified in Footnote #8 is the level to be used for reporting total copper.