

**LATE REVISIONS  
CITY OF BRENTWOOD  
WASTEWATER TREATMENT PLANT  
CONTRA COSTA COUNTY**

**Consideration of Order Amending Waste Discharge Requirements  
Order R5-2008-0006 and New Time Schedule Order  
(NPDES Permit No. CA0082660)  
Regional Water Quality Control Board, Central Valley Region  
Board Meeting – 6 December 2012  
ITEM # 11**

These late revisions are for the proposed Order amending Waste Discharge Requirements Order R5-2008-0006 in Agenda Item #11. Part 1 includes late revisions to the findings and Part 2 includes late revisions to the Hereby Ordered section. There are no late revisions for the proposed new Time Schedule Order.

**Part 1 – Late Revisions to Modify Findings**

1. Modify finding 4 of amending Order R5 2012-XXXX to provide additional details on the progress the City of Brentwood has made to comply with the final effluent limitations for chloride, as shown highlighted in underline/strikeout format below:
  4. The Discharger has been making diligent progress to comply with the final effluent limitations for chloride. The Discharger implemented a pollution prevention plan (PPP) for chloride (March 2011). As part of the PPP implementation the Discharger has completed the following tasks:
    - a. **Alternative chloride criteria to derive effluent limitations (October 2011).** For the 2008 permit, the derivation of the water quality-based effluent limits for chloride was based on the interpretation of the Basin Plan's narrative toxicity objective. Using its judgment the Central Valley Water Board utilized United States Environmental Protection Agency (USEPA) 1988 National Recommended Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life for Chloride to interpret the narrative toxicity objective. The Discharger researched potential alternative water quality criteria for chloride that have been developed by other states to determine if more recent water quality criteria have been developed that may appropriately be used to interpret the narrative toxicity objective for the specific receiving water body. In particular, the state of Iowa, in coordination with the USEPA, developed and adopted new chloride criteria in 2009 based on USEPA criteria development guidelines. Iowa's chloride criteria were derived with support from USEPA and account for the water hardness- and sulfate-dependent toxicity to chloride in sensitive aquatic organisms<sup>1</sup>. The Discharger has completed an evaluation of existing effluent and site-specific receiving water hardness and sulfate data, and developed preliminary conclusions that indicate alternative chloride criteria based on the equations developed by Iowa and USEPA may be more appropriate chloride criteria for protection of aquatic life. If implemented, the alternative chloride criteria of 361 mg/L would be substantially higher than the 1988 USEPA criteria of 230mg/L), which will provide the Discharger with an avenue to comply with the final limits through implementation of the proposed compliance alternative

- (s) described below. The Discharger is currently conducting supplemental monthly monitoring of the effluent and receiving water for hardness and sulfate to justify the potential use of the alternative criteria in the upcoming NPDES permit renewal process. The use of an alternative criteria will have a substantial impact on which compliance alternative(s) need to be implemented to reduce the chloride loading in the effluent.
- b. **Assimilative Capacity and Dilution Credit (April 2012).** The Discharger completed monitoring for chloride to assess available assimilative capacity in Marsh Creek. Based on the results of the study, the available dilution flows in Marsh Creek are low and there is insufficient assimilative capacity for chloride. Therefore, a dilution credit sufficient to resolve the chloride compliance issue is not anticipated to be feasible.
- c. **Alternative Wastewater Disposal – Increased Use of Recycled Water (June 2012).** The Discharger initiated an investigation for expanded use of recycled water to reduce or eliminate the summer discharge. A report on the implementation of this alternative is scheduled for 31 December 2016.
- d. **Chloride Loading Assessment (March 2011).** The Discharger has completed an investigation to evaluate the sources of chloride loading into the Facility and found that the majority of the loading is from the raw influent wastewater, most likely from the use of Self-Regenerating Water Softeners (SRWS) due to the use of high hardness groundwater as the water supply. The Discharger has conducted outreach via annual water quality reports to inform the public about the hardness of the City's water supply and promote the use of systems that regenerate the ion exchange media on demand-based control systems rather than time-based systems. The Discharger does not currently regulate water softener installation requirements through local ordinances code. However, the Discharger is proposing a SRWS control program investigation that will assess the number of existing SRWS systems operating within the City boundaries. The Discharger may implement an incentive program to motivate its residences to reduce SRWS usage.
- e. **Alternative Water Supply (November 2012).** The Discharger has completed a preliminary investigation on water supply control options to switch from high hardness groundwater supplies to lower hardness surface water supplies. The change to surface water supplies will be needed to reduce customer reliance on water softener use in the City. The Discharger has begun to change water supplies, reducing groundwater usage from 60 percent of the total supply prior to 2007 to 35 percent of the total supply in 2012.

The Discharger ~~submitted an Infeasibility Analysis developed a treatment feasibility study~~ and Time Schedule Justification (May 2012) describing feasible alternatives and the process for evaluating and selecting the most appropriate alternative to comply with the final effluent limitations. As part of the Compliance Strategy Work Plan described in the Infeasibility Analysis treatment feasibility study the Discharger is proposing to: 1) investigate water supply control options;

2) investigate regulatory feasibility and cost effective alternative disposal options; and 3) develop and implement a control program for customers to ~~change~~ minimize the use of Self-Regenerating Water Softeners.

Based on the results of the pollution prevention plan and the identified compliance strategy, more time is needed for the Discharger to comply with the final limits. Therefore, the Discharger submitted a request and justification for extending the compliance schedule an additional five years to implement ~~the chloride Compliance Strategy Work Plan objectives~~ compliance alternatives for chloride reduction. The request included the information required in the State Water Resources Control Board's Compliance Schedule Policy. This Order amends the NPDES Permit to extend the existing compliance schedule by five years, allow a compliance schedule until 1 January 2018.

2. Modify amending Order R5 2012-XXXX by adding footnote 1 on page 2, as shown below.

<sup>1</sup> "Alternative Water Quality Criteria for Chloride for the Protection of Aquatic Life," State of Iowa Department of Natural Resources (2009).

**Part 2 –Late Revisions to Modify Hereby Ordered Section**

The proposed Order amending Waste Discharge Requirements Order R5-2008-0006 in Agenda Item #11 includes amended permit language shown in underline/strikeout format in the Hereby Ordered section. The proposed late revisions to Agenda Item #11 are shown below in **highlighted** underline/strikeout text to distinguish the late revisions from the proposed amended permit language included in the agenda package.

**3. Limitations and Discharge Requirements, Section VI.C.7 – Compliance Schedules.**  
 Modify Hereby Ordered item 5 of amending Order R5 2012-XXXX to add additional tasks to the chloride compliance schedule, as shown highlighted in underline/strikeout format below:

**b. Compliance Schedule for Final Effluent Limitations for Chloride.**

- i. **By 1 January 2018**, the Discharger shall comply with the chloride final effluent limitations specified in Section IV.A.1.a. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations and interim requirements and dates for their achievement.

<u>Task</u>	<u>Date Due</u>
i. <b><u>Submit a Pollution Prevention Plan (PPP)<sup>1</sup> for Chloride</u></b>	<b><u>18 March 2011</u></b>
<del>ii. <b><u>Submit a Treatment Feasibility Study<sup>2</sup></u></b></del>	<del><b><u>21 June 2012</u></b></del>
ii. <b><u>Compliance Alternative Investigation and Selection of Preferred Compliance Alternative.</u></b> Submit a report that includes: 1) a compliance options investigations analysis and 2) a rationale for selection of preferred compliance option(s), and 3) a discussion of funding sources. The report <del>shall</del> <b>must</b> also describe the selected preferred compliance alternative(s) and <b>preliminary milestone</b> schedule for implementing the alternative(s) <b>for compliance with the final effluent limits for chloride.</b>	<b><u>31 December 2013</u></b>
iii. <b><u>Prepare Agenda Item for City Council Approval of Selected Alternative.</u></b> Submit a report demonstrating compliance with this task that includes <b>the following:</b> 1) agenda item prepared that summarizes findings from the <u>Compliance Alternative Investigation and recommended preferred compliance alternative(s).</u> 2) summary of the outcome of the City Council meeting (e.g., resolution on compliance alternative options and selected preferred alternative), and 3) schedule for implementing the selected alternative(s).	<b><u>30 June 2014</u></b>
<del>iv. <b><u>Implementation of Selected Project Alternative.</u></b> Submit report demonstrating the Discharger has begun implementing the Selected Project Alternative.</del>	<del><b><u>1 October 2014</u></b></del>
v. <b><u>Rate Analysis Report.</u></b> Submit a report that includes <b>the following:</b> 1) identification of the funding alternatives and sources and 2) an evaluation of the source of rate revenue necessary to fund recommended compliance <b>alternative project(s)</b> and 3) consider alternative funding alternatives such as revenue bonds and/or State Revolving Funds.	<b><u>1 June 2015</u></b> <b><u>31 December 2014</u></b>

<u>Task</u>	<u>Date Due</u>
<u>vi. Project Funding.</u> Submit a financing plan for the selected compliance project(s) and a schedule for obtaining State Water Board funding, if applicable	<u>1 December 2015</u>
<u>vii. Final Project Milestone Schedule.</u> Submit final project milestone schedule that ensures compliance with the final effluent limits for chloride by the final compliance date.	<u>1 February 2016</u>
<u>viii. Implementation of Expanded Recycled Water Usage.</u> Submit report that includes a description of the process and steps on how the Discharger will proceed with describes the implementation of the expanded use of recycled water to reduce discharge of treated effluent into Marsh Creek.	<u>31 December 2016</u>
<u>ix vii. Progress Reports<sup>2</sup></u>	<u>31 December 2014</u> <u>31 December 2015</u> <u>31 December 2016</u>
<u>x vii. Comply with Final Effluent Limitations for Chloride.</u> Submit report demonstrating compliance with the final limits	<u>1 January 2018</u>

<sup>1</sup> The PPP for chloride was submitted by the compliance date. The PPP was prepared and implemented in accordance with Water Code section 13263.3(d)(3) as outlined in the Fact Sheet (Attachment F section VII.B. 3.c).

<sup>2</sup> The Treatment Feasibility Study was submitted by the compliance date. The Treatment Feasibility Study included alternatives and the process for evaluating and selecting the most appropriate alternative to comply with the final effluent limitations. It also included a schedule for achieving compliance with the final effluent limits.

<sup>2-2</sup> The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, funding resources, and recommendations for additional measures as necessary to achieve full compliance by **1 January 2018**. If another report is due on the same date as a progress report, the reports can be combined into one submittal.

4. **Attachment F, Section VII.B.7 – Compliance Schedules.** Modify Hereby Ordered item 10 of amending Order R5 2012-XXXX to provide clarification, as shown highlighted in underline/strikeout format below:

## 7. Compliance Schedules

The use and location of compliances schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

- a. In accordance with the SIP and the Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (Resolution 2008-0025), which is the governing Policy for compliance schedules in NPDES permits (hereafter "Compliance Schedule Policy"), the Discharger submitted a request and justification (dated October 2007), for a compliance schedule for selenium, 4,4'-DDT, alpha-endosulfan, gamma-BHC, and chloride. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP and Item 4 of the Compliance Schedule Policy. This Order establishes a compliance schedule for the final WQBELs for these constituents. Full compliance with the selenium WQBELs is required by 18 May 2010, while full compliance with the WQBELs for chloride, 4,4'-DDT, alpha-endosulfan, and

gamma-BHC is required by 1 January 2013. The justification in the Infeasibility Analysis provides for a time schedule for the Discharger to comply with the new limitation for selenium chloride in five years from the effective date of this Order. Allowance of an additional compliance schedule beyond the dates specified above may be granted in a subsequent enforcement order or within the permit as appropriate, as the Regional Water Board deems necessary.

- b. Since the adoption of WDR Order R5 2008-0006 the discharger implemented a pollution prevention plan for chloride (March 2011) that identified possible alternatives to control chloride in order to comply with the final effluent limitations. The Discharger submitted an infeasibility analysis (June 2012) that included a Compliance Strategy Work Plan to: 1) investigate water supply control options; 2) investigate regulatory feasibility and cost effective alternative disposal options; and 3) develop and implement a control program for customers to minimize the use of Self Regenerating Water Softeners. Based on the results of pollution prevention and the identified compliance strategy, more time is needed to comply with the final limits. The infeasibility study adequately demonstrated that the Discharger cannot immediately comply with the final effluent limits for chloride, and included a request and justification for an extension of the compliance schedule for chloride that met the requirements of the State Water Resources Control Board's Compliance Schedule Policy. This Order establishes a compliance schedule for the final WQBELs for chloride. Full compliance with the chloride WQBELs is required by 1 January 2018. Federal Regulations at 40 C.F.R. § 122.47(a)(1) requires that, "Any schedules of compliance under this section shall require compliance as soon as possible..." The Compliance Schedule Policy also requires that compliance schedules are as short as possible and may not exceed 10 years. The final compliance date schedule complies is as soon as possible in accordance with federal regulations and the State Water Resources Control Board's Compliance Schedule Policy, which allows for a maximum compliance period of ten years.

Any compliance schedule contained in an NPDES permit must be "...an enforceable sequence of actions or operations leading to compliance with an effluent limitation..." per the definition of a compliance schedule in CWA Section 502(17). See also 40 C.F.R. § 122.2 (definition of schedule of compliance). The compliance schedule for chloride meets these requirements. The compliance schedule requires submittal of the Compliance Alternative Investigation report by 31 December 2013, to identify the preferred compliance alternative(s) and preliminary implementation schedule. Upon identification of the selected alternative(s), by 30 June 2014, the Discharger will develop an agenda item for consideration by the City Council of the selected compliance alternative(s) and schedule. The Discharger shall then implement the selected project alternative and submit a report by 1 October 2014. The compliance schedule also requires development of a Rate Study to identify funding alternatives and sources by

31 December 2014 1 June 2015 and a Project Funding with a financing plan for the selected compliance project(s) by 1 December 2016. The compliance schedule also requires submit a final implementation schedule by 1 February 2016, and requires the Discharger implement expanded recycled water usage by 31 December 2016. Specific construction milestones cannot be established at this time, because the compliance alternative(s) has not been selected. Until the Discharger identifies the selected compliance alternative(s), some specific milestone tasks cannot be identified. This Order includes a reopener provision that allows the Central Valley Water Board to reopen the permit for addition and/or modification of the specific tasks and due dates for the chloride compliance schedule upon completion of the Compliance Alternative Investigation report.