Response to Comments on Item No. 4
Cease and Desist Order No. R1-2010-0006
For the Russian River County Sanitation District
And Sonoma County Water Agency

Two comment letters were received on draft Cease and Desist Order No. R1-2010-0006. The letters were received from the Sonoma County Water Agency, commenting on behalf of Russian River County Sanitation District (CSD) (letter A) and Russian River Watershed Protection Committee. Both letters were received on October 26, 2009 (letter B). An email received from Russian River Protection Committee on December 3, 2009 contained one additional comment.

The following are Regional Water Board staff responses to comments provided by the Sonoma County Water Agency (SCWA) on behalf of Russian River CSD (RRCSD). The response to each comment indicates whether or not changes were made to the draft proposed Order in response to the comment:

A. Sonoma County Water Agency /Russian River County Sanitation District October 26, 2009 Letter

The majority of the comments submitted by SCWA/RRCSD identified errata and requested clarification or minor changes to the proposed Order that do not change the substance of the proposed Order. Comments A1,A3b, A9, and A10 request changes that are more substantive.

Comment A1: Finding 7 summarizes dichlorobromomethane (DCBM) data collected between January 2004 and April 2009. RRCSD requests that all DCBM data collected between January 2004 and May 2009 be cited in Finding 7 and that the maximum value of 5.72 ug/L, measured on May 5, 2009, be identified as the performance-based interim limit.

Response: In light of this comment by the Discharger, requesting a higher interim effluent limitation based on the May 2009 DCBM result, and comments submitted by the Russian River Watershed Protection Committee (Comment B1) expressing concern about giving the Discharger more time to achieve final DCBM effluent limitations, Regional Water Board staff reevaluated its approach to setting interim effluent limitations for California Toxics Rule (CTR) pollutants.

Regional Water Board staff have used the Policy for Implementation of *Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Plan or SIP) to establish numeric effluent limitations (interim and final) and compliance schedules for CTR pollutants in NPDES permits. The SIP states that interim effluent limitations are to be established based on current treatment facility performance or on existing permit limitations, whichever is more stringent (section 2.2.1 of the SIP). At the time that Regional Water Board staff began incorporating CTR/SIP requirements into permits, most permits did not have existing numeric effluent limitations for CTR constituents, thus numeric interim effluent limitations were based on "current facility performance" at the time the NPDES permit was prepared. In most

cases, dischargers had limited CTR data sets, thus the maximum effluent concentration of the pollutant was used to set an interim maximum daily effluent limitation.

Section 2.1 of the SIP contains requirements for establishing compliance schedules, including the requirement that compliance schedules may not exceed 10 years to establish and comply with CTR criterion-based effluent limitations. Since the CTR was adopted by the US Environmental Protection Agency on May 18, 2000, this means that compliance schedules for CTR pollutants established in NPDES permits must require compliance with final numeric effluent limitations by May 18, 2010.

The Regional Water Board may authorize compliance schedules in a cease and desist order for dischargers when the discharger demonstrates that reasonable efforts have been made to achieve compliance with final CTR effluent limitations but needs additional time to do so. Regional Water Board staff have determined that establishment of interim effluent limitations based on the maximum observed effluent concentration is no longer appropriate now that the Discharger has a robust data set that allows calculation of statistically based numeric interim effluent limitations. Regional Water Board staff recommend that the proposed Order be modified to include interim effluent limitations for DCBM (and copper which is addressed in response to Comment A4 below) that are statistically derived using similar scientific methods to those used for calculation of final effluent limitations in the SIP. Regional Water Board staff recalculated the interim effluent limitations for DCBM (and copper) in the proposed Order using the 95th upper percentile value for calculation of an average monthly effluent limitation (AMEL) and the 99th upper percentile value for calculation of a maximum daily effluent limitation (MDEL). Regional Water Board staff utilized all data collected between January 2004 and May 2009 for calculating numeric effluent limitations. Finding 7 of the proposed Order has been revised to acknowledge the full DCBM data set and Finding 21 (formerly 19) has been modified to describe the method that Regional Water Board staff used to calculate interim effluent limitations. Requirement 2 of the proposed Order has been revised to remove the originally proposed MDEL of 4 ug/L and replaced it with an AMEL of 4.5 ug/L and an MDEL of 5.5 ug/L.

Comment A2: RRCSD requests that Finding 9 state that the Compliance Project approved in Administrative Civil Liability Order No. R1-2008-0045 is still valid and that the ACLO time schedule is superseded by Compliance Schedule 1.a. and the extension issued by letter from the Regional Water Board on October 5, 2009.

Response: Finding 10 of the proposed Order states that the Regional Water Board Executive Officer approved the Discharger's compliance schedule extension request by letter dated October 5, 2009. The October 5, 2009 letter identifies the fact that the ACLO time scheduled has been extended. The second to last sentence in Finding 10 has been revised to read as follows: "On October 5, 2009, the Regional Water Board Executive Officer approved the <u>ACLO</u> compliance schedule extension request."

Comment A3a: Finding 10 incorrectly indicates the completion date for the UV disinfection project.

Response: RRCSD is correct in pointing out that Finding 10 has an incorrect completion date for the UV disinfection project. The correct completion date, December 1, 2011, is included as Task J of Requirement 1.a of the proposed Order. The December 1, 2010 date in Finding 10 is a typographical error that has been corrected in the proposed Order.

Comment A3b: RRCSD requests that compliance with lower chlorine residual limits (or the demonstration that chlorine residual is no longer present in the effluent) be delayed until the UV system is completed and suggests specific language to be inserted into the Order.

Response: Order No. R1-2009-0003 requires the Discharger to achieve more stringent chlorine residual detection limitations by July 1, 2011 in order to demonstrate removal of chlorine from its effluent below concentrations that are toxic to aquatic life. This compliance date was established based on the fact that the Discharger was working under an Administrative Civil Liability Order time schedule to replace its existing chlorine disinfection system with an ultraviolet (UV) light disinfection system.

Currently the Discharger monitors chlorine residual using monitoring equipment with a detection limit of 0.1 mg/L and Order No. R1-2009-0003 requires the Discharger to achieve more stringent chlorine residual effluent limitations of 0.01 mg/L (average monthly effluent limitation) and 0.02 mg/L (maximum daily effluent limitation) by July 1, 2011.

On September 1, 2009, the Discharger submitted a workplan to evaluate methods to comply with final chlorine residual effluent limitations in Effluent Limitation IV.A.3.b of Order No. R1-2009-0003. The Discharger proposes to comply with the chlorine residual effluent limitations by eliminating the use of chlorine and constructing the proposed UV disinfection system identified in Findings 8 through 10 of the proposed CDO. Although the Discharger's September 1, 2009 workplan did not explicitly request a time extension to comply with the chlorine residual effluent limitations, it may be appropriate to modify the proposed CDO to allow this time extension to coincide with the UV disinfection system completion date of December 1, 2011 provided in the proposed CDO. Since the Discharger typically starts discharging to surface waters around November 1 each year, this time extension from July 1, 2011 to December 1, 2011 equates to one additional month of discharge at the less stringent detection limits. The Discharger's consistent compliance with effluent limitations for acute and chronic toxicity is an indication that the Discharger may be achieving the lower chlorine residual detection limitations, even though its existing chlorine residual monitoring equipment cannot detect down to 0.01 mg/L.

Compliance with chlorine residual effluent limitations may be demonstrated using the Discharger's current methodology and detection limits identified in Effluent Limitation

IV.A.2.c of Order No. R1-2009-0003 until the December 1, 2011 compliance date for completion of the UV disinfection system provided in the proposed CDO.

The proposed Order has been modified to include to new findings, Findings 14 and 15 as follows:

"14 Order No. R1-2009-0003 requires the Discharger to achieve more stringent chlorine residual detection limitations by July 1, 2011 in order to demonstrate removal of chlorine below concentrations that are toxic to aquatic life. Currently the Discharger monitors chlorine residual using monitoring equipment with a detection limit of 0.1 mg/L and Order No. R1-2009-0003 requires the Discharger to achieve more stringent chlorine residual effluent limitations of 0.01 mg/L (average monthly effluent limitation) and 0.02 mg/L (maximum daily effluent limitation) by July 1, 2011.

15. On September 1, 2009, the Discharger submitted a workplan to evaluate methods to comply with chlorine residual effluent limitations in Effluent Limitation IV.A.3.b of Order No. R1-2009-0003. The Discharger proposes to comply with the chlorine residual effluent limitations by eliminating the use of chlorine by constructing the proposed UV disinfection system identified in Findings 8 through 10. Compliance with chlorine residual effluent limitations may be demonstrated using the Discharger's current methodology and detection limits identified in Effluent Limitation IV.A.2.c of Order No. R1-2009-0003 until the UV disinfection system is completed." The Discharger's consistent compliance with effluent limitations for acute and chronic toxicity is an indication that the Discharger may be achieving the lower chlorine residual detection limitations, even though its existing chlorine residual monitoring equipment cannot detect down to 0.01 mg/L.

Requirements 1.a and 2 of the proposed Order also have been modified as follows:

"1.a. Compliance Schedule for Final Effluent Limitations for DCBM and Chlorine Residual. The Discharger shall achieve compliance with DCBM and Chlorine Residual effluent limitations in accordance with the following compliance schedule:"

"2. The Discharger shall comply with the following interim effluent limitations for DCBM, copper, and chlorine residual in the interim period established by this Order for the Discharger to reach compliance with final effluent limitations set forth in Order No. R1-2009-0003:

Interim Effluent Limitations for Discharge Point 002, Discharge to Russian River

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation
Dichlorobromomethane	µg/L	4.5	5.5
Copper	µg/L	30	38
Chlorine Residual	mg/L	---	0.1

Comment A4: RRCSD requests that all copper data collected between January 2004 and May 2009 be cited in Finding 11. The inclusion of the additional data does not change the minimum or maximum values.

Response: Finding 11 of the proposed Order has been revised to acknowledge the full copper data set collected between January 2004 and May 2009. Regional Water Board staff also reevaluated its method for establishing interim effluent limitations for CTR pollutants for the reasons described in response to Comment A1 (paragraph 4) above. Finding 19 of the proposed Order has been modified to describe the method that Regional Water Board staff used to calculate interim effluent limitations.

Regional Water Board staff recommend that the proposed Order be modified to include interim effluent limitations for copper that are statistically derived using similar scientific methods to those used for calculation of final effluent limitations in the SIP. The interim effluent limitations proposed for copper were derived using the 95th upper percentile value for calculation of an average monthly effluent limitation (AMEL) and the 99th upper percentile value for calculation of a maximum daily effluent limitation (MDEL). Regional Water Board staff utilized all data collected between January 2004 and May 2009 for calculating interim effluent limitations. Requirement 2 of the proposed Order has been revised to remove the originally proposed MDEL of 34 ug/L and replaced it with an AMEL of 30 ug/L and an MDEL of 38 ug/L.

Comment A5: RRCSD requests that a statement be included in Finding 13 to indicate that the Regional Water Board agrees with the Discharger's claims of infeasibility to comply with DCBM and copper final limits and suggests specific language to be inserted into the Order.

Response: The proposed Order has been modified to acknowledge that the Regional Water Board concurs with the Discharger's infeasibility assertion and the following sentence has been added to Finding 13 of the proposed Order, "<u>The Regional Water Board concurs with the Discharger's assessment that it is infeasible to comply with final effluent limitations for copper and DCBM because the mean, 95th and 99th percentiles of the data demonstrating the Facility's current performance capabilities, exceed the long term average (LTA), AMEL and MDEL, respectively.</u>"

Comment A6: Finding 19 includes an incorrect statement regarding interim limits for DCBM. The interim limit proposed in the Order is not the same as included in the previous permit, rather is more stringent than the interim limit of 32 ug/L in Order No. R1-2003-0026.

Response: RRCSD is correct in identifying this error. Finding 21 (formerly Finding 19) of the proposed Order has been corrected to read: "…The interim limitations are based on past performance or limits in previous orders, whichever are more stringent. The interim limitations for DCBM is based on the ~~identical~~ existing performance of the WWTF and is stricter than the interim limitation from the previous permit, Order No. R1-2003-0026, while the interim limitations for copper are new and are based on existing performance of the WWTF."

Comment A7: RRCSD requests that the pollution prevention plan required in Task A of Compliance Schedule 1.a be included in the Annual Report that is due March 1, 2010.

Response: This is a reasonable request in that it incorporates the pollution prevention plan requirement into an existing reporting requirement that is only one month after the date originally proposed in the CDO. The proposed Order has been modified to change the pollution prevention plan due date from February 1, 2010 to March 1, 2010.

Comment A8a: RRCSD requests that Task C of the Compliance Schedule in Requirement 1.b indicate a start date rather than a completion date.

Response: The language in Requirement 1.b, Task D (originally Task C) of the proposed Order for copper is intended to be the date by which the Discharger begins implementing plans to control water supply corrosivity. Regional Water Board staff sees no problem in changing the word "by" to "starting in" to clarify this intent. Thus the language in Task D (originally Task C) of the compliance schedule in Requirement 1.b of the proposed Order has been changed to read: "Implement plans to control water supply corrosivity ~~by~~ starting in February 2010. …"

Comment A8b: RRCSD requests that Task E of the Compliance Schedule in Requirement 1.b be changed to include the required action.

Response: RRCSD is correct in pointing out this necessary change. The word "submit" was unintentionally left out of this task description. The language in Task F (originally Task E) of the compliance schedule in Requirement 1.b of the proposed Order has been corrected to read: "Conduct translator study (using samples collected over one entire discharge season) and submit translator study report to the Regional water Board Executive Officer."

Comment A9: RRCSD requests that the DCBM interim limit be established at 5.72 ug/L. This value represents current wastewater treatment facility performance and is the maximum effluent concentration (measured in May 2009).

Response: See Response to Comment A1 above.

Comment A10: RRCSD requests that compliance with lower chlorine residual limits (as specified in Order No. R1-2009-0003) not be required until the UV system is completed and suggest specific language to insert into the Order.

Response: See Response to Comment A3b above.

Comment A11: Table 9 on page 3 of the Order contains a typographical error in listing the DCBM maximum daily effluent limitation.

Response: RRCSD is correct in pointing out this typographical error. The Maximum Daily Effluent Limitation for DCBM in Table 9 of Finding 6 of the proposed Order has been changed from 1.12 ug/L to 0.94 ug/L.

Comment A12: RRCSD asserts that Finding 2 of the proposed Order erroneously states that DCBM limits were effective on the permit adoption date, and that DCBM limits actually became effective on the effective date of the permit.

Response: Regional Water Board staff disagree with this comment. DCBM limits became effective on November 5, 2008, during the term of the previous permit, Order No. R1-2003-0026, thus DCBM limits were effective on the current permit adoption date as stated in Finding 2. No change was made to the Order in response to this comment.

Comment A13: RRCSD requests that Finding 12 be edited to correct a grammatical error.

Response: Finding 12 of the proposed Order has been edited to correct the grammatical error as follows: "On May 22, 2009, the Discharger submitted a Copper Compliance Update Report that summarizes its efforts to identify sources of copper in its effluent that include source control monitoring to attempt to identify industrial/commercial users discharging copper, influent monitoring to asses source water corrosivity and assessment of copper removals following ~~installing~~ installation of new tertiary filters in 2004.

B. Russian River Watershed Protection Committee (RRWPC) October 26, 2009 Letter

Comment B1: RRWPC is concerned about providing additional time for the Discharger to comply with final DCBM effluent limitations and is concerned that the impact of DCBM on the aquatic environment has not been considered or addressed in the proposed Order.

Response: DCBM effluent limitations established in the Discharger's Permit are based on CTR water quality criterion for the protection of human health. The CTR does not establish any water quality criterion for DCBM that are for protection of aquatic life.

Regional Water Board staff have reviewed the literature and *A Compilation of Water Quality Goals* (Water Quality Goals) developed by Central Valley Regional Water Board staff to locate any water quality standards for DCBM for the protection of aquatic life. The Water Quality Goals document identifies a USEPA National Recommended Ambient Water Quality Criteria for Freshwater Aquatic Life Protection of 11,000 ug/L which is based on the lowest observed acute level to demonstrate toxicity to aquatic life. The highest DCBM concentration measured by the Discharger is 5.72 ug/L. Regional Water Board staff can find no evidence or data to demonstrate that the level of DCBM in the Discharger's effluent would cause toxicity to aquatic life.

In considering the Discharger's request for a time extension to meet final effluent limitations, Regional Water Board staff also recognized that an extension from July 1, 2011 to December 1, 2011 is relatively short and will potentially result in only one additional month of discharging effluent with DCBM to surface waters. In exchange for this, the proposed Order requires the Discharger to develop a Pollution Prevention Plan that identifies measures that the Discharger will take to minimize the potential for DCBM formation in its effluent while chlorine is still being used.

No change was made to the Order in response to this comment.

Comment B2: RRWPC expressed support for the UV disinfection system but is concerned that this is the second time that the time schedule for completion of the UV disinfection system has been extended and requests that fiscal information be made available to demonstrate that this is a reasonable request and that SCWA/RRCSD is serious about completing the UV disinfection system in accordance with the extended time schedule provided in the proposed CDO. RRWPC states that SCWA has increased fees to a point that RRCSD ratepayers pay one of the highest rates in Sonoma County and the State and questions why SCWA has not come up with the money for the UV disinfection project. RRWPC recommends that heavy penalties be levied if the revised deadlines are not met.

Response: When RRCSD requested an additional five months to complete the UV disinfection system, Regional Water Board staff contacted staff at the State Water Board Division of Financial Assistance to ascertain the status of the Discharger's State Revolving Fund application. State Water Board staff indicated that the Discharger has been diligent in submitting its initial application for funding and in providing additional information to complete the application.

The Regional Water Board is aware of increasing sewer rates to address the increasing costs of operating wastewater treatment facilities but does not have financial oversight over dischargers. Regional Water Board staff is also aware that the Discharger has completed significant facility improvements in recent years and continues to plan for future improvements. Although progress may be slower than originally anticipated, Regional Water Board staff believe that the Discharger is making progress toward obtaining the funding necessary to complete the UV disinfection project.

Requirement 5 of the proposed Order authorizes the Regional Water Board Executive Officer to take appropriate enforcement actions if the Discharger fails to comply with the provisions of the proposed Order.

No change was made to the Order in response to this comment.

Comment B3: RRWPC is concerned that the proposed Order's compliance schedule for the Discharger to meet final effluent limitations for copper is too long and contains "vaguely defined goals" that may or may not result in compliance with the final effluent limitations for copper. RRWPC suggests that a public education task be included in the copper compliance schedule.

Response: Copper has been one of the more difficult CTR pollutants for municipal wastewater treatment facilities to comply with. The tasks identified in the compliance schedule in Requirement 1.b of the proposed Order are typical of the tasks that other dischargers have evaluated to achieve compliance with final numeric copper effluent limitations. Requirement 1.b requires the Discharger to achieve compliance with copper effluent limitations at the earliest possible date. To do so, the Discharger is required to follow the tasks set out in that section.

New language has been added at the end of Requirement 1 that states that Regional Water Board staff may periodically present informational updates to the Regional Water Board based on the progress reports that the Discharger is required to submit in relation to each compliance schedule task. If the Discharger is unable to demonstrate reasonable progress toward achieving final numeric effluent limitations for copper or DCBM, Regional Water Board staff will notify the Regional Water Board to determine if it should pursue additional enforcement actions against the Discharger.

Requirement 1.b has been modified to require a public education and outreach task.

Comment B4: RRWPC is concerned that the interim effluent limitation for copper in the proposed Order is too high and that the impact of copper on the aquatic environment has not been considered or addressed in the setting of interim effluent limitations in the proposed Order. Two scientific studies describing sublethal effects of copper on salmonids (*Sublethal Effects of Copper on Coho Salmon: Impacts of Nonoverlapping Receptor Pathways in the Peripheral Olfactory Nervous System* (February 15, 2003) and *An Overview of Sensory Effects on Juvenile Salmonids Exposed to Dissolved Copper: Applying a Benchmark Concentration Approach to Evaluate Sublethal Neurobehavioral Toxicity* (October 2007)) were submitted by RRWPC.

Response: Regional Water Board staff appreciate the articles submitted by RRWPC. The articles address the issue of potential sublethal effects of copper on salmonids, however, there is not enough information on this topic for the Regional Water Board to establish revised effluent limitations. Water quality standards for copper in the CTR were established by the USEPA after considerable technical input and a lengthy public participation process, and were based on best available science. The SIP implements

the CTR, and allows the Regional Water Board to issue compliance schedules to allow dischargers time to comply with final numeric effluent limitations. We have no specific evidence or data to demonstrate that the discharge from the Discharger's WWTF is impacting the aquatic environment, and in fact have much evidence to suggest that current levels of copper in RRCSD's effluent is not causing toxic effects on aquatic species.

The Discharger is required to monitor its effluent for acute and chronic toxicity. Acute toxicity tests are run monthly and chronic toxicity tests are run annually during periods when the Discharger is discharging to the Russian River. During the last five years the Discharger has passed all of its acute toxicity tests with 100 percent survival of Rainbow Trout and passed all of its chronic toxicity tests for vertebrates (Fathead Minnow growth and survival tests) and invertebrates (ceriodaphnia reproduction and survival tests). This is strong evidence that the copper limits currently in the permit are not toxic to aquatic species.

In addition, potential impacts are further reduced by the fact that the Permit limits the discharge to the one percent of the flow of the receiving water and most of the time the Discharger discharges at less than one percent of the flow of the receiving water.

As described in the Response to Comment A4 above, Regional Water Board staff reevaluated interim effluent limitations for copper established in the proposed CDO and determined that it is appropriate to modify the interim effluent limitations. Findings 11 and 21 (formerly 19) and Requirement 2 of the proposed Order have been changed to reflect revised interim effluent limitations for copper.

Russian River Watershed Protection Committee December 3, 2009 email

Comment C.1: The commenter requests that the Discharger be required to provide progress reports at a minimum frequency of bi-monthly on their progress on obtaining funding for the UV light disinfection project.

Response: The proposed Order requires the Discharger to secure funding for the UV light disinfection project and submit a progress report to the Regional Water Board Executive Officer by March 1, 2010 (approximately one and a half months after the anticipated Order adoption date). If, for any reason, the Discharger does not secure funding by March 1, 2010, the Discharger would be out of compliance with the Order unless the Regional Water Board Executive Officer determines that an extension should be considered, in which case, the Regional Water Board EO could grant the extension for good cause or bring this matter back to the Regional Water Board.

Staff reviewed the proposed compliance schedules and determined that the time between reports range from one to six months in the dichlorobromomethane compliance schedule (Requirement 1.a of the Order) and from one to fourteen months in the copper compliance schedule (Requirement 1.b. of the Order). Staff determined that an additional progress report is needed to shorten the fourteen month gap between Tasks

H and I of Requirement 1.b in the public review draft. Therefore, Requirement 1.b has been changed to include a new Task I that states "Submit progress report regarding the WER study to the Regional Water Board Executive Officer." And a compliance date of July 1, 2014. The original Task I now appears as Task J in the revised time schedule in Requirement 1.b.

Additional Changes Proposed by Regional Water Board Staff

1. Requirement 1. Added the word "progress" in front of the word "report" in Requirement 1.b, Tasks A, C and D (originally A, B and C) and added the statement "Regional Water Board staff may periodically present an informational update to the Regional Water Board based on the progress reports."

2. Requirement 2. Revised table title to read "Interim Effluent Limitations for Discharge Point 002, Discharge to Russian River."

3. Requirement 4. This requirement has been modified to clarify that it is the Executive Officer who has the authority to grant compliance schedule extensions. The proposed Order has been modified to say "… An extension may be granted by the Regional Water Board Executive Officer for good cause, in which case this Order will be accordingly revised in writing."