

Attachment A

FILE:CF/70-13-9 RUSSIAN RIVER NPDES PERMIT

NCRWQCB

FEB - 8 2010

February 8, 2010

Mr. Luis Rivera
Assistant Executive Officer
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

<input type="checkbox"/> EO	<input type="checkbox"/> WMgmt	<input checked="" type="checkbox"/> Admin <i>LLF</i>
<input type="checkbox"/> AEO	<input type="checkbox"/> Timber	<input type="checkbox"/> Legal
<input checked="" type="checkbox"/> Reg/NPR <i>46</i>	<input type="checkbox"/> Cleanups	<input type="checkbox"/> Date

RE: RUSSIAN RIVER COUNTY SANITATION DISTRICT COMPLIANCE PROJECT, WAIVER, AND FEE SUBMITTAL

Dear Mr. Rivera:

On January 14, 2010, the North Coast Regional Water Quality Control Board (RWQCB) issued Administrative Civil Liability Complaint No. R1-2010-0011 (ACL) to Russian River County Sanitation District (RRCSD). The ACL was issued to address violations of effluent limitations contained in Waste Discharge Requirements Order No. R1-2009-0003 (WDR). The total mandatory minimum penalty (MMP) for the violations is \$45,000.

The ACL includes provisions for RRCSD to complete a compliance project (CP) in lieu of paying the majority of the MMPs directly. Completion of a CP is allowed under the Water Quality Enforcement Policy (Enforcement Policy) and is designed to address problems related to the violations to bring RRCSD back into compliance in a timely manner. The Enforcement Policy specifies that the discharger must propose the CP and must abide by the following:

1. The CP is designed to correct the violations within five years;
2. The CP is in accordance with the Enforcement Policy; and
3. The discharger has demonstrated that it has sufficient funding to complete the CP.

The purpose of this letter is to submit a CP proposal for review and approval by the RWQCB following the requirements set forth in the ACL. The CP proposal provides details for the planned construction of an ultraviolet (UV) disinfection system.

Compliance Project

The *Standard Criteria and Requirements for Compliance Projects* provides a list of specific information to be provided in the CP Proposal. The information provided follows the format of the requested information list:

1. Name, address and phone number of other parties and agencies involved in the project:

- **Sonoma County Water Agency**
404 Aviation Blvd.
Santa Rosa, CA 95403
Phone Number: (707) 547-1900
Project Involvement: Wastewater treatment facility operator

- **HDR Engineering, Inc.**
2365 Iron Point Rd., Suite 300
Folsom, CA 95630
Project Involvement: UV Disinfection system design

2. Description of the link between the violations and the CP:

Effluent limitations established in the WDR were exceeded 21 times over the time period specified in the ACL. Of these incidents, 10 are associated with dichlorobromomethane (DCBM) discharge violations (formed as a byproduct from the use of chlorine for disinfection purposes) and nine are associated with other disinfection system violations (7-day coliform median).

The existing disinfection system utilizes gaseous chlorine for disinfection purposes. Chlorine gas is applied using an in-line diffuser at the inlet to the disinfectant contact basin, upstream in the filter effluent line. The chlorination system has an overall capacity of 400 lb/day, limited by the rotameter. The contact basin used to achieve disinfectant contact time (CT) has a volume of 37,700 gallons. After flowing through the disinfectant contact basin, chlorinated water is dechlorinated using sulfur dioxide.

The size of the disinfectant contact basin as well as the limited chlorination system capacity makes it difficult to provide the necessary level of disinfection during high flow periods. All 7-day coliform median violations occurred in January 2008, a period where RRCSD experienced elevated flows into the wastewater treatment facility.

DCBM is a disinfection byproduct formed through the use of chlorine as a disinfectant. Because DCBM is unlikely to be controlled through pollution prevention practices, RRCSD evaluated the benefits and feasibility of making operational modifications and/or switching the wastewater treatment facility's (WWTF) current chlorine-based disinfection system to an alternative form of disinfection, and concluded that ultraviolet disinfection would be the most effective method to reduce DCBM discharges. In the absence of using chlorine for disinfection, DCBM is not expected to form during treatment.

The disinfection system capacity and disinfectant contact basin limitations are major contributing factors in the WWTF's inability to continuously meet coliform requirements. In addition, the use of chlorine as a disinfectant is the main contributor to the formation of DCBM. The CP proposal to upgrade the WWTF disinfection system to ultraviolet disinfection will provide additional disinfection system capacity that will reduce the potential for future coliform violations and will discontinue the use of chlorine, thereby preventing the production of DCBM in the disinfection process.

3. The total value of the CP:

Installation of the UV disinfection system is estimated to cost approximately \$1,900,000. Phase 2 of the project, which consists of the installation of coagulation and flocculation, is estimated to cost \$800,000, increasing the total project cost to \$2,700,000. However, the proposed CP does not include Phase 2 of the project.

4. A description of the proposed project is summarized in the sections below.

Project Objectives

The objective of the CP is to increase the disinfection system capacity and prevent the formation of DCBM so that RRCSD can continuously meet the WDR requirements.

General Design Criteria

Waste Discharge Requirements Order No. R1-2003-0026 included disinfection requirements for discharges to the Russian River as well as for discharges to the recycled water system. Design of the CP was underway in 2008 and completed in 2009, prior to adoption of the current permit. Therefore, the earlier permit requirements of R1-2003-0026 were used as the General Design Criteria and are summarized in Table 1:

Table 1. Design Criteria

Limitations for Discharge to Russian River		
Total Coliform	7 days median	Not to exceed 2.2 MPN/100mL
	30-day period	No more than one sample to exceed 23 MPN/100mL
	Any time	No sample to exceed 240 MPN/100mL
Chlorine	Discharge to river	Shall not contain detectable level of total chlorine
Chlorination by-products	Dichlorobromomethane	Daily maximum of 32 µg/L until November 2008 Daily maximum of 1.12 µg/L after → November 2008
Chlorine residual	Discharge to river when filter effluent >1.2 mgd	Minimum continuous chlorine residual of 5 mg/L
CT value	Discharge to river when filter effluent <1.2 mgd	Not less than 450 mg-min/L
Limitations for Discharge to Water Recycling System		
Total Coliform	7 days median	Not to exceed 2.2 MPN/100mL
	30-day period	No more than one sample to exceed 23 MPN/100 mL
	Anytime	No sample to exceed 240 MPN/100mL

*Order 2009-2003
 changed permit
 TO
 AMEL = 0.56
 MDEL = 0.97*

Specific Tasks, Activities and Milestones to be Achieved; and Detailed Time Schedule for Completing Project Milestones

The CP schedule is dependent on the timeframe in which a State Revolving Fund loan can be obtained. RRCSD originally submitted the application in March 2008 and has diligently provided additional information on numerous occasions. The last request made by RRCSD for a status update on State Water Resources Control Board (SWRCB) review occurred on January 19, 2010. SWRCB staff responded that its environmental group is determining whether a Tier 1 or 2 review is needed and whether it needs to go to the SWRCB board for approval. Whether a Tier 1 or Tier 2 review is necessary, either process will take a minimum of several months to complete and is an unexpected further delay in the application approval process.

Since the timeframe for securing funding is unknown and the SWRCB review period is not under the control of RRCSD, the following schedule is suggested in order to provide the SWRCB further review time:

Task	Estimated Time to Complete
Secure State Revolving Fund (SRF) loan funding for construction of the Project	November 1, 2010
Prepare bid package, advertise for bids, and submit progress report to the Regional Water Board	December 1, 2010
Award construction contract and submit progress report to the Regional Water Board	March 1, 2011
Issue Notice to Proceed to construction contractor	May 1, 2011
Submit Engineering Report to California Department of Public Health and Regional Water Board for approval	December 1, 2011
Submit Operations and Maintenance Plan to California Department of Public Health and Regional Water Board for approval	February 1, 2012
Submit progress report to Regional Water Board on construction activities	April 1, 2012
Test installed UV equipment and provide testing results to California Department of Public Health and Regional Water Board for approval	June 1, 2012
Complete project and submit final report to Regional Water Board Executive Officer, certifying completion of Project and an overall evaluation showing that the Project achieved its intended objectives.	October 1, 2012

Estimated Budget

The following is the current estimated project budget:	
Engineers estimate of construction	\$ 2,630,000
Contingency Reserve (Bid Item)	\$ 25,000
Contingency (10% of estimate)	\$ 265,000
Actual non-construction expenses (through 6/30/09)	\$ 760,000
FY 10-11 budget for all future non-construction expenses (inc. 10% contingency)	\$ 480,000
Adjustment to design consultant agreement (in process)	\$ 59,000
TOTAL	\$ 4,209,000
TOTAL (of loan application)	\$ 4,200,000

Draft Provisions for a Contract to be Executed between the Discharger(s) who will be Funding the Project and the Entity Performing the CP if different from the discharger

This is not applicable as RRCSD will be funding and performing the CP.

CEQA Documentation

CEQA Documentation has been completed.

Demonstration that the discharger or its third party contractor(s) have the ability and expertise to perform the proposed work and provide the products and reports expected

RRCSD has recently completed many large upgrades to the WWTF that required significant construction expertise. The most recent project was completed in 2004 and consisted of the addition of a third aeration basin, a third secondary clarifier, and replacement of the existing filters. The project was known as the "Third Unit Process Project" (TUPP). Completion of the CP would follow the same process as the TUPP.

RRCSD and Sonoma County Water Agency (SCWA) have a wide variety of personnel including operators, engineers, and environmental specialists that can be utilized for completion of the CP. Attached is a SCWA Organization Chart. In addition, HDR Engineering, Inc. has been contracted to provide further engineering expertise throughout the CP process.

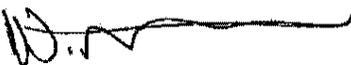
RRCSD requests approval of the proposed CP. If you would like additional information, please contact me as soon as possible.

Fee Submittal

In accordance with the ACL, RRCSD hereby submits the fee of \$6,000 required when submitting a CP proposal.

If you have any further questions, please contact me at (707) 521-1866.

Sincerely,



Wendy C. Gjestland, P.E.
Water Agency Engineer

- Enclosures:
1. SCWA Organizational Chart
 2. \$6,000 payment to State Water Pollution Clean Up and Abatement Account

c Pam Jeane, Randy Cullen, Ellen Simm, Kevin Booker, Doug Messenger, Kent Gylfe