

## Additional Questions to 13267 Response **CARPINTERIA SANITARY DISTRICT RESPONSES IN RED**

(based on follow-ups generated from face-to-face meeting with District on April 4, 2014)

### **1. Discharge Volume Calculation (for October 3, 2012 illegal discharge)**

- a. Craig Murray indicated that the initial volume calculation of 281,250 gallons was based on the hourly effluent flow reading. Please submit effluent hourly flow data (in .XLS format) and include corresponding volume calculation(s) used to support the original calculation estimate provided in monthly monitoring report. **As discussed in my April 10, 2014 email, the District did not retain documents or calculation sheets associated with the initial volume estimate of 281,250 gallons. However, the District's Treatment Supervisor, Mark Rogers, arrived at the volume estimate based on his review of the effluent flow trend for that day, provided in Appendix C (page 20/520 of the PDF file).**
- b. Technical justification on why revised 231,076 gallons discharge volume that was submitted is appropriate (including justification/approach used for flow rate values and include electronic .XLS data if available). **As mentioned in my April 10, 2014 email, the volume estimate generated independently by Carollo Engineers is fully described in Section 3.3.2 of their technical report. Attached is an Excel worksheet (.xls format) that provides the simple calculation used by Carollo and presented in Appendix D of their technical report. If you are looking for some other "justification", please elaborate on exactly what information you are seeking and we can request it from Carollo.**
- c. Submit actual effluent data as monitored by SCADA system for October 3, 2012 spill event (i.e., gallons/minute, gpm) in electronic format (.XLS or SCADA program with SCADA software/installer will be OK as long as we can install and run it; we've done this for other cases). **See attached file with historical flow data in 10 second intervals. This raw data was not previously extracted from the SEQL database connected to the SCADA system – doing so required programming by the District's contract integrator.**

**While we are happy to provide this information, the District continues to question the State's characterization of this short term loss of disinfection as a "spill" and the narrow focus on the volume estimates. Based on our knowledge of prior similar incidents at other facilities, even within Region 3, this investigative/regulatory approach seems quite inconsistent.**

### **2. SCADA Alarm System**

- a. Craig Murray indicated in our April 4, 2014 meeting that the "back end" of the chlorine contact tank (CCT) has chlorine residual monitor with an alarm system that is linked to District SCADA system. According to your summary of events (page 3 of NOV response dated January 23, 2013), an operator discovered this chlorination failure during routine facility inspection at the injection point in the CCT at approximately 9:30 a.m. on October 3, 2012. Please clarify whether or not the SCADA alarm system at the "back end" of the CCT 1) was triggered; and 2) whether or not it notified or failed to notify operators of the low residual chlorine value. **The continuous chlorine residual and ORP monitoring at the "back end" of the chlorine contact tank is located in the effluent surge box, after dechlorination. There is no low chlorine residual alarm at this point, as the normal condition is zero residual. As such, no alarm was triggered from this point in the process on October 3, 2012.**

- b. On page 17 of NOV response (Section 4.4.1 – Actions taken by District), please clarify and describe the “high” chlorine residual alarm call/setting for notification to operators. **The high chlorine residual alarm set point is 5.6 mg/L (5,600 ug/L). If the continuous chlorine analyzer indicates a concentration in excess of this set point, the disinfection controller triggers a SCADA alarm and a plant operator is notified via the Win911 alarm system.**

### **3. Sampling Protocols (in cases of System Failure)**

- a. Please describe any planned changes to sampling protocols/plan to be implemented in cases of a future chlorination/dechlorination system failure (i.e., for a future chlorination failure event, at a minimum, what sampling Standard Operating Procedure (SOP) would Carpinteria undertake to check residual chlorine readings and fecal coliform values?) **The District intends to fully comply with the requirements of its NPDES Permit when responding to any future loss of disinfection. Additionally, we would very much like to work with staff from the Central Coast RWQCB to identify specific measures that may be appropriate in response to such an event. We also hope to get clarification on existing MRP requirements related to loss of disinfection.**

### **4. Other Questions**

- a. Please provide a written description whether or not the new disinfection/dechlorination system upgrades will incorporate “auto switch over” (and where in the plant) for chlorination/dechlorination pumps if they go down and nobody is attending the plant. **The plans and specifications for the Aerated Sludge Holding Tank Replacement Project do not currently include provisions for “auto switch over” of chemical feed pumps, as the design is based on reuse of the Siemens 960 Disinfection Controller. However, the controller will be integrated with a local PLC in the new chemical feed building, providing enhanced capabilities. It is the District’s intent to work with the electrical/instrumentation subcontractor during the preliminary stages of the project to develop a control strategy that provides maximum system reliability and redundancy. If “auto switch over” is practically feasible, while still maintaining the full functionality of the multi-channel disinfection controller, then we will pursue this feature as a contract change order.**
- b. Please provide clarification for Computerized Maintenance Management System (CMMS) work service records (see Appendix E); we need to know WHO and WHEN these activities were performed to verify completion of O+M activities. **Refer to the table at the bottom of each work order report. The “COST\_ITEM” field indicates who performed the work and the “COST\_DATE” and “COST\_TIME” fields indicate when it was performed. For instance, for the first work order provided (No. 48795), the gear oil change was performed by Chris Keller (OPERATOR-CK) on 4/2/2007 at 7:22 a.m.**
- c. Please identify who made the changes on analytical values (with initials) on plant round sheets and reasons for changes (Appendix P). **The changes were made by Mark Rogers, the District’s Treatment Supervisor, to reflect the correct, reportable values on these daily work sheets. On several of the days in question, a plant operator entered chlorine residual values from the SCADA computer, which were updated the same day and initialed by Mr. Rogers following confirmation sampling and analyses using an EPA approved method.**

**(Note that certain parameter values, including chlorine residual and flow, are recorded on the data sheet for the subsequent day, but all information is accurately entered into our operations database and is properly reported).**