TO: File

FROM: Robin Cort, Parsons ES
Dave Smith, Merritt Smith Consulting

DATE: 30 October 1996

SUBJECT: Comment and Response Review Meeting with DHS

Meeting held on 29 October 1996 at North Coast Regional Water Quality Control Board. The purpose of the meeting was to identify adequate responses to comments from DHS on the EIR/EIS. The following people attended the meeting: Bruce Burton and Debra Lambeth of DHS, Tuck Vath and Theresa Wistrum of RWQCB, Ed Brauner and Dan Carlson of the City of Santa Rosa, Andy Hauge of Harland Bartholomew & Associates, Robin Cort of Parsons Engineering Science, and Dave Smith of Meritt Smith Consulting.

ISSUE 1 - RANNEY COLLECTORS

DHS has requested a hydrologic evaluation of Ranney Collectors 3 and 4 to determine percent of wastewater at intakes. This seems an issue for the water agency. If the collectors are under surface water influence, this is a problem for the operation of the water system, not an impact of the long-term project.

DHS POSITION

Determinination of surface water influence pursuant to the Surface Water Treatment Rule is only pertinent to whether pathogens are removed by gravel filtration. DHS concern is not about pathogens, which they feel are removed before reaching the intakes. The concern is based on soluble materials in reclaimed water. Reclaimed water is now below standards for all of these materials, but if standards change, there could be a problem. DHS would like to have additional data showing how much the reclaimed water is diluted before it reaches the collectors. This information may be available from water agency.

HOW WE AGREED TO RESPOND

- Characterize reclaimed water concentration in the river at the collectors, providing average and range of concentrations for each discharge scenario.

- Gather any available SCWA data to determine if we can project further dilution from the river bed to the collectors.

- Ensure that mitigation includes continual evaluation of standards, and that measures are in place to address any parameters that may in the future exceed standards. Measures could include source control, agreements with SCWA to adjust intake points during times of higher discharge levels, or additional treatment technologies.

RELATED DISCUSSION

Other agencies besides the SCWA have expressed concern about influence of discharge on their wells. Concerns have been raised regarding both the Sweetwater Springs Water District and City of Sebastopol wells. DHS responded that Sweetwater Springs' wells are definitely off stream; their water quality is significantly different than the river and there should be no concern regarding discharge impacts on their water supply. Sebastopol's wells are even farther away from the Laguna, and are definitely not affected by water quality in the Laguna.

ISSUE 2 - GIARDIA AND CRYPTOSPORIDIUM

DHS has requested that we expand evaluation of Giardia and Cryptosporidium; the four data points used in the Human Health risk assessment are inadequate. The risk assessment was based on finding no Cryptosporidium in the effluent, but Crypto-sporidium has been found since the completion of the risk assessment. DHS would like some analysis of how plant operatonal conditions affect levels of these organisms. We pointed out that additional data are presented in the Water Quality Update, and that we did find that levels can be higher when the plant is not operating optimally. We requested clarification of how much additional data is needed to satisfy their request.

DHS RESPONSE

DHS apparently was not aware of the additional data in the appendix, and stated that it would be appropriate to report this data, plus any additional data obtained through ongoing monitoring. This should be sufficient, even though there will be less than a year of data at the completion of the responses to comments. Their primary concern is to ensure that mitigation is in place to ensure adequate removal of Giardia and Cryptosporidium. Collection of additional data in the Russian River or Laguna is not necessary, but may be helpful to put discharge in context. It might also be helpful, and in the City's interest, to measure influent to see if there's a pattern for when higher levels occur and have more agressive plant operational procedures during those time periods.

HOW WE AGREED TO REPOND

- Report results of ongoing monitoring.
- Describe how plant operational conditions affect levels of these pathogens.
- Provide mitigation to include ongoing monitoring and measures to ensure adequate removal.

MEETING NOTES

Merritt Smith Consulting
Environmental Science and Communication

TO: File

FROM: Dave Smith
Robin Cort, Parsons ES

DATE: 13 November 1996

SUBJECT: Comment and Response Review Meeting With RWQCB

Meeting occurred at RWQCB from 0930 until 1030 on 29 October 1996. The purpose of the meeting was to identify adequate responses to comments. The following people attended the meeting: Tuck Vath, Theresa Wistrom, Ed Brauner, Dan Carlson, Andy Hauge, Robin Cort and Dave Smith.

REQUEST FOR EVALUATION OF DISSOLVED OXYGEN MINIMA

RWQCB and DFG commented that the analysis of dissolved oxygen impacts is based solely on the average all hourly dissolved oxygen values each month of the simulation, and that the impact of project alternatives on dissolved oxygen minima (that occur each day as part of the natural 24-hour dissolved oxygen cycle) should also be described. These agencies felt that dissolved oxygen minima data could be important because short-term (hours or minutes) depletion can adversely affect the suitability of habitat for aquatic life. The purpose of the dissolved oxygen analysis was to provide a basis for comparing each discharge alternative to existing conditions and for comparing among alternatives.

DS explained that dissolved oxygen minima were not evaluated for significance because the professional opinion of the project team was that the uncertainty of minima was large compared to the average. Uncertainty of minima is a result of much lower number of observations each month (30 daily values versus hourly values for 30 days or 720 values) and the inherent imprecision of estimating extreme environmental conditions. In light of the fact that reclaimed water affects dissolved oxygen via algal growth stimulation, and growth of algae was evaluated with a conservative point of significance of 10 percent change, the approach to dissolved oxygen was considered appropriate by the project team.

A review of the response options that occurred at the DFG meeting of 28 October was provided by DS for TV and TW (see DFG meeting notes prepared by Joyce Hunting). DS commented that the City is considering options for responding. TV expressed the RWQCB position that their comments were not intended to result in a work that would necessitate recirculation of the DEIR/S.

BASIS FOR BIOSTIMULATORY SUBSTANCES POINT OF SIGNIFICANCE

The RWQCB comment letter requested an explanation of the basis of the 10 percent point of significance (POS). RWQCB clarified that they consider the POS to be appropriate.

ANTIDEGRADATION ANALYSIS

TV and TW stated that they believe that all of the technical information needed for RWQCB's Antidegradation Analysis (ADA) of project alternatives is provided in the DEIR/S, but that non-technical information that may be needed to support any RWQCB finding that degradation is consistent with the maximum public benefit is not fully provided in the DEIR/S. DS agreed with this characterization, and said that, since the purpose of the EIR/S is to disclose environmental impacts, providing the non-impact oriented information about maximum public benefit is beyond the scope of the EIR/S. TV and TW agreed that once a project is selected for implementation by the City, the need for additional information that may be needed to support the ADA should be evaluated and provided by the City prior to any Basin Plan amendment. This approach is consistent with that identified in the 28 May 1996 memo by DS. The response to comment will point out where the required technical analysis is provided in the EIR/S and describe a plan for generating non-technical information as part of project implementation. The response to comment will point out locations of required techncial analyses and describe a plan for generating non-technical anlyses as part of project selection.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

RUSSIAN RIVER WATERSHED PROTECTION COMMITTEE and BRENDA ADELMAN,

Plaintiffs,

v.

CITY OF SANTA ROSA and DOES 1-10, inclusive,

Defendants.

No. C-95-1550 SC

FINDINGS OF FACT AND CONCLUSIONS OF LAW

43

This action arises under the citizen suit provision of the Federal Water Pollution Control Act, also known as the Clean Water Act, 33 U.S.C. § 1365. The purpose of a citizen suit under the Clean Water Act is to ascertain whether there are National Pollution Discharge Elimination System ("NPDES") permit violations. Plaintiffs, the Russian River Watershed Protection Committee ("RRWPC") and Brenda Adelman (collectively "plaintiffs") seek to enforce the NPDES permits for the Santa Rosa Subregional Wastewater Treatment System and to obtain judicial review of the interpretation given to the permits by the California Regional Water Quality Control Board, North Coast Region ("Regional Board") and the Executive Officer of the Regional Board ("Executive Officer"). Plaintiffs allege that the Regional Board and the Executive Officer have improperly interpreted the NPDES permits and that

defendant, the City of Santa Rosa ("City"), is repeatedly and continually violating its permit.

On February 29, 1996, the action was bifurcated by the court, the liability phase to be tried prior to the penalty phase. Upon defendant's motion, the court further bifurcated the liability phase to decide the proper method of measuring compliance with the permits before hearing evidence of specific alleged violations. There are two main issues before the court in this phase: (1) what is the proper manner in which compliance with the discharge requirements in the NPDES permits is to be calculated; and (2) at what places in the wastewater treatment and reclamation systems must effluents be measured pursuant to paragraph B(1) of the permits.

Having considered all of the evidence introduced at trial, together with the arguments of counsel, the court finds that the City is properly measuring compliance with the discharge requirements in the NPDES permits and measuring the effluents in paragraph B(1) of the permits at the proper locations. The court finds that the City properly determines compliance in accordance with the procedure established by the Executive Officer. Further, the court finds that the Executive Officer reasonably exercised his discretion pursuant to Cal. Water Code. § 13223(a) and Regional Board Resolution No. 85-14. The court makes further findings of fact and conclusions of law as set forth below.

/ / /

/ / /

I. THE PROPER METHOD FOR MEASURING ALLOWABLE DISCHARGE

A. Findings of Fact

1. Neither the 1990 nor the 1995 NPDES permit specifies the manner in which compliance with the discharge requirements is to be calculated.

2. The time period for measuring compliance with the discharge provisions contained in the permits is the discharge season between October 1 and May 14.

3. In any discharge season, once the City commences a discharge it continues throughout the season unless it is interrupted for a specific reason.

4. The discharge is reduced or increased on a daily basis to match the allowable percentage of the previous day's flow of the Russian River.

5. The Executive Officer, in the exercise of his authority, established the procedure for measuring compliance with the discharge requirement.

6. The procedure established by the Executive Officer measures compliance based on the previous day's highest hourly flow and the highest hourly flow averaged over a seven-day period.

7. The flow of the Russian River is calculated by using the highest hourly flow measured at the Hacienda Bridge.

8. The procedure for measuring compliance established by the Executive Officer is based upon the following characteristics of the discharge and measurement

systems:

a. There is no direct temporal correlation between the amount discharged and the flow of the river at the Hacienda Bridge. The discharge points are 8 to 12 miles upstream from the Hacienda gauging station. Water discharged from the City's reclamation system takes almost a day to five days after discharge to reach the Hacienda Bridge due to varying flow conditions in the river and the Laguna. When the City operator sets the discharge rate each morning, the only information available to the operator is the previous day's flow measurements. The operator cannot predict what the flow of the river will be at the time the discharge reaches the Hacienda Bridge.

b. The gauge at the Hacienda Bridge specified in the permits only measures the height of the river. To calculate flow volume, the bottom contour of the river must be measured. During the winter months, the bottom of the river erodes. The eroding bottom is only measured periodically by the United States Geologic Survey, and there is a delay in making these figures available to the City. Therefore, the true flow at the Hacienda Bridge may not be determined on a day-to-day basis.

c. When the river is rising, the use of the highest hourly flow from the pervious day understates the flow of the river at the Hacienda Bridge. When the river is falling, the use of the highest hourly flow overstates the

flow at the Hacienda Bridge.

d. Once the City sets the discharge rate from its ponds on any given day, the actual amount of water released depends on the level of the pond in comparison to the level of the stream into which the discharge is being made. Because stream levels fluctuate, the exact amount of discharge in one day cannot be predicted with complete accuracy.

9. The Executive Officer and his staff have applied this procedure consistently to the City of Santa Rosa under the 1990 and 1995 NPDES permits.

10. The seven-day averaging procedure was presented to the Regional Board during the 1995 permit hearings.

11. In the 1995 permit hearings the Regional Board staff presented a proposal to change the procedure for measuring compliance by using a thirty-day average of each day's previous day's average hourly flow, and to put this procedure in the permit itself.

12. The thirty-day averaging proposal was opposed by plaintiffs at the hearings.

13. The Regional Board staff withdrew the thirty-day averaging proposal.

14. The 1995 permit flow discharge requirements are the same as the 1990 permit flow discharge requirements.

B. Conclusions of Law

1. The Executive Officer of the Regional Board has authority under the Porter-Cologne Water Quality Control Act,

Cal. Water Code § 13223(a), and Regional Board Resolution No. 85-14 to establish reasonable procedures for measuring compliance with NPDES permits.

2. The procedure established by the Executive Officer based on the seven-day averaging of each day's previous day's highest hourly flow as measured at the Hacienda Bridge is reasonable based on the facts set forth in Findings of Fact 8(a) through 8(d). Substantial deference should be given to an agency's reasonable and consistently held interpretation of its own regulations. See Arkansas v. Oklahoma, 112 S.Ct. 1046 (1992).

3. The Executive Officer properly and consistently exercised his authority to interpret and implement the NPDES permits in accordance with state law.

4. Under the permits, the City may discharge prior to the Russian River reaching 1,000 cubic feet per second, or at the rate of more than 1% but less than 5% of the flow, only after the City has been given written or oral permission by the Executive Officer.

5. Pursuant to paragraph B(3) of the permits, the "variance above the operations curve" is merely one of the factors to be considered by the Executive Officer in deciding whether or not to grant permission to the City to discharge in excess of 1% of the flow. The Executive Officer may grant permission to discharge in excess of 1% when storage is below the operations curve.

II. LOCATION WHERE NUMERIC EFFLUENT LIMITATIONS ARE TO BE MEASURED

A. Findings of Fact

1. Both the 1990 and 1995 NPDES permits specify that the numeric effluent limitations described in paragraph B(1) of the permits are to be measured at the Laguna Treatment Plant.

2. Both the 1990 and 1995 NPDES permits specify that the numeric effluent limitations described in paragraphs B(2) and C of the permits are to be measured in the receiving waters during discharge.

3. The permits state that chlorine residual shall be measured "at the end of the chlorine-contact chamber."

4. The Laguna Treatment Plant uses three chlorine-contact chambers.

5. The permits do not specify multiple tests at the end of each chamber.

6. The sample taken at the end of one of the chlorine-contact chambers is representative of all three chambers because of the following:

a. The flow into the chambers is divided into three equal parts which flow through the chambers in an identical fashion at the same rate.

b. The chambers were designed and tested to assure that they are identical. Conditions in the tanks are identical. The flow out of the tanks is identical, as

measured on a daily basis by flow meters at the end of each tank and as confirmed by a survey of the weirs.

c. Grab samples taken for chlorine taken from one chamber are compared to the continuous chlorine monitoring auto-sampler, which samples chlorine from the end of all three chambers on a continuous basis twenty-four hours a day.

7. Approximately one-third of the random grab samples are taken from each of the three contact chambers.

8. It is not feasible to measure either chlorine or coliform after the chlorine-contact chambers flow into a combined flow channel because dechlorination occurs in this channel.

9. The sulphur dioxide used for dechlorination would make it impossible to measure the chlorine residual in the combined flow channel.

10. The sulphur dioxide used for dechlorination in the combined flow channel would contaminate the coliform sample and give an erroneous reading.

B. Conclusions of Law

1. All of the numeric effluent limitations set forth in paragraph B(1) of the permits are to be measured at the Laguna Treatment Plant and not in the ponds located in the reclamation and irrigation system.

2. The grab samples for chlorine and coliform are properly taken at the end of one of the three chlorine contact chambers.

III. CONCLUSION

Pursuant to the above findings of fact and conclusions of law the court hereby ORDERS that:

(1) plaintiffs shall file and serve a list of specific violations meeting the terms of the court's order within 30 days of the date of this order;

(2) defendant shall file and serve reasons and defenses, if any, to said alleged violations within 30 days after plaintiffs have served the list of violations;

(3) thereafter the court will set a hearing date.

IT IS SO ORDERED.

Dated: September 20, 1996

United States District Judge