



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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2 September 2009

Mr. John Tinger
U.S. EPA
75 Hawthorne St. (WTR-5)
San Francisco, CA 94105-3901
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VIA: Electronic Submission
Hardcopy if Requested

RE: Proposed National Pollutant Discharge Elimination System (NPDES) Permit
CA0049675, Buena Vista Rancheria: Buena Vista Casino, Ione, California

Dear Mr. Tinger:

The California Sportfishing Protection Alliance (CSPA) has reviewed the proposed NPDES Permit (Permit) in the above referenced matter and respectfully submits the following comments.

1. The proposed Permit Fact Sheet states that the treatment system following an equivalent to activated sludge process is an immersed membrane bioreactor (MBR) treatment system. The Fact Sheet then states that the membrane pore size is between 0.1 to 0.4 microns, which is small enough so that coliform bacteria do not pass through, eliminating the need for conventional disinfection. Microfiltration systems with a pore size smaller than 0.1 microns are generally effective at removing bacteria. A pore size of 0.4 microns should be effective at removing some but may not be reliable for removing all bacteria.

The Fact Sheet fails to discuss that coliform bacteria are indicator organisms that can be used to measure the effectiveness of a wastewater system at removing pathogens. However, pathogens include virus and parasites as well as bacteria. The discussions for tertiary treatment capabilities and human pathogen removal were based on traditional filtration systems and care must be taken with regard to the capabilities of alternative treatment technologies. Generally, there is an overlap between the capabilities of micro- and ultra-filtration systems in their capabilities at removing viruses. The capability of a microfiltration system is thought to be limited for virus removal, which is why such systems have been followed by ultraviolet light disinfection. The Fact Sheet discussion of disinfection could be considered misleading in stating that bacteria removal eliminates the need for disinfection.

It is critical information with respect to the capabilities of the wastewater treatment system whether the membrane pore size is 0.1 or 0.4 microns, which is absent from the proposed Permit and Fact Sheet. We strongly recommend that a seeded virus test be performed, once the system is operational, in coordination with the California Department of Public Health to determine the virus removal capability of the system and

its equivalency to “tertiary” treatment. The Fact Sheet should also be expanded to acknowledge that salts, metal ions and pesticides may also not be removed by the proposed system membrane and could be problematic once the system is up and running. We recommend that the maximum membrane pore size allowed for this discharge be 0.1 micron. Testing can then determine compliance with discharge limitations, a seeded virus study, and (priority) pollutant sampling (as discussed in No. 4 below).

2. In California, the Department of Public Health recommends that ultraviolet light systems be operated to provide a minimum UV dose of 100 millijoules per square centimeter (mJ/cm²) at the peak daily flow.
3. The Fact Sheet states that the technology-based capabilities of the proposed wastewater treatment plant are 10 mg/l for both BOD and TSS. While not stated we assume these are monthly average capabilities. The proposed Permit however does not limit the discharge based on the design capability of the system and instead contains Effluent Limitations for BOD and TSS at 30 mg/l. Technology based Effluent Limitations may legally be more stringent than the federal secondary treatment levels if necessary to protect the beneficial uses of the receiving stream. BOD, as is indicated by its name, is an oxygen demanding substance; a discharge at 30 mg/l will exert a much greater demand on the receiving water dissolved oxygen levels than would a discharge at 10 mg/l. Total suspended solids levels at 30 mg/l, as opposed to the system capability of 10 mg/l, threaten to exceed the receiving water limitations for turbidity. The ultraviolet light disinfection system may not be operable at a suspended solids loading of 30 mg/l in terms of transmittance and effectiveness of disinfection. The monthly average Effluent Limitations for BOD and TSS should be changed to 10 mg/l based on the technological capability of the system and protection of the beneficial uses of the receiving stream.

In addition to the above, Federal Regulation, 40 CFR 122.45 (b) requires that in the case of POTWs, permit Effluent Limitations, standards, or prohibitions shall be based on design flow. The design parameters for BOD and TSS are stated in the Fact Sheet to be based on 10 mg/l, not 30. Failure to limit BOD and TSS based on the organic design loading rate will allow the system to be organically overloaded leading to inadequate treatment.

4. The Fact Sheet states that for this new discharge where data is not available: “The permittee will be required to conduct a full scan of priority pollutants within 90 days of discharge from the new treatment plant and in the 3rd and 5th year thereafter. Reasonable potential will be re-evaluated at this time and the permit may be re-opened to incorporate new water quality based limits as necessary.” We recommend that the number of samples collected be statistically significant to eliminate common argument in California that “there is insufficient data to calculate Effluent Limitations”. We ask that non-priority problematic pollutants, including salts (EC, TDS), ammonia, chlorine, pesticides, aluminum, and constituents with primary and secondary maximum contaminant levels, be sampled at the same time as “priority pollutants. We also recommend that the Fact Sheet be clarified that the results of the first round of sampling, “within 90 days of discharge”

will be reviewed, and the permit will be reopened, if necessary, at that time to include protective Effluent Limitations.

Thank you for considering these comments. If you have questions or require clarification, please don't hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Jennings". The signature is written in a cursive, flowing style.

Bill Jennings, Executive Director
California Sportfishing Protection Alliance