STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 10, 2004

Prepared July 21, 2004

ITEM NUMBER: 17

SUBJECT: **Reissuance of Waste Discharge Requirements (National Pollutant Discharge Elimination System Permit No. CA0047830) for Avila Beach Community Services District and Port San Luis Harbor District, San Luis Obispo County, Order No. R3-2004-0068**

KEY INFORMATION:

Location:	2850 Avila Beach Drive, Avila Beach, San Luis Obispo County
Type of Waste:	Domestic Wastewater
Design Capacity:	0.2 million gallons per day (MGD)
Present Volume:	0.03 MGD (annual average for 2003)
Treatment:	Primary sedimentation, trickling filter, secondary sedimentation, chlorination and dechlorination
Recycling:	None
Disposal:	Pacific Ocean through a 2240-foot long outfall
Existing Order:	Waste Discharge Requirements (NPDES) Order No. 99-59

SUMMARY

Avila Beach Community Services District is currently permitted to discharge up to 0.2 MGD of secondary-treated and disinfected wastewater to the Pacific Ocean at San Luis Bay. The purpose of the Proposed Order is to reissue the permit. Several changes are proposed, including: decreased effluent limitations for Acute Toxicity and several Priority Pollutants; addition of a requirement to submit a Feasibility Study of water recycling by May 15, 2005; addition of a requirement to repair the outfall diffuser by June 30, 2005; addition of a requirement to submit an Inflow/Infiltration and Spill Prevention Program by September 1, 2005; deletion of effluent Acute Toxicity monitoring; and addition of several sewage spill reporting provisions.

DISCUSSION

Purpose of Proposed Order

Order No. 99-59, "Waste Discharge Requirements, NPDES No. CA0047830, for Avila Beach Community Services District and Local Sewering Entities of Port San Luis Harbor District and Avila Beach State Park, San Luis Obispo County," (Permit) expires September 8, 2004. Avila Beach Community Services District (Discharger) submitted an application to continue discharging wastewater under the National Pollutant Discharge Elimination System (NPDES) on May 10, 2004. Proposed Order No. R3-2003-0068 is intended to replace Order No. 99-59.

Facility Description

Avila Beach, with a current population of less than 500, is primarily residential; with very little industry. Nearby Port San Luis is mostly recreational and commercial, with very few full-time residents. Combined wastewater flows from both Avila Beach

and Port San Luis averaged 0.03 MGD (or 30,000 gpd) in 2003. Avila Beach and Port San Luis are popular recreational areas and vacation destinations. Consequently wastewater flow peaks during summer holidays and weekends. Peak seasonal flows reached 0.09 MGD in 2003.

Much of downtown Avila Beach was demolished during Unocal's oil pollution cleanup project in 1999 and 2000. The cleanup project is now complete, and much of the area has either been developed or is scheduled for redevelopment in the near future. Consequently, wastewater flow rates will likely increase significantly in the next five years.

The Discharger's wastewater treatment facility is located at 2850 Avila Beach Drive, at the north end of Avila Beach, as shown in Attachment A of the proposed Permit. The treatment facility consists of a primary clarifier, trickling filter, secondary clarifiers, disinfection with chlorine, and dechlorination. Design capacity of the treatment plant is 0.2 million gallons per day (MGD). The treatment facility is shown in Attachment B.

Treated municipal wastewater is discharged to the Pacific Ocean through a 2240-foot outfall. The outfall terminates in San Luis Bay in approximately 29 feet of water, about 540 feet beyond the Avila Pier (35°10'25" N. Latitude, 120°44'01" W. Longitude). The outfall location is shown on Attachment A. The minimum initial dilution of the discharge (seawater:effluent) is approximately 10:1.

The Discharger's Permit is based on the California Ocean Plan, the Central Coast Basin Plan, and the Clean Water Act (40 CFR Parts 122 and 133). In addition to effluent limitations for several conventional water quality parameters and whole effluent toxicity (acute toxicity and chronic toxicity), the permit contains chemical-specific numeric effluent limitations for all Priority Pollutants.

Compliance History

The Discharger consistently complies with Permit requirements. According to our records, only six (6) violations occurred from 1999 to present:

- June 7, 1999 – Effluent total coliform limitation exceeded. Cause unknown.
- April 17, 2000 – 500 to 600 gallon spill of treated effluent occurred as result of excessive rain and a temporary diversion during the Unocal cleanup project.
- March 14, 2002 – 500 gallons sewage spill occurred as result of grease in the sewer main.
- June 30, August 14, and August 31, 2003 – Discharger failed to perform effluent oil and grease monitoring.

The County of San Luis Obispo routinely monitors beach water quality at the projection of San Luis Street and San Juan Street at Avila Beach. Heal the Bay's Beach Report Card, which is based on the County of San Luis Obispo's monitoring data, gave both locations an A+ grade for dry season 2002, and an F for wet season 2002-2003.

Given that the wastewater discharge is continuously disinfected and no effluent coliform violations or sewage spills occurred during wet season 2002-2003, the F grade for that period was not likely caused by the discharge. Poor beach water quality during the wet season is most likely caused by storm runoff from nearby San Luis Obispo Creek. The Pathogen Total Maximum Daily Load (TMDL) for San Luis Obispo Creek is currently undergoing scientific peer review and may be presented for Regional Board consideration later this fiscal year.

Outfall Diffuser Repair

During a diving inspection in 1999, the Discharger found their outfall diffuser severely corroded and separated from the outfall pipe. In December 1999, staff required submittal of plans to repair the diffuser, and verification that the minimum initial dilution of the damaged outfall system remained greater than 10:1 (which is specified in the Permit as the basis for all water-quality based effluent limitations). In a January 2000 letter, the Discharger committed to installing a new diffuser by September 30, 2000. In February 2000, the Discharger submitted verification that although the outfall diffuser system was severely damaged, the minimum initial dilution of the discharge remained greater than 10:1.

To date the Discharger has not yet replaced the diffuser. Unocal granted the Discharger funding for a majority of project cost. In addition, this Regional Board granted the Discharger supplementary funding from the Avila Beach Water Quality Fund (Resolution No. 00-004) in November 2000. Only recently, in April 2004, the Discharger submitted a satisfactory Scope of Work for the project, to begin the process of executing a contract and disbursing payments from the Water Quality Fund. The Scope of Work indicates that work will commence in January 2005 and the project will be completed by June 2005. To reinforce this schedule, the following provision is added to the proposed Order:

> "Replacement of the outfall diffuser shall be completed by **June 30, 2005**. Failure to complete the replacement of the outfall diffuser by such date shall justify disapproval of funding allocated to the diffuser project by Resolution No. 00-004, unless failure to complete the project is outside the control of the Discharger. Results of dilution modeling of the new diffuser shall be submitted by **August 30, 2005**. If the minimum initial dilution of the new diffuser is found to be greater than 10:1 (seawater:effluent), this permit may be reopened to revise relevant effluent limitations."

Water Recycling

Order No. 99-59 required the Discharger to submit a report evaluating the feasibility of water recycling by September 8, 2000. The Discharger failed to submit the report, and Regional Board staff failed to follow-up with Discharger regarding report submittal. The California Water Code states that the Regional Boards are responsible for encouraging water recycling, especially in water short areas of the coastal zone such as Avila Beach. Staff recommends the following provision be included in the proposed Order:

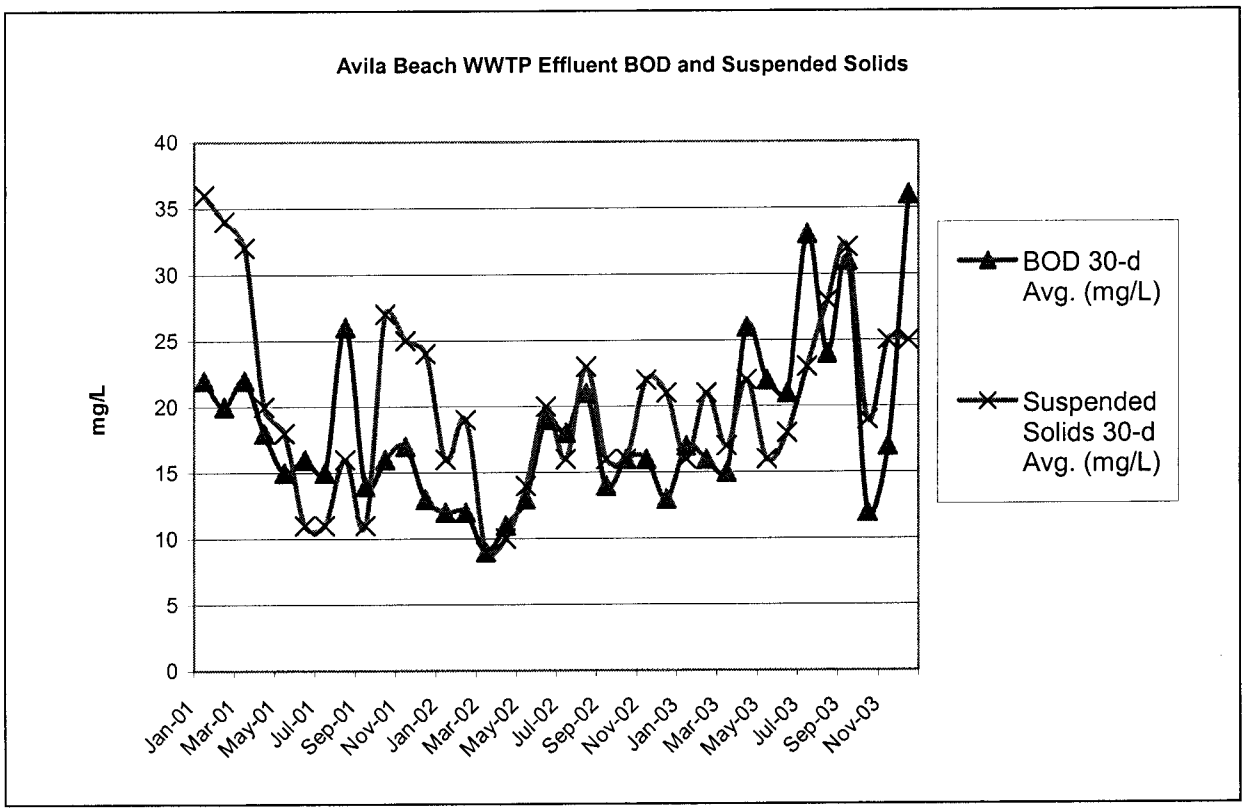
> "The Discharger shall complete a Feasibility Study of water recycling in Avila Beach. Potential use of both Secondary-23 and Tertiary 2.2 quality (as defined in Title 22) recycled water shall be evaluated. At least three recycled water use areas shall be evaluated, including irrigation of the nearby golf course. If the primary hindrance to irrigation of the golf course is that it currently falls outside the service area of the Discharger, the feasibility of including the golf course in the Discharger's service area shall be discussed. An approximate cost of each recycled water use scenario shall be provided, as well as a comparison of such costs to current water costs. A recommendation as to whether water recycling should be pursued shall be included. The final Feasibility Study shall be submitted to the Executive Officer by **May 15, 2005**."

Effluent BOD and Suspended Solids Limitations

The Permit contains effluent Biochemical Oxygen Demand (BOD) and Suspended Solids limitations of 40 mg/L (30-day average) and 60 mg/L (7-day average), as well as minimum removal efficiency requirement of 75%. These limitations are based on *treatment equivalent to secondary treatment* standards, as provided in 40 CFR Part 133. In order to be eligible for *treatment equivalent to secondary treatment* standards, the Discharger must utilize a trickling filter as the principal biological treatment process and *effluent concentrations consistently achievable through proper operation and maintenance* must be greater than secondary treatment standards. 40 CFR Part 133.101(f) defines *effluent concentrations consistently achievable through proper operation and maintenance* as:

> "the 95th percentile value for the 30-day average effluent quality achieved by a treatment works in a period of at least two years, excluding values attributable to upsets, bypasses, operational errors, or other unusual conditions, and (2) a 7-day average value equal to 1.5 times the value derived [above]."

Figure 1 displays the Discharger's effluent 30-day average BOD and Suspended Solids concentrations from January 2001 through December 2003. The 95th percentiles for this period, derived according to the above definition, are 32 mg/L for BOD and 33 mg/L for Suspended Solids. Each of these values exceeds the secondary treatment standard of 30 mg/L. The Discharger therefore remains eligible for *treatment equivalent to secondary treatment* standards.



An argument may be made that since the Dischargers' *effluent concentrations consistently achievable through proper operation and maintenance* are less than the current effluent limitations, that the effluent limitations should be decreased. Staff disagrees, because the above values were derived using data from a period when the Dischargers' treatment facility was under-loaded and the values under-estimate long-term conditions. The population of Avila Beach decreased significantly as a result of the Unocal cleanup project, and has increased only slightly since then. Influent flows were less than 20% of the treatment facility's design capacity from 2001 through 2003. Greater BOD and Suspended Solids removal efficiency is expected under such conditions. As influent flows increase in the near future, staff expects effluent BOD and Suspended Solids concentrations to increase slightly. The Discharger's *effluent concentrations consistently achievable through proper operation and maintenance* will likely increase to 35 to 40 mg/L by 2009. Staff believes the existing effluent BOD and Suspended Solids limitations are appropriate and protective of beneficial uses. Staff recommend they remain unchanged.

Proposed Changes to WDRs and Monitoring and Reporting Program

Several changes to the Permit and Monitoring and Reporting Program (MRP) are proposed, primarily as a result of incorporating the 2001 amendments to the California Ocean Plan. Following are the specific changes proposed:

Change	Section	Rationale
1. The Acute Toxicity limitations of the existing Permit (1.5 TUa 30-Day Average, 2.0 TUa 7-Day Average, and TUa 2.5 Daily Maximum) are replaced with a 0.61 TUa Daily Maximum.	WDR, Section B.3	Acute Toxicity is changed from an effluent limitation to a Water Quality Objective (Daily Maximum of 0.3 TUa) with an associated dilution credit in the 2001 Ocean Plan.
2. Effluent limitations for the following constituents are more stringent than the existing Permit: thallium, chlorodibromomethane, 1,2-dichloroethane, 1,1-dichloroethylene, dichlorobromomethane, isophorone, N-nitrosodi-N-propylamine, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,1,2-trichloroethane, 2,4,6-trichlorophenol.	WDR, Section B.3	Water Quality Objectives for these constituents are more stringent in the 2001 Ocean Plan.
3. Mass Emission Limitations language from Standard Provisions is promoted into the body of the permit.	WDR, Section B.4	To emphasize and clarify Mass Emission Limitations.
4. The Discharger is required to review and update their Infiltration/Inflow and Spill Prevention Program (Program) by September 1 of each year. Order No. 99-59 did not require the Discharger to submit their Program. A requirement is added to submit the Program to the Executive Officer by September 1, 2005, and annually thereafter if requested by the Executive Officer.	WDR, Section E	Submittal of the Program is necessary to determine whether the Program complies with WDR, Section E, "Requirements for Inflow/Infiltration and Spill Prevention Program."
5. A requirement is added for the outfall diffuser to be replaced by June 30, 2005, and submittal of dilution modeling results by August 30, 2005.	WDR, Section F	Please see "Outfall Diffuser Repair" above.
6. A requirement is added for a Feasibility Study of water recycling to be submitted by May 15, 2005.	WDR, Section F	Please see "Water Recycling" above.
7. The effluent Acute Toxicity monitoring requirement is eliminated.	MRP, Section B	The 2001 Ocean Plan requires Chronic Toxicity testing, not Acute Toxicity testing, where the minimum initial dilution of the effluent is less than 100:1. The initial dilution ratio of the Discharger's facility is 10:1.
8. An annual biosolids monitoring requirement is added.	MRP, Section D	40 CFR Part 503 requires annual biosolids monitoring.
9. Several sampling, analysis, and reporting provisions from Standard Provisions are promoted into the body of the Monitoring and Reporting Program.	MRP, Sections F and G	To ensure sampling and analysis procedures are appropriate and improve determinations of compliance.
10. Several Sewage Spill Reporting Provisions are added.	MRP, Section H	To emphasize and clarify sewage spill reporting requirements.

ENVIRONMENTAL SUMMARY

Waste Discharge Requirements for this discharge are exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et. seq.) in accordance with Section 13389 of the California Water Code.

COMMENTS

The following parties were sent a draft of the Proposed Order and invited to submit written comments on June 3, 2004. The Discharger published a notice of the public comment period and the September 10, 2004 Regional Board hearing in the San Luis Obispo County Tribune on June 12, 2004. Written comments were due by July 16, 2004.

The following parties did not submit any written comments:

- **Port San Luis Harbor District**
- **California Coastal Commission**
- **Department of Health Services**
- **Fish and Wildlife Service**
- **Department of Fish and Game**
- **State Water Resources Control Board**
- **San Luis Obispo County Planning Dept**
- **County of San Luis Obispo Environmental Health Services**

Avila Beach Community Services District submitted the following comments on July 16, 2004:

Comment: "Effluent Limitations – Section B.3, The District is in agreement with the recommendation that copper and cadmium effluent limitations remain at the same levels identified in WDR Order No. 99-59."

Staff Response: Staff mistakenly transposed the 6-month median effluent limitations for cadmium and copper in the Draft Order. The District alerted staff of this mistake prior to submittal of their written comments, and staff had since corrected the mistake.

Comment: "Provisions – Section F.1, The District concurs with the proposed completion date for replacement of the diffuser and will exhaust every avenue under its control to meet that date. However, there are factors that could affect the project completion date that are outside the control of the District, for example, forces of nature and the actions by other agencies to grant permits or necessary easements. The District requests that the provision be revised with the following language, "Failure to complete replacement of the outfall diffuser by such date shall justify disapproval of funding contained for the diffuser project in Resolution No. 00-004, *unless the failure to complete the replacement is outside the control of the District.*"

Staff Response: The District's request is reasonable and appropriate. Staff recommends their proposed language be added to the subject provision.

RECOMMENDATION

Adopt Order No. R3-2004-0068

ATTACHMENT

Attachment 1 - Waste Discharge Requirements Order No. R3-2004-0068 (NPDES Permit No. CA0047830), with attachments:

A. Facility Location Map
B. Treatment Process Diagram
C. Monitoring and Reporting Program No. R3-2004-0068
D. Sewage Spill Report Form

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