

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF MARCH 20-21, 2008

Prepared on February 27, 2008

ITEM NUMBER: 10

SUBJECT: Reissuance of Waste Discharge Requirements, National Pollutant Discharge Elimination System Permit No. CA0048551 for the Monterey Regional Water Pollution Control Agency, Monterey County, Order No. R3-2008-0008

KEY INFORMATION

Location: 14811 Del Monte Blvd., Marina, Monterey County
Type of Discharge: Secondary treated municipal wastewater and brine waste
Population Served: Approximately 252,000
Permitted Flow: 29.6 million gallons per day (MGD; dry weather flow design capacity)
Average Flow: 19.6 – 23.6 MGD (range of 2006 monthly average municipal influent flows)
Brine Waste: 30,000 – 50,000 gallons per day (gpd) diverted from influent
Type of Treatment: Secondary via trickling filters and tertiary via media filtration
Disposal Method: Ocean discharge of secondary effluent and brine waste to Monterey Bay through 11,260-foot long outfall/diffuser
Recycling: Agricultural irrigation of tertiary effluent on approximately 12,000 acres (7.3 – 20.6 MGD – average monthly from April – November 2006)
Solid Wastes: Offsite disposal of biosolids at Monterey Regional Waste Management District landfill in Marina, Monterey County (used for daily cover)
Existing Orders: NPDES Permit, Waste Discharge Requirements Order No. R3-2002-0083
Water Reclamation Requirements Order No. 94-82

This Action: Adopt Revised Waste Discharge Requirements (NPDES Permit), and Rescind Coverage Under Waste Discharge Requirements Order No. R3-2006-0063, General Permit for Discharges with Low Threat to Water Quality (NPDES No. CAG993001)

SUMMARY

The proposed Order is presented in the new statewide format for National Pollutant Discharge Elimination System (NPDES) permits. This standardized format presents the proposed Order with all supporting information appended as associated attachments. Consequently, the facility information and permit evaluation discussion normally contained within the staff report are presented in the Fact Sheet as Attachment F to the proposed Order. Attachments to the proposed Order consist of the following:

- Attachment A – Definitions
- Attachment B – Topographic Map
- Attachment C – Wastewater Flow Schematic
- Attachment D – Standard Provisions

Attachment E – Monitoring and Reporting Program (MRP) No. R3-2008-0007
Attachment F – Fact Sheet
Attachment G – Comments and Changes

The following discussion briefly outlines significant changes to the proposed Order. Additional changes made to the draft Order submitted for public comment are outlined and discussed in Attachment G. See the Order attachments for additional detail regarding the proposed Order.

DISCUSSION

Significant changes

Aside from the new format the proposed Order only contains one major modification from the previous permit.

The proposed Order includes the discharge of brine waste via the existing ocean outfall. Brine discharges are ongoing and were formerly permitted under Waste Discharge Requirements Order No. R3-2006-0063, General Permit for Discharges with Low Threat to Water Quality (NPDES No. CAG993001). The Discharger currently accepts up to approximately 50,000 gallons per day (gpd) of brine waste consisting of water softener regenerant waste, groundwater nitrate removal waste, and reverse osmosis reject waste produced within the Monterey Peninsula area. A majority of the brine waste has been diverted from the municipal wastewater collection system and is collected downstream of the treatment process in a 375,000 gallon lined storage pond prior to being blended back into the ocean outfall with secondary treated effluent. The brine diversion has effectively improved the quality of the Salinas Valley Reclamation Project (SVRP) produced recycled water for the seasonal irrigation of approximately 12,000 acres of agricultural land in the Castroville area (Castroville Seawater Intrusion Project [CSIP]) by reducing the total dissolved solids (TDS) of the influent wastewater to the wastewater treatment and subsequent SVRP facilities. The future diversion of additional brine waste around the treatment facility and the implementation of projects along the Monterey Peninsula such as desalination facilities for municipal water supply will likely increase the amount of brine waste being handled by the Discharger. The Discharger's existing ocean outfall is the most viable alternative for regional brine disposal along the Monterey Peninsula. The Discharger's ultimate goal is to minimize its municipal wastewater discharge via year round reclamation except for the minimum amount of secondary treated effluent blending required to safely meet the Ocean Plan and NPDES permit requirements for brine waste discharges.

The amount of brine the Discharger can currently accept is dependent on the existing brine storage pond and brine flow metering system located at the tail end of the treatment facility and whatever excess storage that exists within the standby sludge lagoons and drying beds. The sludge lagoons and drying beds were replaced in 2007 along with belt filter presses by a new biosolids dewatering facility consisting of two large screw presses. The amount of brine the Discharger can dispose of at any given time is dependent on the combined secondary effluent disposal and brine flow up to the ultimate wet weather outfall design flow of 81.2 MGD. As such, the proposed Order contains two sets of flow prohibition requirements; one for influent average dry weather and peak wet weather treatment system design flows of 29.6 MGD and 75.6 MGD, respectively (not including brine flows), and a combined as discharged to the ocean outfall secondary effluent and brine flow of 81.2 MGD. It is uncertain whether brine flows to the facility will increase significantly within the next five year permit term that will require upgrades to either the brine handling facility or ocean outfall. Therefore, the proposed Order contains a triggered requirement for the Discharger to

conduct a technical evaluation of the brine facility and outfall prior to accepting brine flows in excess of 375,000 gpd.

The proposed Order contains a single set of water quality based effluent limitations (WQBELs) consistent with the Ocean Plan that are applicable to any ratio of blended secondary effluent and brine waste flows and will generally dictate the amount of secondary effluent required for blending with brine waste. The proposed Order also contains brine specific flow and water quality monitoring requirements.

Other modifications

The Central Coast Long-Term Environmental Assessment Network (CCLEAN) program monitoring requirements contained within Attachment E of the proposed Order under section IX. A., have been updated in conjunction with the three other Monterey Peninsula ocean dischargers, Carmel Area Wastewater District, City of Watsonville and City of Santa Cruz. Specific CCLEAN program modifications are discussed under Item 8 of this agenda package and are not repeated here.

The Ocean Plan was amended in 2005 to include a procedure for determining "reasonable potential" by characterization of effluent monitoring data. The results of the reasonable potential analysis (RPA) are presented in Attachment F of the proposed Order under section IV. C. "Water Quality-Based Effluent Limitations (WQBELs)". The RPA, using effluent data and the updated Ocean Plan procedure, only resulted in "reasonable potential" (Endpoint 1) for the Table B pollutants hexavalent chromium and DDT. A conclusion of "reasonable potential" for whole effluent, acute and chronic toxicity, and total chlorine residual is based on the nature of the treatment and discharge instead of characterization of effluent monitoring data. The RPA resulted in "no reasonable potential" (Endpoint 2) for chlorinated phenolics and was inconclusive (Endpoint 3) for all remaining Table B pollutants. Therefore, WQBELs were retained for all of the Ocean Plan Table B pollutants except for chlorinated phenolics.

Based on the result of the RPA, effluent monitoring for the Table B pollutants with reasonable potential to exceed the water quality objectives, hexavalent chromium and DDT, was increased from annually to quarterly.

Semiannual effluent monitoring for the remaining Table B pollutants was maintained within the proposed permit. Semiannual sampling is required once during the dry season and once during the wet season to evaluate effluent quality when brine waste to secondary effluent flow ratios are at the expected seasonal high and low, respectively. Whole effluent toxicity effluent monitoring was decreased from quarterly to semiannually (the minimum required per the Ocean Plan), and is required to be conducted concurrently with Table B pollutant monitoring.

Effluent monitoring for the list of "Remaining Priority Pollutants" was reduced from semiannually to the minimum of three times during the next permit cycle as required per 40 CFR 122.21. In addition, the list of "Remaining Priority Pollutants" was revised¹ to more accurately reflect the current differences between the Ocean Plan and EPA form 3510-2A. The last five years of

¹ Bromoform, 1,3-Dichloro-Propylene, Methyl Bromide, Methyl Chloride, Pentachlorophenol, Acenaphthylene, Anthracene, 3,4-Benzo-Fluoranthene, Benzo (GHI) Perylene, Butyl Benzyl Phthalate, Chrysene, Dibenzo (A,H) Anthracene, 1,4-Dichlorobenzene, Fluorine, Indeno (1,2,3-CD) Pyrene, Phenanthrene, and Pyrene were added, and Endrin Aldehyde, N-Nitrosodi-N-Propylene, Bis (2-Ethylhexyl) Phthalate, N-Butyl Benzyl Phthalate, Benzo (B) Fluoranthene, P-Chloro-M-Cresol, Trichlorofluoromethane, Dichlorodifluoromethane, Dibromochloromethane, and Bis(Chloromethyl) Ether were removed

semiannual data (408 pollutant data) for these constituents resulted in only ten detections of selected constituents below the EPA specified method applicable minimum level and some of the constituents now have ocean criteria per the Ocean Plan Table B water quality objectives. The list of "Remaining Priority Pollutants" in the proposed Order consist of the priority pollutants listed in Part D of EPA Form 3510-2A (Rev. 1-99) that currently do not have ocean criteria (water quality objectives) per Table B of the Ocean Plan. A complete EPA Form 3510-2A is required for all new and renewal NPDES permit applications pursuant to 40 CFR 122.21.

The effluent limitations contained within Table 7 of the proposed Order contain changes from the previous permit that reflect updates to the 1997 Ocean Plan. The 2001 Ocean Plan adopted by the State Water Resources Control Board on November 16, 2000 contained modifications to Table B of the 1997 Ocean Plan, including (1) the addition of Dichlorobromomethane, Heptachlor Epoxide, and N-Nitrosodi-N-Propylamine as new constituents, (2) the designation of 1,1-Dichloroethylene, Isophorone, 1,1,2,2-Tetrachloroethane and 1,1,2-Trichloroethane as carcinogens (formerly tabulated as noncarcinogens) with new water quality objectives, and (3) new water quality objectives for 1,1-Dichloroethylene, Isophorone, Heptachlor Thallium, 1,2-Dichloroethane and Tetrachloroethylene. In all cases the new water quality objectives are more stringent. These changes should have been reflected in the update of the previous permit, but were evidently overlooked. These changes are also consistent with the 2005 Ocean Plan as no new changes were made to Table B of the 2005 Ocean Plan.

The proposed Order requires the Discharger to utilize high volume water sampling (HVWS) methods employed by the CCLEAN program for compliance determination of the Table B pollutants and the implementation of all other pollutant monitoring requirements contained within the proposed Order, when appropriate, given the subsequent analytical methods are in accordance with 40 CFR PART 136 or as allowable per the Implementation Provisions for Table B contained in section III.C.5.b of the Ocean Plan. The CCLEAN steering committee is required to evaluate appropriate HVWS methods as part of the forthcoming CCLEAN Quality Assurance Project Plan (QAPP).

Receiving water sampling for total coliform, fecal coliform, and *Enterococcus* monitoring were retained from the previous permit. However, water contact (surface water) limitations for bacteria were updated and resampling requirements were added per the Implementation Provisions for Bacterial Characteristics for Water Contact Monitoring in the Ocean Plan.

The proposed Order also includes requirements for a Pollutant Minimization Program per the Ocean Plan.

RECOMMENDATION

Adopt Order R3-2008-0008 and rescind coverage under Order No. R3-2006-0063 (General Permit) as proposed.

ATTACHMENTS

1. Proposed Order No. R3-2008-0008 and associated attachments
2. Waste Discharge Requirements Order No. R3-2002-0083