

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

STAFF REPORT FOR REGULAR MEETING OF MARCH 24, 2006

Prepared on February 20, 2006

ITEM NUMBER: 6

**SUBJECT: Revised Waste Discharge Requirements for the City of Gonzales
Wastewater Treatment Plant, Monterey County
(Order No. R3-2006-0005)**

KEY INFORMATION

Location: Gonzales River Road two miles southwest of Gonzales, Monterey County
Type of Waste: Domestic and Industrial Wastewater
Discharge Volume: Up to 1.3 million gallons per day (monthly average daily flow)
Pretreatment: Grit removal and two parallel grinders with overflow and bypass through a manual vertical bar screen.
Treatment: Pond
Disposal: Evaporation and percolation in ponds and infiltration areas.
Reclamation: None
Existing Orders: Order No. 01-39
This Action: Adopt Waste Discharge Requirements Order No. R3-2006-0005

SUMMARY

The purpose of Waste Discharge Requirements Order No. R3-2006-0005 (Hereafter "Order" or "Order No. R3-2006-0005") is to update and replace existing Order No. 01-0039. Although existing Waste Discharge Requirements are only 4 years old, they require updating to address the City of Gonzales's (City) proposed expansion plans. The City proposes to address future capacity needs in two phases. Phase 1, to be permitted by this Order, includes operational changes to increase capacity from 0.763 to 1.3 million gallons per day (MGD). Phase 2 will occur in 3-5 years and will increase capacity to approximately 3 MGD and will require substantial improvements. This Order does not address phase 2 expansion, but does require that phase 2 planning incorporate some specific treatment and facility improvements to protect water quality.

The proposed Waste Discharge Requirements are consistent with standard requirements for domestic wastewater dischargers throughout the Central Coast Region. Requirements specified are designed to prevent discharges to surface waters, protect

groundwater, and prevent nuisance conditions caused by the discharge.

DISCUSSION

The City of Gonzales owns and operates a wastewater treatment plant (Facility), located at the end of Short Road, where it intersects River Road. The facility is located next to the Salinas River, two miles southwest of the City, as shown on Order Attachment "1." The Facility treats domestic and light industrial wastewater.

The Facility is located on approximately 62 acres. The facility consists of pretreatment headworks, six aerated facultative ponds, two polishing oxidation ponds, and three infiltration basins, as shown on Order Attachment "2." Pretreatment occurs at the headworks and consists of two parallel grinders with overflow and bypass through a manually cleaned vertical bar screen. Biological treatment occurs within the ponds, in the soil column below the ponds and in the infiltration basins. Disposal occurs via evaporation and percolation. A current operation schematic is shown on Order Attachment "3." The aerated facultative ponds are currently

operated in parallel. The polishing oxidation ponds are also currently operated in parallel and receive flow from the facultative ponds. The polishing ponds act as holding basins before discharge to the infiltration basins.

The Salinas River is located near the southwestern edge of the Facility and flows in northwesterly direction. Agricultural land surrounds the Facility and has traditionally been used in row crop production.

The Facility is located on relatively level topography in sandy alluvial soils. Depth to the first shallow groundwater near the ponds and infiltration basins ranges from 10 feet to over 15 feet.

During 2004, the facility averaged 0.524 MGD while permitted capacity is 0.763 MGD. The City has historically tried to keep 25% of permitted capacity available for possible new significant dischargers. As a result, the City is proactively requesting permission to increase permitted capacity from 0.763 to 1.3 MGD. The City is proposing to address future capacity in two phases.

Phase 1 expansion to pretreatment capability will include construction of new larger headworks with two grinders capable of handling flows up to 1.3 MGD and ability to expand to 3 MGD in the future. Pretreatment will also include grit removal to reduce wear and tear on pumps and grinders. Phase 1 treatment expansion will include modifying operations from six parallel ponds to two parallel sets of three ponds in series. Each set of three ponds will discharge into a polishing pond, as shown in Order Attachment "4." Improvements will also include adding two 15 hp aerators to both ponds 1 and 2, reconditioning or replacing all the 7.5 hp aerators to improve efficiency, and addition of 7.5 hp aerators to ponds 3 and 4.

Phase 2 expansion plans have not been completed. As a result, the proposed Order does not address phase 2 expansion. The proposed Order does require that phase 2 planning incorporate some specific treatment and facility improvements to protect water quality. Required improvements include lining of the treatment ponds, improved treatment to meet secondary standards and limits, nitrogen removal, and appropriate expansion of the disposal area.

The proposed Order incorporates prohibitions, specifications (including effluent limitations, groundwater limitations, system operation, solids control, stormwater source control, and inflow/infiltration control), and provisions to protect beneficial uses of groundwater and the public.

The following sections regarding prohibitions, specifications, and provisions discuss the differences between the proposed Order and the existing Order. If sections are not discussed, they are similar to those in existing Order No. 01-039.

Effluent Specifications – The proposed Order modifies specification B.1, which currently limits the maximum daily flow, averaged over each month, to 0.763 mgd; it allows, upon completion of phase 1 improvements or an engineered alternative approved by the Executive Officer, a maximum daily flow averaged over each month of 1.3 MGD.

Groundwater Specifications – The proposed order adds specification B.6 to include median groundwater objectives for the 180 foot confined aquifer sub-area of the Salinas Valley sub-basin. Groundwater beneath the facility is believed to be a source of recharge for confined aquifers (180 foot and 400 foot) located down gradient.

System Operation Specifications – The proposed Order adds specification B.10 requiring the Discharger to install permanent freeboard markers in all ponds.

Salts Management – The proposed Order adds specifications B.17 through 19, which require the City to develop a salts management program to assess and reduce salt loading to the facility. This is consistent with what is being required of similar dischargers throughout the region.

Provisions – The proposed Order adds provision C.6 requiring the City to submit a Long-Term Wastewater Management Plan (LWMP) to address facility expansion beyond 1.3 mgd. The LWMP shall include the following:

1. Current treatment and disposal capacity.
2. Projected wastewater flows for ten years.
3. An evaluation of recycling and reuse.
4. Proposed capacity, treatment, and disposal improvements.

5. A hydrogeologic study with recommendation for improvements to the groundwater-monitoring system.
6. Timeline for implementation of any proposed improvements.
7. Documentation of financial resources to complete the plan.

At a minimum, expansion above 1.3 MGD will include lining of the treatment ponds, improved treatment to secondary standards, nitrogen removal, and appropriate expansion of the disposal area.

Compliance Status - The City has been in compliance with Order No. 01-039 and has been proactively addressing future plant capacity issues.

Monitoring and Reporting Program - The City is required to collect water supply samples annually. Each year samples shall be analyzed for general minerals. The proposed water supply monitoring is consistent with the existing monitoring and reporting program.

The City is required to perform routine influent monitoring. Compared to the existing Monitoring and Reporting Program, the proposed Influent Monitoring increases the frequency of monitoring to monthly from quarterly for common domestic wastewater treatment parameters and quarterly from annually for common mineral constituents. The new monitoring frequencies are appropriate for the increased wastewater treatment and disposal capacity of 1.3 MGD.

The City is required to perform routine effluent monitoring. Each month, effluent samples shall be analyzed for pH, BOD₅, total suspended solids, settleable solids, nitrite (as N), nitrate (as N), total kjeldahl nitrogen (as N), and total nitrogen (as N). Each quarter, effluent shall be analyzed for total dissolved solids, sodium, chloride, boron, and sulfate. Each year, samples shall also be analyzed for the following Title 22 primary and secondary inorganic drinking water constituents. Proposed effluent monitoring frequencies for common wastewater quality and performance parameters have been increased or remained the same. Proposed monthly monitoring for common wastewater parameters is increased from quarterly in the existing Order. Proposed quarterly, annual,

and every five years monitoring is the same as the existing Monitoring and Reporting Program.

The City is required to conduct solids monitoring prior to disposal. The City will submit a summary of activities regarding solids handling with each quarterly report. Prior to biosolids removal or change in disposal practices, the City will submit all disposal site information including biosolids analysis. Characterization required by the disposal facility may be submitted to fulfill this monitoring requirement. Proposed solids monitoring is similar to the existing Order.

The City is required to collect groundwater samples (upgradient and downgradient) monthly until September 2007 and quarterly thereafter. Groundwater samples from each groundwater-monitoring well shall be analyzed to aid in evaluating compliance with their Waste Discharge Requirements and in development of an improved hydrogeologic study for the Long-term Wastewater Management Plan as required by Provision C.6 of the proposed Order. This study is expected develop and improve on knowledge of background site groundwater conditions, assess the current groundwater monitoring system, propose additional wells if necessary, and incorporate future expansion plans into groundwater monitoring plans.

In addition to the monitoring described above, the City is required to perform regular facility, inflow/infiltration, salt monitoring, and spill reporting. Information and summaries shall be submitted with each quarterly and annual report.

Monitoring reports are required quarterly, and will contain the data collected or calculated over the previous three months. An annual report will be submitted by the 30th of January pursuant to Standard Provisions and Reporting Requirements, General Reporting Requirement C.16. with the 4th quarter monitoring report.

ENVIRONMENTAL SUMMARY

The City adopted a negative declaration for the proposed phase 1 improvements to the Gonzales Wastewater Treatment Facility in accordance with California Environmental Quality Act (Public Resources Code Section 21000, et seq.) and the California Code of Regulations, on June 20, 2005.

COMMENTS AND RESPONSES

The City of Gonzales submitted a comment letter dated January 16, 2006, which is paraphrased and responded to below.

1. Finding 14 on page 2 states "replace" all 7.5 HP aerators, the City intends to recondition to full efficiency or replace all 7.5 HP aerators.

Response

Regional Water Board staff agrees and has modified Finding 14 as requested. Finding 14 as modified, is shown below:

14. Phase 1 expansion of treatment capability will include modifying operations from six parallel ponds to two parallel sets of three ponds in series, addition of two 15 hp aerators to ponds 1 and 2, *reconditioning or* replacement of all 7.5 hp aerators to improve efficiency, and addition of 7.5 hp aerators to ponds 3 and 4.

In addition, staff proposes to modify the Monitoring and Reporting Program to include spill reporting procedures and requirements. A summary of all overflows and spills must be included with the annual monitoring report. The proposed spill reporting is similar to that required in recently adopted orders for other wastewater treatment facilities within Region 3.

RECOMMENDATION

Adopt Waste Discharge Requirements Order No. R3-2006-0005 as proposed.

ATTACHMENT

1. Proposed Order No. R3-2006-0005
2. Monitoring and Reporting Program No. R3-2006-0005