

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
Thursday, May 17, 2018
Regional Water Board Office
Santa Rosa, California

ITEM: 3

SUBJECT: Public Hearing on Order No. R1-2018-0003 to consider adoption of proposed Waste Discharge Requirements for Sonoma West Holdings, Incorporated Wastewater Treatment Facility, Plant No. 2, WDID No. 1B812020SON, NPDES No. CA0023655 (*Imtiaz-Ali Kalyan*)

BOARD ACTION: The Board will consider adoption of Waste Discharge Requirements Order No. R1-2018-0003. The Order will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years.

BACKGROUND: Sonoma West Holdings, Inc. (hereinafter Permittee) is the owner and operator of the Wastewater Treatment Facility, Plant No. 2 (hereinafter Facility), a wastewater treatment system for a multi-tenant food and beverage processing, packaging, storage, and warehousing facility. Tenants that are currently leasing warehouse space at Sonoma West Holdings, and contributing to their process wastewater include: wineries, wheatgrass processors, hard apple cider processors, and yogurt and cheese processors. The Facility discharges process wastewater to land application benches for additional treatment and disposal. The Permittee is currently regulated under Order No. R1-2010-0019 adopted on April 29, 2010.

The design and operation of the process wastewater treatment system is specifically suited to treat organic wastes from beverage and food operations. The system is not designed to treat process wastewater from other types of industrial activity. Therefore, the Proposed Order contains provisions restricting the types of waste that may ultimately be treated by the centralized process wastewater treatment system.

The Facility's treatment system is comprised of a segregated process wastewater collection sewer within each building, which collects wastewater through trench drains and sumps, a centralized collection sump, rotary screen for large solids removal, a second settling sump equipped with overflow weir, and a third sump where oil and grease can be removed if necessary. Process wastewater flows by gravity from the third sump to an irrigation sump and are pumped either to land discharge fields, the transfer pond, or the aerated storage pond (Lake Davis). The Permittee uses seven benches for land application of process wastewater. A bench is a plot of ground that has been modified with spray irrigation facilities and contoured to facilitate irrigation runoff collection. These benches are used for additional process water treatment and disposal during the dry season. This Order retains maximum rates of application of process wastewater to land of 0.17 million gallons per day

(mgd) (average) and 0.37 mgd (daily maximum) from the previous permit. During times of heavy precipitation or when the benches are saturated, process wastewater is pumped directly to the aerated storage pond. The minimum level of treatment of process wastewater includes screening of solids and oil/water separation at all times, land application of wastewater to the benches for discharges to land, and aeration in the storage pond for discharges to surface waters. Although the Permittee has the ability of discharging treated process wastewater to surface waters, no discharge to surface waters have occurred over the past 10 years. Land application of process wastewater has been the primary method of disposal.

The Facility's domestic wastewater treatment system is designed to provide treatment for a peak flow of 6,000 gallons per day (gpd) and an average flow of 2,720 gpd, equivalent to a peak employee day of 400 full time employees and an average employee day of 182 employees. Domestic wastewater is collected in four 1,500 gallon septic tanks where settling and anaerobic treatment occurs, and then flows to a lined and aerated domestic wastewater pond. Domestic wastewater is filtered and disinfected with chlorine prior to being applied to Bench No. 1. Domestic tailwater from Bench No. 1 is retained by a constructed berm, which prevents commingling of domestic and process tailwaters, and is allowed to percolate and evaporate. Commingling of treated domestic wastewater and treated process wastewater is prohibited.

ISSUES:

Federal Effluent Limit Guidelines (ELGs) for BOD and TSS. Maximum daily effluent limitations (MDELS) for BOD₅ and TSS of 80 mg/L and settleable solids of 0.2 ml/L at Discharge Point 001 are retained from Order No. R1-2010-0019 and are based on standards for systems equivalent to secondary level wastewater treatment and best professional judgement. The settleable solids limitation is retained from Order No. R1-2010-0019, consistent with anti-backsliding regulations in 40 C.F.R. section 122(l). The Facility primarily receives waste streams from wine producers. Other tenants such as yogurt and cheese processors, wheatgrass processors and hard apple cider processors also discharge waste streams that can be treated by the existing treatment process. Although the processing of yogurt and cheese and wheatgrass are subject to U.S. EPA Effluent Limit Guidelines (ELGs) specific to these two individual food processing operations, the Proposed Order currently does not incorporate ELGs since all treated effluent is discharged to land. Should the Permittee decide to discharge treated effluent to surface waters, the Proposed Order may be reopened to revise effluent limits for BOD and TSS based on national ELGs. In order for staff to develop appropriate ELGs and to determine compliance, the Facility would need to provide food and beverage-specific monitoring data, which is currently not available due to the configuration of the system. Discharge to surface waters is prohibited until such time that ELGs can be established.

Reasonable Potential Analysis (RPA). The RPA demonstrated reasonable potential for discharges of copper, aluminum, lead, mercury, thallium, zinc, ammonia, nitrate, electrical

conductivity, iron, manganese, MBAS, total dissolved solids, and cyanide from the Facility to cause or contribute to exceedances of applicable water quality criteria. The Proposed Order therefore includes effluent limitations for these constituents that are more stringent than the minimum, federal technology-based requirements but are necessary to meet water quality standards. These effluent limitations apply only if the Permittee discharges to Barlow Creek.

Process Wastewater Discharged to Land. Monitoring data collected at Monitoring Locations LND-001 and STG-001 indicated that the process wastewater discharged to land contains pollutant concentrations exceeding the applicable Maximum Contaminant Levels (MCLs) and Basin Plan objectives for aluminum, chloride, total coliform bacteria, manganese, thallium, iron, and MBAS. However, groundwater monitoring data for some constituents/parameters is insufficient to determine if discharges to land are impacting groundwater. Therefore, the Proposed Order establishes monitoring requirements for these parameters at Monitoring Location LND-001 and RGW-001 to RGW-007 to characterize the process wastewater quality and collect sufficient information to determine if the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives in the underlying groundwater.

In addition, land discharge and groundwater monitoring data indicate that discharges of process and domestic wastewater to land are contributing to increased concentrations of total dissolved solids and electrical conductivity in the underlying groundwater. In order to limit further increases in total dissolved solids, the Proposed Order establishes an average monthly effluent limitation at Discharge point 002 of 500 mg/L, based on the secondary MCL established by the State Water Board Division of Drinking Water. The Proposed Order also establishes semiannual monitoring for electrical conductivity.

Domestic Wastewater. Monitoring data collected at Monitoring Location REC-001 indicated that the domestic wastewater discharged to land contains pollutant concentrations exceeding the applicable MCLs and Basin Plan objectives for aluminum, chloride, nitrite, total coliform bacteria, and manganese. However, groundwater monitoring data is not available to determine if discharges to land from monitoring location REC-003 are impacting groundwater. Therefore, the Proposed Order establishes semiannual monitoring requirements for these parameters at monitoring locations REC-001 and RGW-001 to RWG-007 to characterize the process wastewater quality and collect sufficient information to determine if the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives in the underlying groundwater.

Groundwater Monitoring. Groundwater monitoring required by the Proposed Order will provide important and necessary data to properly manage the impacts of salts and nutrients, that may be generated at the Facility, on the underlying groundwater. Regional Water Board staff's evaluation of groundwater data near the disposal sites shows that groundwater is generally shallow (<30 feet deep), high quality, and used for domestic water supply. Areas of high quality groundwater exist within the Wilson Grove Formation

Highlands Groundwater Basin. However, areas throughout the basin are steadily trending towards degradation for salts and nutrients since the 1960s. The Wilson Grove formation, prevalent through much of the area, is considered a Groundwater Ambient Monitoring Assessment (GAMA) priority groundwater basin and is identified as a hydrologically vulnerable basin with areas of highly permeable geology making the underlying groundwater at risk for contamination from human activities. Although discharges from the Facility may be occurring at hydraulic and nitrogen agronomic rates, during the normal irrigation season, there are no recommended agronomic rates for salts and metals. Thus, to ensure adequate protection of the underlying groundwater quality, the Proposed Order requires the Permittee to conduct groundwater monitoring, and to meet a final effluent limitation of 500 mg/L, as an average monthly effluent limit for total dissolved solids (TDS) at the land application monitoring locations.

Public Comment. Upon request from the Permittee, Regional Water Board staff granted a two week extension to the public comment period by extending the initial deadline from December 4, 2017, to December 21, 2017. The Regional Board received comments on the Draft Permit from the Permittee on December 21, 2017, and made some changes to the Proposed Permit in response to the comments received. The most significant changes made to the Proposed Order in response to the Permittee's comments were: (1) changing monitoring requirements at Lake Davis (STG-001) to only require monitoring when process wastewater stored in Lake Davis is applied to land; (2) changing the accelerated monitoring requirements (when a test result exceeds an effluent limitation) to only require accelerated monitoring once normal discharge resumes given that process wastewater discharged to land is intermittent; and (3) a change in effluent limits at EFF-001 (discharges to surface waters) from total cyanide to free cyanide consistent with U.S. EPA water quality objectives. A full explanation of the comments and responses is documented in the attached Response to Comments document. Below are additional requests that the Permittee made within their submitted comments to the Draft Permit.

Request to Remove TDS Effluent Limitations at Land Application Monitoring Locations.

The Permittee requested the removal of TDS limitations for all land application monitoring locations citing the need to first conduct a groundwater salinity assessment and to implement source control measures prior to the establishment of TDS effluent limitations. Total dissolved solids concentrations at Monitoring Locations LND-001 (process wastewater that is applied directly to land following sump treatment) and STG-001 (process wastewater stored in Lake Davis) ranged from 250 mg/L to 1,100 mg/L, and frequently exceeded the State Water Board Division of Drinking Water Secondary MCL, based on samples collected from January 2011, through February 2015. In addition, groundwater monitoring data collected during the period of March 2011 to March 2016 show increasing TDS concentrations in groundwater from up gradient to down gradient wells at the Facility. To limit further groundwater degradation and ensure adequate protection of the underlying groundwater quality, the Proposed Order implements the secondary MCL for TDS of 500 mg/L as an average monthly limitation at the land application monitoring locations. The Regional Water Board staff acknowledges that the Permittee may need time to determine if they can reasonably comply with TDS effluent limitations and therefore provided the Permittee with an opportunity to submit a proposed

compliance schedule for review. The Permittee submitted their proposed compliance schedule to the Regional Board on April 18, 2018. Regional Board staff used the Permittee's proposed compliance schedule to develop a draft Time Schedule Order (TSO) that will be made available for public comment for 30 days prior to being issued by the Regional Water Board Executive Officer.

Request for Removal of Effluent Limits for Process Wastewater Applied to Land at

LND-001. The Permittee requested the removal of effluent limits for process wastewater applied directly to land, following the screening of solids, and flow through a series of sumps where oil and grease are separated. The Permittee has stated that the Facility process wastewater treatment and disposal system is an overland flow treatment system that requires land application of process wastewater for treatment. The Permittee's point of compliance for process wastewater discharged to land is the aeration pond called Lake Davis (STG-001). Effluent limits for BOD, TSS, pH, and settleable solids were exceeded on multiple occasions at this location during the current permit (Order No. R1-2010-0019) term. Furthermore, land discharge and groundwater monitoring data indicate that discharge of process wastewater to land are contributing to increased concentrations of TDS and electrical conductivity in the underlying groundwater. Therefore, in accordance with section 301(b) of the CWA, and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44, technology based effluent limits for BOD, TSS, pH, and settleable solids, as well as water quality based effluent limits for TDS, have been established in the Proposed Order for process wastewater discharged directly to land, and maintained for process wastewater that is applied to land following aeration in Lake Davis.

The Proposed Order is uncontested.

RECOMMENDATION: Adopt Order No. R1-2018-0003, as proposed.

**SUPPORTING
DOCUMENTS:**

1. Proposed Order No. R1-2018-0003
2. Staff Responses to Written Comments
3. Sonoma West Holdings, Inc Comment Letter
4. Public Notice