

Regional Water Quality Control Board
Central Valley Region Board Meeting
22/23 June 2023

Response to Written Comments for the
California Concentrate Company
Tentative Waste Discharge Requirements

At a public hearing scheduled for 22/23 June 2023, the Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) will consider adoption of revised Waste Discharge Requirements (WDRs) for California Concentrate Company in San Joaquin County. This document contains responses to written comments received from interested persons regarding the tentative WDRs circulated on 22 March 2023. Written comments were required by public notice to be received by the Central Valley Water Board by 21 April 2023 to receive full consideration. Comments were received from Ms. Jo Anne Kipps on 21 April 2023.

Written comments are summarized below, followed by responses from Central Valley Water Board staff. In addition, staff have made a few minor changes to the tentative WDRs to improve clarity and fix typographical errors.

MS. JO ANNE KIPPS COMMENTS

COMMENT 1: Please explain why the Tentative Order identifies Thomas Alexander, California Concentrate Company's Agent of Service of Process, as Discharger, and California Concentrate Company as the Facility.

RESPONSE: A revised Form 200 was received after the issuance of the first Tentative Order in April 2021. The revised Form 200 shows "California Concentrate Company" as the facility name and operator, and the facility owner as "Thomas Alexander". The Secretary of State business search lists the company name as "California Concentrate Company" and the agent as Lori Gikas. The owner of the company is correct as presented in the tentative Order. On the title page of the tentative WDRs, the facility name was presented as "Concentrates". It has been revised to show "Concentrate".

COMMENT 2: Please include data characterizing groundwater for total organic carbon (TOC), arsenic, hardness, and total alkalinity in Tables 8, 10, and 11.

RESPONSE: The requested data has been added to the tables.

COMMENT 3: Please include information in Finding 36 regarding the drainage and permeability of Columbia and Tokay series soils and, somewhere in the Tentative Order, provide estimates for the annual hydraulic loadings (feet/year) of wastewater to the unlined treatment and percolation ponds, and for associated annual loadings of BOD, nitrogen, and dissolved solids.

RESPONSE: Information on permeability and runoff has been added to Finding 36.

Constituent and hydraulic loadings are generally used to manage Land Application Areas (LAAs), where the health of crops is dependent on wastewater quality. However, in a pond system, loading rates to ponds are not required. Pond systems are generally regulated through wastewater pond maintenance, effluent limits, and impacts to groundwater quality. If discharges to the ponds cause nuisance conditions or an unreasonable degradation of groundwater, additional actions may be needed at that time.

COMMENT 4: Please consider revising the Tentative Order as described in the comment, and establish a reasonable time schedule for the Discharger to either implement the cited BPTC measures or to cease discharge to land.

RESPONSE: Staff recognize that the Discharger was in violation of the Basin Plan and the Antidegradation Policy, which was the justification for issuing Notice of Violations and the Cleanup and Abatement Order. In response, the Discharger has improved the treatment system which has improved the effluent quality. When changes to a system are made, improvements in effluent quality can be observed relatively quickly. However, changes to groundwater quality take time.

Chapter three of the Basin Plan discusses that “*water quality objectives are to be achieved primarily through the adoption of WDRs and cleanup and abatement orders*”. The Discharger was issued a Cleanup and Abatement Order to address violations of the WDRs. “*The Regional Water Board recognizes that immediate compliance with water quality objectives adopted by the Regional Water Board or the State Water Board, or with water quality criteria adopted by the USEPA, may not be feasible in all circumstances. Where the Regional Water Board determines it is infeasible for a discharger to comply immediately with such objectives or criteria, compliance shall be achieved in the shortest practicable period of time (determined by the Regional Water Board), not to exceed ten years after the adopted of applicable objectives or criteria.*”

Provision I.1.a in the proposed Order include a compliance schedule that requires the Discharger to evaluate groundwater quality after five years of continuous groundwater monitoring and submit a *Groundwater Compliance Assessment Report*. This is necessary to verify the efficacy of the changes and the impact on groundwater. As stated above, the Basin Plan allows time for compliance to be achieved. If the *Groundwater Compliance Assessment Report* shows constituent concentrations in groundwater are increasing, additional changes may be required, or an enforcement order may be issued at that time.

COMMENT 5: Please provide information on the apparent spill evident on Google Earth satellite imagery (either in the Tentative Order or Response to Comments). And, please consider including a Provision requiring the Discharger to submit a flood prevention work plan to identify and implement within two years corrective measures necessary to

ensure compliance with Discharge Specification E.5. Alternatively, explain why the Discharger will not be in immediate violation of Discharge Specification E.5 and explain why the discharge should not be subject to regulation under the NPDES Program like other discharges of waste to percolation ponds within a regulatory floodplain.

RESPONSE: The aerial distribution of water (or dark areas) visible in the image is likely the result of the river overflowing and not a release from the facility. Additionally, the angle of aerial photography can result in misleading visual interpretation without collaborating physical data. There are no spill reports in California's Office of Emergency Services' (OES) Spill Release Reporting database corresponding to the time period of the Google Earth image. In the April 2017 monitoring report, freeboard in the pond ranged between 1.7 feet to 2.25 feet and in the May 2017 report, freeboard measurements ranged from 1.75 feet to 2.5 feet and no spills were noted in either report. In addition, the water balance, signed by a Professional Engineer, shows sufficient pond capacity for a 100-year rain event. Because wastewater is not discharged to any surface water bodies, this facility is not required to be regulated under the NPDES program.

The southern portion of the Facility is within the 100-year flood plain, as described in Finding 34. Surrounding the percolation ponds (the ponds closest to the Mokelumne River) is a 10- to 11-foot high berm to protect the ponds from inundation from the river. Within the percolation ponds are 3-foot-high berms separating each percolation pond. As shown in the referenced Google Earth photo, the outer berms surrounding the percolation ponds are intact, indicating the dark area is likely the result of an overflow of the Mokelumne River, and based on monitoring reports, the overflow did not impact the percolation ponds.

Effective and routine maintenance of the berms around the ponds are critical to providing adequate flood protection. As required by Discharge Specification E.3, the Discharger is required to operate and maintain all conveyance, treatment, storage, and disposal systems for wastewater to prevent inundation or washout due to floods with a 100-year return frequency. Provision I.1.b requires the Discharger to evaluate the existing berms to determine compliance with Discharge Specification E.3 in the proposed Order.

COMMENT 6: Please revise the tentative Monitoring and Reporting Program (MRP) to include monitoring of potassium monthly in the effluent and quarterly in the groundwater.

RESPONSE: Potassium analysis in effluent and groundwater has been added to the MRP.

COMMENT 7: Please revise Findings 18 and 24 to identify the elevations in feet above mean sea level (amsl) of each pond's bottom (invert) and berm, and approximate the minimum vertical separation distance between pond bottoms and highest anticipated groundwater.

RESPONSE: Depths of the percolation ponds have been added to the Order. Including the amsl or additional elevations are not necessary as there are no concerns regarding the vertical separation at this time. The deepest treatment pond (T-2 at 11.4 feet below ground surface [bgs]) is located in an area where depths to groundwater range from 33 to 41 feet bgs. Therefore, the separation between the pond bottom and highest groundwater level is greater than 20 feet.

For the percolation ponds, the deepest pond is 3 feet bgs and the depth to groundwater in this area (closer to the river), ranges between 15 feet to 23 feet bgs. Therefore, the separation is greater than 10 feet.

COMMENT 8: Please revise Finding 22 to include nitrogen and potassium as constituents of concern.

RESPONSE: Based on a comparison of effluent and groundwater monitoring data, potassium is not a constituent that is expected to negatively impact groundwater. However, total nitrogen was added to Finding 22. Total nitrogen, total Kjeldahl nitrogen (TKN), nitrate as nitrogen, and potassium (added as requested in comment 6) are required to be analyzed in effluent and groundwater.

COMMENT 9: What are the sources of compaction cited in Finding 25? What technical literature did staff consult to support its suggestion that calcium carbonate in the effluent precipitates and reduces pond percolation rates? Has staff considered high discharge sodium (at least until 2020) relative to calcium and magnesium (i.e., through calculation of the discharge's Sodium Adsorption Ratio) as contributing to decreased pond percolation rates?

RESPONSE: The source of the information summarized in Finding 25 was included in the RWD, which was signed by a Professional Engineer, and in the *Process Wastewater Facility Operation and Maintenance Plan* submitted by the Discharger. Staff concur with this analysis and the information was included in the tentative Order. The actions necessary to address compaction issues to ensure effective percolation rates are included in Finding 27.

COMMENT 10: Please revise the Tentative Order to provide a technical justification for its annual flow-weighted biochemical oxygen demand (BOD) effluent limitation of 650 milligrams per liter (mg/L).

RESPONSE: The flow weighted average BOD concentrations in the effluent for monitoring years 2019, 2020, and 2021 is 520 mg/L. Because there have been no odor complaints from this facility since January 2020, it appears that the facility modifications, such as adding aerators and discontinuing discharging vinegar waste to the treatment system, have improved wastewater quality. A performance-based effluent limit of 650 mg/L was set to allow the Discharger some flexibility in operations as they continue to make refinements to their discharge operations.

While the discharge was previously in violation of WDRs Order 98-136, the facility changes have resulted in improvements to effluent and groundwater quality. The tentative Order is recommended for adoption to reflect the Discharger's current operations and apply discharge limitations that are more appropriate for the improved discharge. However, if groundwater continues to show increasing concentrations, Provision I.1.a requires the Discharger to evaluate groundwater quality after five years of monitoring and submit a *Groundwater Compliance Assessment Report*. This is necessary to determine if the changes the Discharger has already implemented are sufficient to mitigate unreasonable degradation of groundwater quality. If the *Groundwater Compliance Assessment Report* shows constituent concentrations in groundwater increasing, additional improvements may be required, or an enforcement order may be issued at that time.

COMMENT 11: Please explain why the use of unlined ponds for wastewater treatment does not threaten to violate Discharge Specifications E.1 and E.2.

RESPONSE: The pond system is used for treatment and *disposal* of wastewater, and is appropriately regulated as presented in the proposed Order. Disposal of wastewater through percolation is considered part of the treatment system. The treatment system is regulated by compliance with performance-based effluent limits, among other requirements. If violations of the proposed Order occur, it is the Discharger's responsibility to evaluate the reason for the violations and make the appropriate changes, which may include changes to the processing of grapes or barley, or to the treatment system itself.

COMMENT 12: Please explain why the authorization to store sludge indefinitely in treatment ponds until accumulations reduce design storage capacity does not represent a threatened violation of Discharge Specifications E.1 and E.2.

RESPONSE: Pond sludge accumulation is part of standard pond operations. It is not used to indefinitely store sludge. As the sludge accumulates, the permeability of the pond decreases. Per Provision H.1, "Sludge and solid waste shall be removed from screens, sumps, and ponds, as needed to ensure optimal operation and adequate storage capacity." The Order requires the Discharger to submit a Sludge Cleanout Plan prior to any sludge removal and disposal and should include details regarding compliance with this Order. Compliance with the Order will be evaluated at that time. Additional measures or an enforcement order may be required if violations of this Order occur (i.e., odor issues or unreasonable degradation of groundwater).

COMMENT 13: Please revise the Tentative Order to include Land Application Area Specifications at least as stringent as those in WDR Order R5-2022-0013 for Eriksson, LLC, Ingleby US Pistachio Plant, Land Application Area Specifications F.1 through F.10.

RESPONSE: Site-specific effluent quality, soil, and groundwater conditions are not included in WDRs Order No. R5-2022-0013 and discharge conditions are

thus not directly comparable to this discharge. The percolation ponds are not land application areas and therefore, are not regulated as such. The requirements in the tentative Order are sufficient to regulate discharges to the ponds.

COMMENT 14: Please explain how the Discharger is supposed to comply with this specification (Treatment and Percolation Pond Specification G.3)? Perhaps the term, "Percolation Pond," does not accurately characterize the effluent discharge and that the term, "Land Application Area," is a better fit to how the discharge is actually conducted.

RESPONSE: The above requirement is for Land Application Areas, where the application of wastewater should not be initiated when the area is saturated. This was inadvertently included in the tentative Order and have been removed.

COMMENT 15: If possible, please describe how the Discharger plans to remove sludge without violating the terms and conditions of the Tentative Order regarding groundwater protection and odor nuisance.

RESPONSE: The Order requires the Discharger to submit a Sludge Cleanout Plan prior to any sludge removal and disposal that should include details regarding compliance with the WDRs for the protection of groundwater.

COMMENT 16: Please revise the Tentative MRP to require monthly monitoring of influent for BOD, iron, and manganese. Specify the monitoring location as Manhole #2 and the sample type as composite over a duration of time equivalent to the Facility's wastewater generation hours. Identify, somewhere in the Tentative Order, the usual hours of Facility operation to justify the time duration required for representative composite sampling of treatment pond influent.

RESPONSE: This Tentative Order regulates wastewater effluent and its impact on groundwater. Influent sample collection is not required. Grab samples collected from the treatment ponds will be representative of the quality of effluent and composite sample collection is not necessary.

COMMENT 17: Please revise the Tentative MRP to include potassium, chromium, and nickel in the list of constituents to be monitored monthly in effluent and in the list of constituents to be monitored quarterly in groundwater.

RESPONSE: The above listed constituents have been added to the MRP.

COMMENT 18: Please consider defining standard minerals in the MRP's Glossary and include, besides those already identified, sulfate and potassium. Source water sulfate is necessary to evaluate increases in wastewater sulfate from processing operations. Groundwater sulfate is necessary to monitor for anaerobic conditions in groundwater resulting from organic overloading. [Low sulfate in downgradient groundwater compared to upgradient is evidence of anaerobic conditions brought on by excessive BOD loading.] Grapes are an excellent source of dietary potassium. It is logical to assume

that wastewater generated by the processing of grapes is also high in potassium. Monitoring for potassium is necessary because the Discharger has phased out the use of sodium-based chemicals with potassium-based chemicals. The resulting increase in potassium in the discharge from this change needs to be monitored to assess its contribution to overall wastewater TDS.

RESPONSE: Potassium and sulfate have been added to the list of constituents for analysis in groundwater and effluent.