CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER R5-2021-XXXX

FOR
THOMAS ALEXANDER.
CALIFORNIA CONCENTRATES COMPANY
SAN JOAQUIN COUNTY

FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

Introduction

1. The California Concentrate Company (the Facility) is owned by Thomas Alexander (Discharger) and is located at 18678 North Highway 99, Acampo in San Joaquin County (Section 31, T4N, R7E, MDB&M), as shown on Attachment A (Site Location Map) (included herein). Facility details are shown on Attachment B (Site Features Map) (attached herein).

2. Waste Discharge Requirements (WDRs) Order 98-136, adopted by the Central Valley Water Board on 5 June 1998, prescribes the requirements for the discharge. Order 98-136 allows a maximum daily discharge of 50,000 gallons per day (gpd). The Discharger has made changes and improvements to the wastewater treatment system. A Report of Waste Discharge (RWD), dated 30 April 2020, was submitted by the Discharger that describes the Facility's current operations and wastewater treatment system. Therefore, Order 98-136 will be rescinded and replaced with this Order. The Discharger is responsible for compliance with these WDRs.

3. The following materials are attached and incorporated as part of this Order:

    a. Attachment A – Site Location Map
    b. Attachment B – Site Features Map
    c. Attachment C – Wastewater Flow Diagram
    d. Attachment D – Standard Provisions and Reporting Requirements
    e. Information Sheet

4. Monitoring and Reporting Program (MRP) R5-2021-XXXX is attached, which requires monitoring and reporting for discharges regulated under these WDRs.

Existing Facility and Discharge

5. California Concentrate Company is an existing facility that was established in 1935. The Facility processes grapes and malted barley for juice and malt extract to produce wine concentrates and balsamic vinegars. The Facility may also store wine for other facilities.

6. Wastewater from the Facility consists of a combination of process wastewater and site storm water runoff. Wastes from vinegar production operations, which occurs in a separate building, are segregated from other waste streams, contained in a dedicated tank, and disposed of offsite at a permitted facility. All other wastewater is collected on-site and treated through treatment ponds with effluent disposal in percolation ponds.

7. The majority of the wastewater is produced during the grape crushing season, generally from August to November. Between December and July, smaller wastewater volumes are generated during juice extraction and concentration. Wastewater is generated from Facility cleaning, tank cleaning, and process/product waste streams.

8. Source water for the Facility is from an on-site water well owned by the Discharger and regulated by the San Joaquin County Environmental Health Department. Analytical results from well samples collected between 2016 and 2020 for select constituents are summarized below.

Table 1. Source Water Quality

Parameter	Units	Average Concentration	Max/Min Concentrations
pH	std units	6.96	7.4 / 6.3
Specific Conductance	µmhos/cm	226.6	350 / 72
TDS	mg/L	192	270 / 110
Nitrate + Nitrite as N	mg/L	3.45	4.7 / 0.4
Calcium	mg/L	19.4	33 / 4
Chloride	mg/L	6.2	10 / 2
Iron	µg/L	50	70 / 30
Manganese	µg/L	<10	--
Sodium	mg/L	11.8	17 / 6
Sulfate	mg/L	17.2	25 / 3.1
Total Hardness as CaCO3	mg/L	85.4	144 / 18.2

CaCO3 = calcium carbonate
mg/L = milligrams per liter
N = nitrogen
TDS = total dissolved solids
µmhos/cm = micromhos per centimeter

9. Chemicals used at the Facility that may impact wastewater quality include:

   - Sodium hydroxide (the Discharger is phasing out the use of this chemical).
   - CIP peracetic acid rinse, consisting of 11% acetic acid, 6% peracetic acid, 23% hydrogen peroxide, 0.6% sulfuric acid, and 60% water.
   - Chlorinated Foam Cleaner, consisting of 15% potassium hydroxide, 5% sodium hypochlorite, and <5% surfactant.
   - Potassium hydroxide (50%).

10. The wastewater treatment system consists of a collection system (piping, manholes [MHs], and valves), screens, aerated treatment ponds, and percolation/evaporation ponds. Wastewater is collected in floor drains and storm water drains located throughout the Facility and is gravity fed to collection system piping. Screens on several main floor drains collect solids which are disposed of off-site.

11. Wastewater entering the collected system is monitored for pH levels and an automated system adjusts the pH as needed. Control of low pH conditions is achieved by injection of potassium hydroxide into the wastewater stream, regulated by a metering pump and probe system. Acceptable pH ranges for aerobic digestion are between 6.8 and 7.8; however, maintaining pH at the higher end of the range reduces odors.

12. Influent flow rates to the treatment system are measured prior to discharging to the treatment pond system, as shown on Attachment C (attached herein). Flow rates in million gallons (MG) are summarized below.

Table 2. Influent Flow Rates for 2019

Month	Influent Flow (MG)
January - July	0.28
August	0.12
September	0.41
October	0.44
November	0.06
December	0.07
Total	1.38

13. Influent wastewater quality samples are collected at influent MH #2, as shown on Attachment C. Analytical results in mg/L for monitoring conducted between April 2019 and March 2020 are summarized below. The effluent data below does not include vinegar waste, which is containerized and hauled off-site.

Table 3. Influent Wastewater Quality (mg/L)

Month	BOD	TDS	FDS	VDS	Sulfate	TKN	Nitrate as N
Apr 2019	881	1,110	740	370	125	7.4	10.6
May 2019	1,540	1,340	60	1,280	32.8	20	3.4
Jun 2019	1,750	710	340	370	30.5	5.6	2.6
Jul 2019	54.3	320	170	150	32.8	2.5	5.9
Aug 2019	4,300	2,710	350	2,360	91.6	13.6	4.9
Sep 2019	5,700	13,300	710	12,600	312	23	3.1
Oct 2019	4,500	3,780	<20	3,780	162	19	2.6
Nov 2019	6,520	12,085	380	11,690	121.9	13	4.7
Dec 2019	1,240	1,170	290	880	52.8	20.1	3.9
Jan 2020	5,300	5,530	480	5,050	199	6.5	3.8
Feb 2020	2,779	1,790	320	1,470	69.75	15.05	5.25
Mar 2020	5,000	2,920	270	2,650	103	13.9	3.6

Data Source: 2020 RWD
BOD = biochemical oxygen demand
FDS = fixed dissolved solids
TKN = total Kjeldahl nitrogen
VDS = volatile dissolved solids

14. Prior to wastewater discharging to the treatment ponds, additional pH adjustment occurs as needed at the influent to treatment pond T-1, as shown on Attachment C.

15. Wastewater is then discharged into the pond system, which consists of unlined treatment ponds T-1 through T-3. The ponds are operated in series, as shown on Attachment C. Ponds T-2 and T-3 are aerated as needed and are the main treatment ponds. Historically, Pond T-1 was the main treatment pond; however, in early 2018, the pond configuration was modified and the largest pond, T-3, was changed to be the primary pond in the treatment series. Piping allows the wastewater to flow from Pond T-3 to T-2, and if necessary, to T-1, which is used when additional treatment is needed. Treatment pond details are shown below.

Table 4. Treatment Pond Details

Pond	Volume [1] (MG)	Length x Width (feet)	Depth (feet)
T-3	1.5	156 x 224	10.5
T-2	0.8	142 x 136	11.4

Pond	Volume [1] (MG)	Length x Width (feet)	Depth (feet)
T-1 (overflow pond)	0.7	148 x 129	10.8

Note 1: Volumes do not include 2 feet of freeboard.

16. If an unexpected large influent of wastewater volumes occurs due to accidental spills during grape processing or due to large seasonal site storm water inflow, pond T-1 may be used as an overflow basin. Once wastewater in T-3 and T-2 have stabilized, wastewater from T-1 is pumped back to T-3 for aerated treatment.

17. Organic and inorganic constituents in the wastewater are treated through biological and physical processes. The treatment ponds are operated as stabilization and flocculation ponds with aeration and mixing provided by mechanical aerators. The main chemical and physical processes in the treatment ponds include:
    - Natural coagulation and flocculation.
    - Sedimentation.
    - Dissolution and precipitation reactions.
    - Photoreactions and photo-degradation by sunlight.

18. Effluent wastewater quality samples are collected from the last treatment pond in the series, which is generally T-2. Monthly monitoring results for data collected between 2016 and 2020 for select constituents are summarized below. Units are mg/L, unless noted otherwise.

Table 5. Effluent Wastewater Quality

Constituent/ Parameter		Year				
		2016	2017	2018	2019	2020
pH (std)	min	6.67	4.48 [1]	4.82 [1]	6.5	6.7
	max	7.42	6.68	6.98	7.5	7.2
EC (µmhos/cm)	avg	--	--	--	1,930	1,687
	max	--	--	--	3,030	2,320
DO	avg	--	--	--	2.5	2.9
	min	--	--	--	2.1	2.8
BOD	avg	189	811	516	1,099	439
	max	364	2,900	2,300	3,500	1,510
TDS	avg	377	510	844	690	890
	max	580	1,050	1,660	3,480	2,000
FDS	avg	193	215	495	618	908
	max	300	500	970	1,730	1,160

Constituent/ Parameter		Year				
		2016	2017	2018	2019	2020
Nitrate as N	avg	0.12	1.4	0.08	0.1	0.065
	max	0.6	3.4	0.2	0.2	0.2
TKN	avg	16	22	12	19	24
	max	40	75	20	37	66
Chloride	avg	--	--	--	31.3	43
	max	--	--	--	50	63
Iron	avg	--	--	--	3.9	2.3
	max	--	--	--	4.7	4.49
Manganese	avg	--	--	--	0.1	0.1
	max	--	--	--	0.13	0.19
Sodium	avg	--	--	--	486	203
	max	--	--	--	1,210	386

Note 1: Vandalism and system failures resulted in low pH.
-- = Samples were not analyzed for these constituents until 2019.

19. Based on average concentrations presented above, constituents of concern in effluent that have the potential to degrade groundwater include EC, BOD, FDS, iron, manganese, and sodium.

20. From the treatment ponds, wastewater is discharged to three percolation ponds (P-1 to P-3) for disposal. The use of each percolation pond is rotated on a regular basis. A pond is filled to a depth of between 1 to 2 feet of wastewater before diverting the remaining flow to another percolation pond. Percolation pond cycling is based on maximizing the percolation rate in each pond. Cycling periods may be 1 to 3 days of discharge, with 5 days of drying time during the summer and up to 10 days in the winter. Ponds P-2 and P-3 are the main percolation ponds. P-1 is not normally used unless additional disposal is required. Use of P-1 is avoided in an attempt to minimize nuisance odors from effecting neighboring properties.

21. Percolation pond construction details are summarized below.

Table 6. Percolation Pond Details

Percolation Pond	Surface Area (acres)	Length x Width (feet)
P-1	0.9	350 x 150
P-2	0.8	130 x 350
P-3	2.2	290 x 350

22. Percolation rates in the ponds may diminish over time from:

- Binding of soil surface by organic and inorganic effluent constituents.

- Soil porosity and permeability losses due to compaction.
- Soil cementation from precipitation of effluent constituents, such as calcium carbonate.

23. To ensure the percolation ponds' disposal capacities, pond maintenance procedures were developed and documented in the *California Concentrate Company Process Wastewater Facility Operation and Maintenance Plan*, dated April 2020. Maintenance activities for the percolation ponds include:
    - Shallow disking for weed removal and to incorporate accumulate solids.
    - Removal of accumulated solids for off-site disposal.
    - Deep ripping of the percolation pond base down to 3 feet below ground surface (bgs), and disking and redistribution of ripped earth.

24. The percolation ponds are surrounded by embankments to contain all wastewater. The embankments are inspected regularly to ensure excessive seepage, such as washout of embankment material, is not occurring. If seepage is observed, the embankment is immediately repaired.

25. Percolation pond loading rates were calculated using average monthly monitoring results for data collected between 2015 and 2019. Loading rates were calculated using 3.9 acres of percolation ponds.

Table 7. Percolation Pond Loading Rates

Month	BOD		FDS		Total Nitrogen	
	Conc. (mg/L)	Loading (lb/ac/mo)	Conc. (mg/L)	Loading (lb/ac/mo)	Conc. (mg/L) TKN / NO_3-N	Loading (lb/ac/mo)
Jan	557	48	323	28	9 / <0.1	0.8
Feb	942	81	537	46	15 / 0.33	1.3
Mar	161	14	363	31	16 / 0.2	1.4
Apr	98	8	295	26	13 / <0.1	1.1
May	201	17	215	19	20 / 7.5	2.4
Jun	137	12	153	13	11 / <0.1	1.0
Jul	103	9	305	26	17 / <0.1	1.5
Aug	117	29	300	74	20 / 1.8	5.4
Sep	1,468	1,281	623	544	33 / <0.1	28.8
Oct	1,946	1,831	873	821	18 / 0.1	17.0
Nov	1,014	124	633	77	12 / <0.1	1.5
Dec	724	115	493	78	15 / <0.1	2.4

Month	BOD		FDS		Total Nitrogen	
	Conc. (mg/L)	Loading (lb/ac/mo)	Conc. (mg/L)	Loading (lb/ac/mo)	Conc. (mg/L) TKN / NO_3-N	Loading (lb/ac/mo)
Annual Total	**3,569 lbs**		**1,783 lbs**		**64.4 lbs**	

Conc. = Concentration
lb/ac/mo = pounds per acre per month
NO_3 – N = nitrate as nitrogen
Table Source: 2020 RWD.

26. BOD loading rate per discharge cycle for processing months are summarized below.

Table 8. BOD Cycle Loading Rates

Parameter	Units	Average Crush Season Period (2015-2019)				
		Aug	Sep	Oct	Nov	Dec
BOD Concentration	mg/L	117	1,468	1,946	1,014	724
Volume per Cycle	MG/cycle	0.027	0.093	0.099	0.014	0.016
Cycle Time	days	7	7	7	7	7
BOD Loading	lb/ac/day/cycle	1	42	59	4	3

Table Source: 2021 RWD Addendum

27. Water balances included in the 2020 RWD show sufficient capacity for a 100-year rain event, using the previously permitted maximum flow rate of 0.05 mgd. Recent flow rates have been lower than the permitted flow rate.

28. Domestic wastewater is treated by an onsite wastewater treatment and disposal system permitted through San Joaquin County Environmental Health Department. Domestic wastewater is not discharged to the treatment or percolation ponds.

Site-Specific Conditions

29. Local land use in the vicinity of the Facility consists primarily of vineyards, rural residential areas, and mobile home parks. The Mokelumne Beach RV Park is located along the western boundary of the Facility, adjacent to treatment pond T-1 and percolation pond P-1. North of the Facility was the Victor Fine Foods Facility which was a meat packaging and processing facility used between 1961 and 1991. Victor Fine Foods used Class II Surface Impoundments and had a pretreatment plant used to remediate groundwater.

30. The Facility is located on relatively flat terrain, sloping towards the south to the Mokelumne River. The closest site features to the river are the southwest corner of percolation pond P-1 (approximately 130 feet from the river), and the southeastern corner of P-1 (approximately 200 feet southeast of the river).

31. Beneficial uses of the Mokelumne River are agricultural supply; water contact recreation; noncontact water recreation; warm freshwater habitat, cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

32. Storm water at the Facility is collected in drains, comingled with process wastewater, and treated in the treatment ponds.

33. According to the 16 October 2009 Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, the offices and main facilities are located outside of the 500-year floodplain within Zone X, the area of minimal flood hazard. The wastewater treatment and disposal systems are located within the regulatory floodway Zone AE, which has a base flood elevation of approximately 53 feet, approximately 2 feet above the top of berm elevation for the wastewater treatment facilities. The Zone AE floodway is within the 100-year floodplain. The Discharger regularly inspects and maintains the berms surrounding the wastewater treatment facilities as preventative flood protection for the treatment and disposal facilities. This Order requires continued routine maintenance and inspections of the berms surrounding the ponds to ensure adequate flood protection.

34. Annual precipitation for an average rainfall year is 17.35 inches and 32.8 inches for a 100-year rainfall event based on Department of Water Resources (DWR) rainfall data for rainfall station Number B00503200, in Lodi, California. The average evapotranspiration annual rate using data collected between 1984 through 2014 is approximately 50.84 inches.

35. The soil in the vicinity of the wastewater treatment facilities used for treatment and disposal is a mixture of Columbia and Tokay fine sandy loams (soil map units 130 and 256, respectively).

36. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

Groundwater Conditions

37. The groundwater monitoring network at the Facility consists of three groundwater monitoring wells installed in 2001: MW-3, MW-4, and MW-5. Monitoring well details and depths to groundwater are shown below.

Table 9. Monitoring Well Details

Monitoring Well ID	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs) [1]	Location
MW-3	15 – 35	14 – 18	Upgradient of ponds
MW-4	30 – 50	33 – 35	Downgradient from ponds
MW-5	28 – 50	33 - 36	Downgradient from ponds

Note 1: Depths to groundwater are shown as the minimum and maximum depths below groundwater surface for data collected between second quarter 2019 and first quarter 2020 monitoring events.

38. Groundwater generally flows to the north, away from the Mokelumne River, but varies from northwest to northeast.

39. Groundwater data from first quarter 2016 to first quarter 2020 for select constituents are summarized below. For non-detect values, half the reporting limit was used for averaging purposes.

Table 10. Groundwater Quality

Constituent/ Parameter		MW-3 (upgradient)	MW-4 (downgradient)	MW-5 (downgradient)
EC (µmhos/cm)	avg	139	979	854
	min - max	109 - 277	768 – 1,077	605 – 1,121
pH (std)	avg	6.7	6.4	6.3
	min - max	5.6 – 7.6	6.0 – 7.1	5.6 – 7.4
NO_3/NO_2 as N	avg	0.17	0.67	1.3
	min - max	<0.1 – 0.4	<0.1 – 2.5	<0.1 – 9.5
TKN	avg	1.65	0.49	0.48
	min - max	<0.25 – 22	<0.5 – 1.5	<0.5 – 2
TDS	avg	118	614	540
	min - max	70 – 260	510 – 720	360 – 800
VDS	avg	53.5	126	176
	min - max	20 – 210	40 – 190	60 – 650
Iron	avg	2.8	1.52	2.58
	min - max	1.86 – 3.96	1.19 – 1.95	2.11 – 3.57
Manganese	avg	0.78	0.86	8.05
	min - max	0.135 – 3.96	0.21 – 1.4	7.18 – 8.76
Sodium	avg	3.6	56.5	93
	min - max	3 – 6	48 – 66	81 – 109
Chloride	avg	2.14	23.8	31.6
	min - max	1 - 6	21 - 28	22 - 48

40. MW-3 is located near the Mokelumne River, which is known to be a source of groundwater recharge and is expected to be influencing water quality in MW-3. Mokelumne River water is of better-quality water than groundwater in the area and is low in salinity concentrations, with a near neutral pH, as reported in the 2020 RWD. Regionally, shallow groundwater in the area is known to have higher salinity levels at a distance from the Mokelumne River. Results for water samples collected from the Mokelumne River for select constituents are summarized below and are in mg/L unless noted otherwise.

Table 11. Mokelumne River Water Quality

Parameter	3Q2019	4Q2019	1Q2020
TDS	30	40	<20
EC (µmhos/cm)	37	38	38
Chloride	<1	<1	1
Sodium	2	5	2
Iron	0.22	0.18	0.20
Manganese	0.01	0.01	0.01

41. In MW-3 (upgradient well), groundwater concentration trends using data collected between July 2013 and January 2020 show stable trends over time for nitrate, pH, sodium, and TDS. EC concentrations show an increasing trend; however, the maximum concentration is 277 µmhos/cm, which is less than the Secondary Maximum Contaminant Level (MCL) of 700 µmhos/cm.

42. In downgradient monitoring wells MW-4 and MW-5, concentrations of constituents, which the exception of pH and iron, are generally higher in the downgradient wells when compared to upgradient concentrations in MW-3. As noted above, MW-3 is influenced by the better-quality water from the Mokelumne River and may not represent changes in groundwater quality with respect to wastewater discharged to land. Iron concentrations and pH levels are relatively equivalent in up- and downgradient wells.

43. Groundwater concentration trends (intrawell evaluations) for MW-4 and MW-5 show stable concentrations over time using data collected between July 2013 to January 2020 for nitrate, EC, pH, and sodium, with the exception of TDS in MW-4. However, the maximum TDS concentration in MW-4 was reported in January 2018, and concentrations of TDS have since decreased. Using data collected between January 2018 to January 2020, TDS data show a stable concentration trend and all concentrations are less than the Secondary Maximum Contaminant Upper Level of 1,000 mg/L.

44. Manganese and iron concentrations in upgradient and downgradient groundwater wells and in effluent exceed Secondary MCLs. Sampling for manganese and iron in

groundwater began in September 2019. Insufficient data are available to estimate groundwater concentrations trends. Iron and manganese in effluent have the potential to degrade groundwater. However, there are no historical groundwater data available to determine if iron and manganese were present in groundwater at concentrations of concern prior to discharges of wastewater to land. Additional data are needed to further evaluate potential groundwater impacts from the iron and manganese in the effluent.

Compliance History

45. Since 2017, three Notice of Violations (NOVs), dated 26 October 2017, 24 January 2018, and 2 October 2018, were issued to the Discharger due to failure to comply with requirements in WDRs Order No. 98-136. These violations included discharges of vinegar process wastewater to the treatment system, on-going odor issues, and low pH levels and low DO concentrations in the treatment pond.

46. As a result of the on-going violations, Cleanup and Abatement Order (CAO) R5-2019-0700, adopted on 20 February 2019, was issued to the Discharger. The Order allows the Discharger to continue discharging while also allowing the Discharger time to study and characterize all waste generated at the facility and implement additional facility processing and operational changes to bring the discharge into compliance with the WDRs. Additionally, because of the seasonality of the processing operations and variation in wastewater flow volume and strength, the Order was necessary to ensure that the Discharger monitors and studies the effectiveness of the facility changes throughout the 2019 processing season and submit monitoring and technical reports documenting their results to the Central Valley Water Board.

47. CAO Order R5-2019-0700 required the Discharger to cease discharging vinegar production wastewater to the treatment system, bring the discharge into compliance with Discharge Specifications in Order 98-136, implement additional monitoring, and submit the several technical reports. The Discharger has met the requirements of the CAO, as changes to the system were made in 2019 and continue to be modified and adjusted as necessary, vinegar waste is no longer discharged to the treatment ponds, and the following documents have been submitted.

    - *Compliance Plan*, dated 25 October 2019
    - *Groundwater Evaluation Workplan*, dated 1 August 2019
    - *Pond Modification and Aeration System Improvement Report*, dated 28 February 2020
    - *Revised Operation and Maintenance Plan*, dated 1 April 2020
    - *Report of Waste Discharge*, dated 30 April 2020

48. After the issuance of the CAO, the Discharger has received three additional NOVs as listed below.
    - NOV dated 4 November 2019 for additional odor complaints and failure to submit monthly monitoring reports.
    - NOV dated 13 January 2020 for additional odor complaints.
    - NOV dated 16 January 2020 for non-submittal of monitoring reports.

49. In response the NOVs and CAO, the Discharger has implemented several changes and improvements to the wastewater treatment system. When changes are made to treatment systems, additional time is needed to evaluate the effectiveness of the changes and to make modifications as necessary. Due to the Discharger's willingness to cooperate and communicate with the Central Valley Water Board and continue to make improvements to the system to mitigate odor issues, the CAO will be rescinded with the adoption of this Order. However, this Order requires objectionable odors not to be perceivable beyond the property boundary.

Basin Plan, Beneficial Uses, and Regulatory Considerations

46. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fifth Edition, rev. May 2018 (Basin Plan) designates beneficial uses, established WQOs, contains implementation plans and policies for protection waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263, subdivision (a), WDRs are required to implement the Basin Plan.

49. The Basin Plan establishes narrative WQOs for chemical constituents, tastes, and odors, and toxicity in groundwater. It also sets forth a numeric WQO for total coliform organisms.

50. The Basin Plan's numeric WQO for bacteria requires that the most probably number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.

51. The Basin Plan's narrative WQOs for chemical constituents, at a minimum, require MUN-designated water to meet the MCLs in the California Code of Regulations, title 22 (Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent that MCLs to ensure that water do not contain chemical constituents in concentrations that adversely affect beneficial uses.

52. The narrative toxicity WQO requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.

53. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative WQO is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative WQO.

Salt and Nitrate Control Programs Reopener

54. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. The Basin Plan amendments were conditionally approved by the State Water Board on 16 October 2019 (Resolution 2019-0057) and the Office of Administrative Law on 15 January 2020 (OAL Matter No. 2019-1203-03).

    a. For nitrate, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers could comply with the new nitrate program either individually or collectively with other dischargers. For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-022.01 (San Joaquin Valley – Eastern San Joaquin), a Priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued within two to four years after the effective date of the Nitrate Control Program (17 January 2020).

    b. For the Salt Control Program, the Discharger was issued a Notice to Comply (CV-SALTS ID 2086) with instructions and obligations for Salt Control Program on 5 January 2021. Upon receipt of the Notice to Comply, the Discharger must submit a Notice of Intent by 15 July 2021 informing the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). Dischargers that are unable to comply with stringent salinity requirements for EC of 700 µmhos/cm to protect AGR beneficial uses or 900 µmhos/cm to protect MUN beneficial uses will need to meet performance-based requirements and participate in a basin-wide planning effort to develop a long-term salinity strategy for the Central Valley (i.e., participate in the Priority and Optimization Study per Option 2).

        As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met.

55. This Order may be amended or modified to incorporate any newly applicable requirements

ANTIDEGRADATION POLICY AND ANALYSIS

56. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
    a. The degradation is consistent with the maximum benefit to the people of the state.
    b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
    c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and
    d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.

57. Groundwater data has been collected from the monitoring wells since 2001. Therefore, it is not possible to determine pre-1968 groundwater quality or pre-discharge quality. Determination of compliance with Resolution 68-16 for this facility shall be based on existing groundwater quality.

58. Constituents of concern in wastewater that have the potential to degrade groundwater include salts (primarily EC, TDS, nitrogen, and sodium), iron, and manganese based on the quality of wastewater generated at the Facility. Flow weighted averages from 2016-2020 for the discharge are shown below. For non-detect values, half the reporting limit was used for averaging purposes.

    Water Quality Objectives (WQOs) or other numerical limits are based on the following: Secondary MCL for EC; Secondary Maximum Contaminant Upper Level for TDS; Primary Maximum Contaminant Level for nitrate as nitrogen; Lowest agricultural water quality goal for sodium; and Secondary MCLs for iron and manganese.

Table 12. Antidegradation Summary

Constituent	Flow Weighted Average Effluent Concentrations (mg/L)	Upgradient GW Quality (MW-3) (mg/L)	Downgradient GW Quality (MW-4 and MW-5) (mg/L)	WQO (or other numerical limit) (mg/L)
EC [1] (µhmos/cm)	1,786	139	907	700
TDS	747	119	569	1,000
FDS	410	68	433	NE

Constituent	Flow Weighted Average Effluent Concentrations (mg/L)	Upgradient GW Quality (MW-3) (mg/L)	Downgradient GW Quality (MW-4 and MW-5) (mg/L)	WQO (or other numerical limit) (mg/L)
TKN	18	1.7	0.44	NE
Nitrate as Nitrogen	0.3	0.12	0.67	10
Sodium	318	3.6	75	69
Iron [1]	2.95	2.8	2.1	0.3
Manganese [1]	0.11	0.78	4.5	0.05

Table Notes:
GW = groundwater
NE = not established
Note 1 = EC, iron, and manganese were only analyzed in samples collected in 2019 and 2020.

a. **Electrical Conductivity**. Electrical conductivity is a measure of the capacity of water to conduct electrical current and is an indicator of salinity. EC concentrations in effluent are higher than the WQO of 700 µmhos/cm. However, evaluating concentration trends in wastewater for EC using data collected during the 2019 and 2020 processing seasons, after issuance of the CAO and during the time-period the Discharger began making changes, concentrations of EC are decreasing in effluent.

   Upgradient EC groundwater concentrations are less than downgradient concentrations. However, upgradient well MW-3 is highly influenced by the better-quality water from the Mokelumne River and is likely not representative of upgradient groundwater conditions.

   Concentrations of EC in downgradient wells MW-4 and MW-5 exceed the WQO. Concentration trends for EC in downgradient wells have been stable over time since 2013, indicating the discharge may not be impacting groundwater beyond existing conditions. However, due to the high concentrations in effluent and the shallow depths to groundwater, EC in wastewater has the potential to further degrade groundwater. The Discharger has made several changes and upgrades to the treatment system and additional time is necessary to monitor the effectiveness of the changes and to determine if potential impacts to groundwater have been reduced. For the protection of groundwater, this Order requires the effluent to be monitored for EC and sets a groundwater limit for EC.

b. **Total Dissolved Solids.** For the purposes of evaluation, TDS is representative of overall salinity in groundwater and FDS, the inorganic fraction of TDS, is the

best measure for salinity of process wastewater. Wastewater effluent has been analyzed for FDS and TDS. The flow-weighted average concentrations of both constituents are relatively low (less than the Secondary Maximum Contaminant Upper Level of 1,000 mg/L for TDS) and equivalent to wastewater quality for other wineries in the area. As discussed previously, groundwater quality at MW-3 is highly influenced by the Mokelumne River and is not likely representative of upgradient groundwater quality. In downgradient wells, all TDS concentrations are less than 1,000 mg/L, with the maximum TDS concentration of 800 mg/L detected in MW-5 in January 2020. Concentration trends for TDS have been stable over time using data collected between 2013 and 2020 in MW-3 and MW-5. In MW-4, concentration trends are stable using data from 2018 to 2020, as discussed in Finding 43. Discharges of wastewater to land with regards to FDS and TDS do not appear to be impacting groundwater beyond existing conditions. Because FDS in effluent has the potential to impact groundwater, this Order sets an effluent limit for FDS and a groundwater limit for TDS.

c. **Nitrate as Nitrogen.** For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality and the ability of the vadose zone below the percolation ponds to support nitrification and denitrification to convert nitrogen to nitrogen gas before it reaches the water table. Most of the nitrogen in the process wastewater is present as TKN, which can readily mineralize and convert to nitrate (with some loss via ammonia volatilization) in land application areas when under anaerobic soil conditions. The flow-weighted average TKN concentration is 18 mg/L with nitrate as nitrogen concentrations less than 1 mg/L. In both the upgradient and downgradient wells, nitrate concentrations are less than 0.5 mg/L and TKN is less than 2 mg/L. Concentration trends for nitrate as nitrogen have been stable over time using data collected between 2013 and 2020 and all concentrations have been less than 10 mg/L (Primary MCL). It does not appear that the TKN in effluent is a concern with respect to nitrate in groundwater. For the continued protection of groundwater, this Order sets a nitrate as nitrogen effluent limit for the ponds and a groundwater limit for nitrate as nitrogen and total nitrogen.

d. **Sodium.** Sodium is known to be key salinity constituent in food processor wastewater. Average concentrations of sodium in effluent are considered high (a flow-weighted average of 318 mg/L) when compared to the WQO of 69 mg/L. However, evaluating concentration trends in wastewater for sodium using data collected during the 2019 and 2020 processing seasons, after issuance of the CAO and during the time-period the Discharger began making changes, concentrations of sodium show decreasing trends in effluent.

   Average concentrations of sodium in downgradient wells exceed 69 mg/L. Although concentration trends for sodium in groundwater show stable

concentrations over time, it appears that the high effluent concentrations have the potential to degrade groundwater. For the protection of groundwater, this Order sets a groundwater limit for sodium and requires continued monitoring of sodium in the effluent.

e. **Iron and Manganese.** Typical winery wastewater is not expected to contain significant iron or manganese concentrations. However, iron and manganese concentrations in effluent exceed Secondary MCLs. In past operations at the Facility, vinegar wastewater was discharged to the treatment system in violation of the existing WDRs. This waste stream was highly acidic, which may have resulted in the dissolution of metals from metallic sources, such as floor drains and cast-iron piping. As part of the CAO R5-2019-0700, discussed in Finding 45, the Discharger was required to cease all vinegar wastes discharging to the treatment system. In addition, the Discharger has implemented additional monitoring and controls to better manage the pH levels of the wastewater.

   Using data collected during the 2019 and 2020 processing seasons, after issuance of the CAO and during the time-period the Discharger began making changes, concentrations of iron and manganese show decreasing trends in effluent. Additional time is needed to determine if these changes will result in lower or stabilized iron and manganese concentrations in the wastewater.

   Based on the limited groundwater data available for iron and manganese (only three samples per well have iron and manganese analytical data), groundwater trends could not be estimated. Manganese concentrations are greater in the downgradient wells when compared to the upgradient wells and iron concentrations between upgradient and downgradient wells are relatively equivalent. However, analyzing groundwater for manganese and iron was only recently required as part of the CAO in 2019. Insufficient groundwater data are available to determine if the presence of elevated manganese is the result of naturally occurring variations in groundwater or the result of wastewater discharges. Additional data are needed to estimate groundwater concentration trends over time to determine if discharges are degrading groundwater and to determine if facility changes will result in lower manganese and iron concentrations in the effluent and groundwater. For protection of groundwater, this Order requires effluent to be monitored for iron and manganese and sets a groundwater limit for both constituents.

59. Due to the influence of the Mokelumne River on groundwater near MW-3, analytical data from MW-3 may not be representative of potential changes in groundwater quality as a result of discharges of wastewater to land from this Facility. Therefore, groundwater quality will continue to be monitored at MW-3 but will not be identified as a compliance well at this time.

60. The Discharger has made changes to the wastewater treatment system and facility operations in order to mitigate odor issues and potential impacts to groundwater. These changes were made in 2019 and continue to be modified as needed to ensure compliance with WDRs. The nuisance odors that were reported after the issuance of the CAO (as discussed in Finding 48) are expected to be reduced as modifications to the treatment system and operations are implemented, and BPTC practices are continued.

61. Degradation of groundwater by some of the typical waste constituents associated with discharges from food processors, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The Discharger's operation will provide approximately 209 jobs. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

62. This Order establishes effluent and groundwater limitations for the facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

63. The Discharger provides treatment and control of the discharge that incorporates:

    a. The capture, segregation, and off-site disposal of solids from the wine and barley processing.
    b. the capture, segregation, and off-site disposal of all wastes associated with vinegar production.
    c. Sodium-based cleaners and caustic agents have been replaced with potassium-based cleaners (which the exception of a specific sanitizing solution for special equipment).
    d. Hot water has replaced the use of cleaning chemicals in most facility cleaning and sanitation processes.
    e. The preferential use of peracetic acid because it can be naturally degraded in biological processes.
    f. Reduction in the amount of chemicals used for sanitation and cleaning.
    g. Aeration of the treatment ponds.
    h. An air diffusion system is planned to be installed in treatment pond T-3.
    i. Managing the percolation ponds to ensure sufficient percolation and drying times.
    j. pH levels in wastewater are managed with two automatic systems; one located after wastewater enters the floor drains and one located just before wastewater discharges to T-3.

64. The Discharger's implementation of these practices is considered BPTCs for the wastes in the discharge. This Order requires the Discharger to maintain these practices consistent with the State Antidegradation Policy.

California Environmental Quality Act

65. The issuance of this Order, which prescribes requirements and monitoring of waste discharges at an existing facility, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301 (CEQA Guidelines). The discharges authorized under this Order are substantially within parameters established under prior WDRs, particularly with respect to character and volume of discharges.

Other Regulatory Matters

66. This Order is issued in part pursuant to Water Code section 13263, subdivision (a), which provides as follows:

> The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area … into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Water Code] Section 13241.

67. This Order implements the Central Valley Water Board's Basin Plan, which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (Wat. Code, § 13241 et seq.)

68. Based on the threat and complexity of the discharge, the Facility is determined to be classified as 2B as defined below:

    a. Category "2" – Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.

    b. Category "B" – Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

69. As authorized under this Order, discharges of wastewater and decomposable food processing residual solids to land are exempt from the prescriptive requirements of California Code of Regulation, title 27 (Title 27). See Title 27, §20090, subds. (b)-(d).

70. Statistical data analyzes methods set forth in the USEPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) are appropriate for determining whether the discharge complies with Groundwater Limitation of this Order.

71. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities and requiring submittal of a Notice of Intent by all affected industrial dischargers. Storm water at the Facility is collected, commingled with process wastewater, and discharged to the percolation ponds. Storm water is not discharged offsite or discharged to waters of the U.S. Coverage under the NPDES General Permit CAS000001 is not required at this time.

72. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

73. The action to adopt waste discharge requirements for this existing Facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301.

74. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Reporting Requirements

75. This Order is also issued in part pursuant to Water Code section 13267, subdivision (b)(1), which provides that:

> [T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall

provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

76. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.

77. Failure to comply with the reporting requirements under this Order and the MRP may result in enforcement action pursuant to Water Code section 13268.

Procedural Matters

78. All local agencies with regulatory jurisdiction over land-use, solid waste disposal, air pollution and public health protection have approved the use of the Facility's site for the discharge of waste to land as provided for herein.

79. California Concentrate Company, interested agencies, and interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, § 13167.5; Title 27, § 21730.)

80. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

81. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED that Order 98-136 and CAO R5-2019-0700 are rescinded and pursuant to Water Code sections 13263 and 13267, that Thomas Alexander for California Concentrates Company, and their agents, employees, and successors shall comply with the following.

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.

3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements.

5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.

6. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.

7. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.

8. Discharge of process wastewater to the domestic wastewater treatment system is prohibited.

9. Discharge of domestic wastewater to the process wastewater ponds, percolation ponds, or any surface waters is prohibited.

B. Flow Limitations

1. Flows to the wastewater treatment pond, measured at the location shown on Attachment C, shall not exceed the following limits:

Table 13. Flow Limits

Flow Measurement	Flow Limits
Monthly Average Daily Flow	50,000 gpd As determined by the total flow during the calendar month divided by the number of days in that month
Total Annual Flow	7.5 MG As determined by the total flow for the calendar year

C. Effluent Limitations

1. The wastewater applied to the percolation ponds shall not exceed the following effluent limit:

Table 14. Effluent Limits

Constituent	Annual Average Concentration (mg/L)
FDS	1,000 mg/L Flow-weighted average based on the total flow.
Nitrate as N	10 mg/L Flow-weighted average based on the total flow.

D. Mass Loading Limitations

1. The wastewater applied to the percolation ponds shall not exceed the following mass loading limits:

Table 15. BOD Loading Limits

Constituent	Discharge Cycle Average
BOD Mass Loading	100 lb/ac/day

Compliance with the above requirements shall be determined as specified in the Monitoring and Reporting Program.

E. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitation of this Order.

2. Wastewater treatment, storage, and disposal shall not cause pollution, or a nuisance as defined by Water Code section 13050.

3. The discharge shall remain within the permitted waste treatment/containment structures at all times.

4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

5. All conveyance, treatment, storage, and disposal systems for wastewater shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.

7. As a means of discerning compliance with Discharge Specification 6, the dissolved oxygen (DO) content in the upper one foot of the wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If DO concentrations are less than 1.0 mg/L for three consecutive sampling events and objectionable odors are perceivable beyond the property limits, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results and odors within 30 days.

8. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at a design capacity and enable determination of available operational freeboard.

9. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

10. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharger Specifications E.8 and E.9.

11. All ponds and open containment structures shall be managed to prevent breeding of mosquitos. Specifically:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface.

    d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

12. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

13. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every **five years** beginning in **2022**, and shall periodically remove sludge as necessary to maintain adequate storage capacity. Sludge removed from ponds will be hauled off-site for disposal.

14. Solids shall be stored and managed such that free draining liquid is contained (e.g., placed on a compacted, bermed outdoor pad, controlled with a leachate collection and return system), directed to a containment structure (e.g., process water pond), or otherwise similarly controlled and contained to prevent leachate runoff and minimize infiltration.

F. Groundwater Limitations

Release of waste constituents from any portion of the Facility shall not cause groundwater to:

1. Contain any of the specified constituents in a concentration statistically greater than the maximum allowable concentration tabulated below. The wells to which these requirements apply are specified in the Monitoring and Reporting Program.

Table 16. Groundwater Limits

Constituent	Maximum Allowable Concentration
EC	Current Groundwater Quality or Secondary MCL, whichever is greater
TDS	Current Groundwater Quality or Secondary Maximum Contaminant Upper Level, whichever is greater
Total Nitrogen	Current Groundwater Quality
Nitrate as N	Current Groundwater Quality or Primary MCL, whichever is greater
Sodium	Current Groundwater Quality or Lowest agricultural water quality goal, whichever is greater
Manganese	Current Groundwater Quality or Secondary MCL, whichever is greater
Iron	Current Groundwater Quality or Secondary MCL, whichever is greater

Note: Current groundwater quality will be defined using appropriate statistical methods described in an approved Groundwater Limitation Compliance Assessment Plan (Provision I.1.a).

2. For all compliance monitoring wells, except as specified in F.1 above, contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22.

3. For all compliance monitoring wells, except as specified in F.1 above, contain taste and odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

4. Compliance with these limitations shall be determined annually as specified in the Monitoring and Reporting Program using approved statistical methods.

G. Percolation Pond Specifications

1. Wastewater shall be distributed uniformly within the percolation ponds to preclude the creation of nuisance conditions or unreasonable degradation of groundwater.

2. Discharge to the percolation ponds shall not be initiated when the ground is saturated.

3. Discharge of wastewater to the percolation ponds shall be managed to minimize erosion.

4. The percolation ponds shall be managed to prevent breeding of mosquitos or other vectors.

H. Solids Disposal Specifications

For the purposes of this Order, sludge means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds; “solid waste” refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables; and “residual solids” mean organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application.

1. Sludge and solid waste shall be removed from screens, sumps, and ponds, as needed to ensure optimal operation and adequate storage capacity.

2. Any handling and storage of sludge, solid waste, and residual solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into solids in a mass or concentration that will violate the groundwater limitations of this Order.

3. When removed from the site, sludge, solid waste, and residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, or land disposal at facilities (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by the Regional Water Board) will satisfy this specification.

4. Any proposed change in solids or disposal practices shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

I. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267, and shall be prepared as described in Provision I.5:

    a. **By 1 April 2022**, the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The Plan, at a minimum, shall propose and justify the values and statistical methods to be used to determine "current groundwater quality" (as defined in Groundwater Limitations F.1) for each of the compliance wells listed in the Monitoring and Reporting Program (MRP) using intrawell evaluations. Compliance shall be determined using appropriate statistical methods that have been selected based on site-specific information and the U.S. EPA Unified Guidance document cited in Finding 70 of this Order. The report shall also contain a Sample and Analysis Plan that describes sampling procedures and sample analyses methods to be used that will meet EPA standards.

2. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order based on intrawell evaluations, within 120 days of the request of the Executive Officer, the Discharger shall submit a BPTC Evaluation Workplan that sets forth the scope and time schedule for a systematic and comprehensive technical evaluation of each component of the Facility's waste treatment and disposal system to determine best practicable treatment and control for each waste constituent that exceeds a Groundwater Limitation. The schedule to complete the evaluation shall be as short as practicable and shall not exceed one year. Alternatively, if it can be shown that the increase is the result of activities outside the Discharger's control, a technical report shall be submitted that justifies and supports that determination.

3. In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgements shall be performed by or under the direction of a registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional (s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

4. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.

5. The Discharger shall comply with Monitoring and Reporting Program **R5-2021-XXXX**, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

6. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements dated 1 March 1991 (Standard Provisions), which are attached hereto and made part of this Order by reference.

7. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

8. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

9. The Discharger shall use the best practicable control technique(s) including proper operation and maintenance, to comply with this Order.

10. Per the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

11. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Action (42 U.S.C. § 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.

12. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

13. In the event of any change in control or ownership of the Facility, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

14. To assume operation as Discharger under this Order, the succeeding owner or operation must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of the corporation if a corporation, the name and address and telephone phone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

15. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

16. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day,

depending on the violation, pursuant to the Water Code, including sections 13268, 13350, and 13385. The Central Valley Water Board reserves the right to take any enforcement actions authorized by law.

ADIMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available via the Water Board's Webpage for Public Notices (http://www.waterboards.ca.gov/public_notices/petitions/water_quality).

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX Month 2021.

_____
PATRICK PULUPA, Executive Officer