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WASTE DISCHARGE REQUIREMENTS ORDER R5-2020-0023 and Monitoring and Reporting Program

ORDER INFORMATION

Program:	Non-15
Order Types:	Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP)
Status:	Draft
Discharger:	North State Rendering Company, Inc.
Facility:	North State Rendering Company, Inc.
Address:	15 Shippee Road
County:	Butte County
Prior Orders:	Order No. 93-083, 85-055, 75-47

I, Patrick Pulupa, Executive Officer, hereby certify that the following is a full, true, and correct copy of the Waste Discharge Requirements Order and Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, Central Valley Region, on 16 April 2020.

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Water Boards

Patrick Pulupa,
Executive Officer

TABLE OF CONTENTS

CONTENTS

TABLE OF CONTENTS

TABLE INDEX

GLOSSARY

ADF ..... Anaerobic digester facility

Antidegradation Policy ... *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16

Basin Plan ..... Water Quality Control Plan for the Sacramento and San Joaquin River Basins

bgs ..... Below Ground Surface

BOD ..... Biological Oxygen Demand

BPTC ..... Best Practicable Treatment and Control

CEQA ..... California Environmental Quality Act, Public Resources Code section 21000 et seq.

CEQA Guidelines ..... California Code of Regulations, Title 14, section 15000 et seq.

C.F.R. ..... Code of Federal Regulations

CNG ..... Compressed natural gas

COC[s] ..... Constituent[s] of Concern

COD ..... Chemical Oxygen Demand

CV-SALTS ..... Central Valley Salinity Alternatives for long-Term Sustainability

DO ..... Dissolved Oxygen

DTSC ..... California Department of Toxic Substances Control

DWR ..... California Department of Water Resources

EC ..... Electrical Conductivity

EIR ..... Environmental Impact Report

F ..... Fahrenheit

FDS ..... Fixed Dissolved Solids

FEMA ..... Federal Emergency Management Agency

GLOSSARY

gpd..... Gallons per day

LAA..... Land Application Area

lbs/ac/yr..... Pounds per Acre per Year

µg/L..... Micrograms per Liter

µmhos/cm..... Micromhos per Centimeter

MCL..... Maximum Contaminant Level per Title 22

MG[D]..... Million Gallons [per Day]

mg/L..... Milligrams per Liter

MPN/100 mL..... Most probable number of colonies per 100 milliliters

msl..... Mean Sea Level

MRP..... Monitoring and Reporting Program

MW..... Monitoring Well

NPDES..... National Pollutant Discharge Elimination System

ORP..... Oxygen Reduction Potential

N..... Nitrogen

ND..... Non-Detect

NE..... Not Established

NM..... Not Monitored

R[O]WD..... Report of Waste Discharge

RCRA..... Resource Conservation and Recovery Act

SPRRs..... Standard Provisions and Reporting Requirements

SERC..... State Emergency Response Commission

TDS..... Total Dissolved Solids

GLOSSARY

Title 22 ..... California Code of Regulations, Title 22

Title 23 ..... California Code of Regulations, Title 23

Title 27 ..... California Code of Regulations, Title 27

TKN ..... Total Kjeldahl Nitrogen

Unified Guidance ..... *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (USEPA, 2009)

US EPA ..... United States Environmental Protection Agency

WDRs ..... Waste Discharge Requirements

WMUs ..... Waste Management Units

WQO[s] ..... Water Quality Objective[s]

(Findings begin on next page)

FINDINGS

The California Regional Water Quality Control Board, Central Valley (Central Valley Water Board) hereby finds as follows:

Introduction

1. Chris Ottone (Discharger) owns and operates the North State Rendering Company, Inc. (Facility), which is located at 15 Shippee Road, approximately 7.5 miles northwest of Oroville in Butte County, Section 18, T20N, R3E, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted on the Site Location Map in **Attachment A**.

2. The Facility is located within Butte County Assessor Parcel Number (APN): 410-020-230.

3. As the Facility's owner and operator, the Discharger is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.

4. The following materials are attached to this Order and incorporated herein:

   a. Attachment A—Site Location Map

   b. Attachment B—Facility Map

   c. Attachment C—Process Flow Diagram

   d. Attachment D—Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports

   e. Standard Provisions and Reporting Requirements

   f. Information Sheet

5. Also attached to this **Order R5-2020-0023**, which establishes a Monitoring and Reporting Program (MRP) for discharges regulated under the WDRs prescribed herein. Compliance with the MRP and subsequent revisions thereto.

6. Any additional information set forth in the attached **Information Sheet** is also incorporated herein.

7. On 14 April 2017 and 28 July 2017, the Discharger submitted a Report of Waste Discharge (ROWD) to apply for Waste Discharge Requirements (WDRs) for an existing wastewater treatment facility.

Background

8. WDRs Order 93-083, adopted by the Central Valley Water Board on 25 June 1993, prescribes requirements for the discharge. Order 93-083 allows a monthly average wastewater flow of up to 8,000 gallons per day (gpd) from former rendering operations. At the time this Order was issued, the Facility had three wastewater treatment and disposal ponds. The Discharger has expanded the facility by adding an anaerobic digester facility (ADF) in 2012 which converts food and food processing wastes into compressed natural gas (CNG) and methane and four additional wastewater treatment and disposal ponds. CNG is used as vehicle fuel and electrical generation.

9. The Discharger added four wastewater treatment and disposal ponds to accommodate increased wastewater discharges at the Facility. Therefore, Order 93-083 is being updated to reflect changes at the Facility and will be rescinded and replaced with this Order.

10. On 8 September 2017 the Discharger submitted a Work Plan for Pilot Study to incorporate septic waste as a feedstock for the anaerobic digester operations. Following the Pilot Study completion in May 2018, updated ROWD materials were submitted on 16 October 2018, 3 April 2019 and 29 October 2019.

Existing Facility and Discharge

11. The Facility consists of an ADF, a rendering facility now used to process used cooking oil, seven wastewater treatment and disposal ponds, a storm water holding pond, an office building, a generator and a bio-gas pump station. A Facility map is shown on Attachment B. A process flow diagram is included in Attachment C.

12. An onsite groundwater supply well, known as the New Well, with a screened interval from 70 to 180 feet below ground surface (bgs) provides water for the Facility. Note that water is not used in the ADF, but rather for general cleaning purposes and office facility use. Water quality of the well was characterized in March 2019; data are shown in Table 1.

Table 1—New Well Groundwater Characterization, March 2019

Monitoring Parameter	Unit	Concentration
pH	standard units	7.15
Specific conductance	microohms per centimeter	352
Total dissolved solids	milligrams per liter	256

Monitoring Parameter	Unit	Concentration
Fixed dissolved solids	milligrams per liter	206
Total Alkalinity	milligrams per liter	107
Bicarbonate	milligrams per liter	131
Hardness	milligrams per liter	142
Chloride	milligrams per liter	18.6
Nitrate as Nitrogen	milligrams per liter	1.61
Sodium	milligrams per liter	10.3
Sulfate	milligrams per liter	30.2
Total coliforms	Most probable number per 100 milliliters	124
Arsenic, dissolved	micrograms per liter	0.95
Copper, dissolved	micrograms per liter	0.68
Iron, dissolved	micrograms per liter	<15
Manganese, dissolved	micrograms per liter	8.72
Zinc, dissolved	micrograms per liter	1.2*

Table Note: *Zinc concentration was detected below the laboratory reporting limit. The value is estimated.

13. Tanker trucks deliver used cooking oil waste to the rendering facility where it is stored in tanks equipped with liquid level gauges to prevent overfilling. The rendering facility is used to heat used cooking oil to separate water from concentrated fats. Wastewater is discharged to a sump located on the west side of the rendering facility and then pumped to Pond 1 or to the ADF depending on temperature compatibility with ADF operations.

14. The rendering facility is licensed to operate by the California Department of Food and Agriculture's Meat, Poultry and Egg Safety Branch, Est #RG-505.

15. Concentrated fats are transported for offsite biodiesel fuel generation. Glycerin waste product from this fuel generation process is returned to the Facility for ADF processing.

16. Digester feedstock material is also delivered by tanker trucks from northern California and southern Oregon and includes agricultural fruit waste, cheese whey, grease trap waste, used cooking oil, septage waste, commercial waste from pasta and salami manufacturing, cow manure, food waste, and olive processing waste.

17. The feedstock is collected in two concrete pits, one for solids and one for liquid material. A mechanical de-packager separates nonorganic material from the feedstock material and stores it in a container for offsite disposal; it is hauled to an appropriately permitted offsite disposal facility. The organic wastes are homogenized into a slurry mixture and pumped to the ADF.

18. The ADF is a two-stage mesophilic anaerobic digestion system. In the first stage, particulate organic molecules are converted into monomers by hydrolyzing bacteria and then converted into volatile fatty acids under acidic conditions (pH=4.5), which are then biologically converted into acetic acid, carbon dioxide and hydrogen.

19. ADF operations require pH monitoring and stabilization with ferric iron (either ferric hydroxide or ferric iron to bind up free sulfur and minimize the production of hydrogen sulfide gas, an undesired by-product. The iron is added either in solid or liquid form. Solid ferric iron is stored in 50-pound bags on a roofed concrete pad. Liquid ferric chloride is stored in totes or plastic barrels adjacent to the concrete pad receiving area for solids and liquid feedstock.

20. The last stage of digestion occurs in the second reactor under neutral pH conditions, where methanogens utilize the acetate or the carbon dioxide and hydrogen to produce methane and carbon dioxide. The methane gas is then passed through a scrubber to remove hydrogen sulfide gas and carbon dioxide impurities before being compressed into CNG which is used to fuel vehicles and power a generator which produces electricity for the Facility.

21. ADF wastewater contains less than two percent solids and discharges directly to Pond 1. There is no pretreatment. ADF discharge is routed to Pond 2 in summer months to help reduce scum buildup at the pond surface.

22. The Facility operates seven wastewater treatment and disposal ponds in series. Based on the July 2017 ROWD submittal and October 2019 updated water balance, the storage capacity of the pond system is approximately 9.8 million gallons (MG) (30 acre-feet). Wastewater discharges from the ADF and rendering plant sump are discharged directly to Pond 1. Pond 1 gravity flows to Ponds 2 through 7, respectively. Pond 7 at the southeast corner of the property is the final wastewater treatment and disposal pond.

23. In 2016 the Facility discharged 5.84 MG, or approximately 16,000 gpd. The peak average monthly flow was 672,100 gallons, or 22,400 gpd, recorded in August

2016. In 2018 the Facility discharged 7.39 MG, or approximately 20,250 gpd with a peak monthly flow in August 2018 of 718,080 gallons or 23,935 gpd.

24. Water balance data based on average 2016 effluent rates indicate that the pond system provides adequate storage to contain wastewater discharges under average monthly precipitation conditions. However, under maximum 100-year return annual precipitation conditions, the water balance indicates that the pond system lacks adequate storage capacity to contain wastewater discharges. Note that the water balance assumes zero infiltration, or leakage from the ponds.

25. In June 2018 the Discharger installed two Apex 2.0 evaporators in Pond 4 to facilitate evaporation. The mechanical evaporators are run continuously. Portable pumps allow recirculation of wastewater from Ponds 5 through 7 back to Pond 4. Pond 4 is kept full to optimize evaporator use.

26. An influent sample to the pond system was collected at a sampling port where wastewater exits the ADF to the pond system for disposal. A partially treated effluent sample was also collected where wastewater discharges from Pond 4 to Pond 5; Ponds 6 and 7 were not in use at the time of sampling indicating that Pond 5 was the endpoint of the treatment system. Effluent characterization data are summarized in Table 2.

Table 2—Effluent Characterization, March 2018

Monitoring Parameter	Unit	ADF Effluent	Pond 5 Effluent
Biological Oxygen Demand	milligrams per liter	1,760	153
Chemical Oxygen Demand	milligrams per liter	12,500	1,480
Dissolved Oxygen	milligrams per liter	3.3	0.9
pH	standard units	7.39	8.12
Electrical Conductivity	micro ohms per centimeter	12,200	7,270
Total Dissolved Solids	milligrams per liter	3,870	3,800
Fixed Dissolved Solids	milligrams per liter	2,430	2,540
Alkalinity	milligrams per liter	4,460	2,130
Bicarbonate	milligrams per liter	5,440	2,600
Hardness	milligrams per liter	223	209

Monitoring Parameter	Unit	ADF Effluent	Pond 5 Effluent
Chloride	milligrams per liter	665	794
Total Kjeldahl Nitrogen	milligrams per liter	1,240	413
Ammonia as Nitrogen	milligrams per liter	996	348
Nitrate as Nitrogen	milligrams per liter	<0.20	<0.20
Sodium	milligrams per liter	305	513
Sulfate	milligrams per liter	<10.0	16.4
Total Coliforms	Most probable number per 100 milliliters	>24,200	19,900
Arsenic, dissolved	micrograms per liter	<60	<60
Copper, dissolved	micrograms per liter	<20	<20
Iron, dissolved (see note below)	micrograms per liter	316	439
Manganese, dissolved (see note below)	micrograms per liter	36	41
Zinc, dissolved	micrograms per liter	<40	<40

Table Note 2: Dissolved iron and dissolved manganese concentrations for both ADF Effluent and Pond 5 Effluent were below laboratory reporting limits; the results are estimations.

27. All ponds are unlined and local soils have low permeability. Pond 1 was added in 2016; excavators broke three buckets reaching a very dense low permeability zone at 15 feet bgs. Ponds 2 through 7 are approximately 6 feet deep.

28. The Storm Water Pond (SW Pond) is located along the west side of the property and receives noncontact storm water runoff from the northern portion of the property around the ADF. When the SW Pond is full, storm water overtops the west berm and flows into an agricultural drain which discharges to Gold Run. Gold Run is located approximately 600 feet south of the property and flows to the west-southwest.

29. The area near the ADF is sloped to capture storm water and allow drainage to the SW Pond. The concrete pads for waste receiving are sloped to collect waste materials and contact storm water in the concrete storage pits for ADF feedstock.

30. The concrete area surrounding the rendering facility is sloped toward the rendering facility's sump to contain any accidental discharges and washdown water. The sump is pumped to the ADF when ambient temperatures are warm enough for ADF microbial populations. In cold weather sump water is pumped to Pond 1.

31. Onsite fuel storage for ADF operations consists of two above-ground storage tanks for diesel storage, one with 8,000-gallon and one with 150-gallon capacity. Both storage tanks are stored on a concrete pad with secondary containment. The larger tank is currently unused because the Facility's vehicles run on CNG produced onsite. The smaller tank is used to fill the yard tractor, stored on a concrete pad near the rendering plant sump.

32. The Discharger intends to sell excess power to other parties, but infrastructure costs to connect to the local electrical grid are currently prohibitive. The Discharger currently flares off excess methane gas. The Butte County Air Quality Management District regulates the Facility's air emissions under Permit to Operate No. NSR-13-04.

33. Domestic wastewater produced at the Facility's office is routed to a leach field system located south of the office building and regulated by the Butte County Environmental Health Department.

Site-Specific Conditions

34. The Facility is located on relatively flat terrain at elevations ranging from 185 feet above mean sea level (ft MSL) at the northeast corner to 170 ft MSL at the southwest corner, sloping to the southwest.

35. An agricultural drainage ditch (Ag-drain) flows west along the Facility's northern boundary and south along its western boundary toward Gold Run. Additionally, several shallow swales located south of the Facility flow to Gold Run. Gold Run is tributary to Dry Creek; Gold Run and Dry Creek are ephemeral drainages which flow west and south to the Sacramento River. The Federal Emergency Management Agency does not identify Gold Run or Dry Creek as a flood hazard and the Facility is not constructed within a 100-year flood zone.

36. Land uses to the north, east and west of the Facility are agricultural orchards and fields which are irrigated by private groundwater wells and equipped with tile drains. To the south is a nature preserve used for cattle grazing. A few private homes located to the east on Shippee Road are supplied by private wells.

37. The climate is hot and dry in summer with temperatures exceeding 110 Fahrenheit (F) and mild winters occasionally reaching temperatures as low as 25 F. According to the Western Regional Climate Center the average annual precipitation for the Oroville area as reported at the nearest rain gauge station (046521) is 28.69 inches and the maximum annual precipitation recorded is 59.98 inches (link to local climate data; https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6521). Annual pan evaporation based on the Department of Water Resources Oroville Dam Station: 6527 is 70.78 inches (National Oceanic and Atmospheric Administration Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States. 1982).

Groundwater Conditions

38. The United States Department of Agriculture's Web Soil Survey shows the predominant soil type underlying the 28-acre Facility is the Redtough-Redswale-Anita gravelly duripan which is 45% gravelly loam, 25% loam, and 20% duripan. The soils description reports there is no saturated conductivity (or 0 inches per hour) resulting from a cemented gravelly material between 15 and 25 inches deep with a very high stormwater runoff potential (link to soil survey homepage; https://websoilsurvey.sc.egov.usda.gov) .

39. The Facility is underlain by the Tuscan Formation, which the United States Geological Survey describes as Quaternary lacustrine clay and alluvial gravel deposits. Onsite groundwater supply well logs show first water in the Old Well (installed in 1943) was encountered at 105 feet bgs and first water in the New Well (installed in 1963) was encountered at 24 feet bgs. The Facility has no shallow groundwater monitoring wells.

40. A 2011 geotechnical investigation performed by Applied Technical Consultants of Chico, California, for planning ADF construction involved two 40-foot soil borings which showed silty sand soils with increased moisture content observed at approximately 21 feet bgs in both borings. The approximate depth below ground surface and relative elevation of this saturated zone may be correlated to the first water observed when the New Well was installed and the elevation of Gold Run (approximately 165 to 170 feet MSL).

41. In Hanover Environmental Services Inc.'s 2013 "Results of Additional Investigation Report," used shallow direct push borings to identify petroleum in unsaturated soils between 5 and 9 feet bgs, primarily east of the rendering facility and west of the storage ponds. This investigation led to a 2013 deed restriction and paving of the area around the rendering facility.

42. According to the Department of Water Resources Groundwater Information Center Interactive Map Application, regional groundwater in the area ranges seasonally from 105 to 135 feet MSL, or 30 to 60 feet bgs with flow to the southwest (link to groundwater information map homepage; https://gis.water.ca.gov/app/gicima/).

43. Table 3 provides available groundwater quality data for a Department of Water Resources well located 1.5 miles west-southwest of the Facility sampled on 17 December 1990.

Table 3—Regional Groundwater Characterization

Monitoring Parameter	Unit	Offsite DWR Well
DWR Well ID	--	20N02E14P002M
Depth of Screened Interval	feet bgs	Unknown
pH	standard units	7.8
Electrical conductivity	microohms per centimeter	280
Total dissolved solids	milligrams per liter	210
Alkalinity	milligrams per liter	136
Hardness	milligrams per liter	130
Chloride	milligrams per liter	3
Sodium	milligrams per liter	9
Sulfate	milligrams per liter	7

Table Note: Link to regional water quality well data (http://wdl.water.ca.gov/waterdatalibrary/includes/include_wqstation_details.cfm?qst_id=35712)

Legal Authorities

44. This Order is adopted pursuant to Water Code section 13263, subdivision (a), which provides in pertinent part 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 or receiving waters upon, or 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 Section 13241.

45. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.

46. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, §13263, subd. (g).)

47. This Order and its associated Monitoring and Reporting Program (MRP) are also adopted pursuant to Water Code section 13267, subdivision (b)(1), which provides as follows:

> [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 … 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.

48. The reports required under this Order, as well as under the separately issued MRP, are necessary to verify and ensure compliance with WDRs. The burden associated with such reports is reasonable relative to the need for their submission.

Basin Plan Implementation

49. Pursuant to Water Code section 13263, subdivision (a), WDRs must "implement any relevant water quality control plans…, 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 Section 13241."

50. This Order implements the Central Valley Water Board's Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.)

51. Local drainage is to Gold Run which drains into Dry Creek and to the Sacramento River. The beneficial uses of Gold Run and Dry Creek (per the Basin Plan) include: agricultural supply (AGR); groundwater recharge (GWR); freshwater replenishment (FRSH); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); cold freshwater

habitat (COLD); wildlife habitat (WILD); migration of aquatic organisms (MIGR); and spawning, reproduction and/or early development (SPAWN).

52. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility are municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

53. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

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

55. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

56. The narrative toxicity objective 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.

57. Quantifying a narrative water quality objective 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 objective 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 objective.

58. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an Electrical Conductivity (EC) less than 700 micromhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 micromhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

Salt and Nitrate Control Programs Reopener

59. The Central Valley Water Board adopted Basin Plan amendments incorporating new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative. The Basin Plan Amendments were conditionally approved by the State Water Board on 16 October 2019 and the Office of Administrative Law on 15 January 2020.

60. 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 salinity, dischargers that are unable to comply with stringent salinity requirements would instead need to meet performance-based requirements and participate in a basin-wide effort to develop a long-term salinity strategy for the Central Valley. 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.

61. For the purpose of this Order, saline waste is defined as wastewater that contains high concentrations of fixed dissolved solids. Because salts occur naturally in all waters, and because the naturally occurring salt concentrations vary depending on the water supply, it is not practical to define saline waste region-wide as that which exceeds a certain Fixed Dissolved Solids (FDS) concentration. Generally speaking, saline waste is that for which the FDS concentration is more than 300 mg/L higher than the Total Dissolved Solids (TDS) concentration of the water supply. Although there are many individual ions that can impact the beneficial uses of groundwater, nitrate, sodium and chloride are the predominant salts of concern in the Central Valley Region.

Special Considerations for High Strength Waste

62. For the purpose of this Order, high strength waste is defined as wastewater that contains concentrations of readily degradable organic matter that exceed typical concentrations for domestic sewage. Such wastes contain greater than 500 mg/L Biological Oxygen Demand (BOD) and often contain commensurately high levels of Total Kjeldahl Nitrogen (TKN), which is a measure of organic nitrogen and ammonia nitrogen. Typical high strength wastewaters include septage, some food processing wastes, winery wastes, and rendering plant wastes.

63. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices which include planting crops to

take up plant nutrients and maximizing oxidation of BOD to prevent nuisance conditions.

64. Unless groundwater is very shallow, groundwater degradation with nitrogen species such as ammonia and nitrate can be prevented. Where there is sufficient unsaturated soil in the vadose zone, excess nitrogen can be mineralized and denitrified by soil microorganisms.

65. With regard to BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly-breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions that convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.

Compliance with Antidegradation Policy

66. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (*Antidegradation Policy*) prohibits the Central Valley Water Board from authorizing degradation of "high quality waters" unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger's best practicable treatment or control (BPTC).

67. The Discharger does not conduct groundwater quality monitoring at the Facility. Given the unavailability of pre-1968[1] groundwater quality information, compliance with the Antidegradation Policy cannot be determined based on pre-1968 water quality. Therefore, determination of compliance with Resolution 68-16 for this Facility must be based on existing background groundwater quality, which currently meets all applicable WQOs.

68. Constituents of concern (COCs) that have the potential to degrade groundwater include BOD, Chemical Oxygen Demand (COD), pH, EC, TDS, FDS, Total Nitrogen, Sodium, Chloride, Dissolved Iron and Dissolved Manganese in Table 4.

[1] The *Antidegradation Polic*y was adopted by the State Water Board in 1968.

Table 4—Constituents of Concern in Pond System

Constituent	Units	ADF Effluent	Pond 5	Potential WQOs
Biological Oxygen Demand	milligrams per liter	1,760	153	NE
Chemical Oxygen Demand	milligrams per liter	12,500	1,480	NE
pH	standard units	8.12	8.12	6.5-8.5
Electrical Conductivity	micromhos per centimeter	12,200	7,270	900
Total Dissolved Solids	milligrams per liter	3,870	3,800	500
Fixed Dissolved Solids	milligrams per liter	2,430	2,540	NE
Carbonate Alkalinity	milligrams per liter	4,460	2,130	NE
Bicarbonate	milligrams per liter	5,440	2,600	NE
Hardness	milligrams per liter	223	209	NE
Chloride	milligrams per liter	665	794	250
Total Kjeldahl Nitrogen	milligrams per liter	1,240	413	10
Nitrate as Nitrogen	milligrams per liter	<0.20	<0.20	10
Sodium	milligrams per liter	305	513	250
Sulfate	milligrams per liter	<10.0	16.4	250
Total coliforms	Most probable number per 100 milliliters	>24,200	19,900	2.2
Iron, dissolved	micrograms per liter	316	439	300
Manganese, dissolved	micrograms per liter	36	41	50

Table Note: ADF Effluent and Pond 5 concentrations reported for the 2 March 2018 sampling event, Report of Findings for Septage Pilot Study, SHN Consulting, May 2018. Hardness, Chloride, Nitrate and Sulfate data reported with elevated reporting limits due to sample matrix interference with laboratory testing procedures.

69. This Order prescribes Flow Limitations (Section B) and Groundwater Limitations (Section D) to ensure that Facility discharges will not threaten the present and anticipated beneficial uses of surface water and groundwater (see Findings 52 and 53), or result in water quality less than applicable WQOs.

70. This Order will not result in water quality less than established WQOs, with the following considerations:

    a. With respect to pH, EC, TDS, Total Nitrogen, and Chloride, the existing discharge may cause some degradation in water quality relative to the Antidegradation Baseline, but such degradation is not expected to result in water quality less than applicable WQOs.

71. The Discharger proposes to implement the following BPTC measures:

    a. Improved water storage management to clean out ponds, maintain berms, and set pond connectors at optimal elevations for gravity flow management.

    b. Addition of mechanical evaporators to Pond 3.

    c. Improved storm water management.

72. The Discharger's implementation of the above-listed BPTC measures will minimize the potential for wastewater discharges due to storage capacity shortfalls resulting from the Facility’s continued operation.

73. The Discharger’s operation provides three full-time jobs, provides an alternative disposal option for septage waste, grease trap waste, used cooking oil, and other organic food wastes, and energy production. Currently energy is not marketed for offsite clientele. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State. Accordingly, to the extent that any degradation occurs as the result of the Facility’s continued operation, such degradation is consistent with the maximum interest of the people of the State of California.

74. Based on the foregoing, the adoption of this Order is consistent with the State Water Board’s *Antidegradation Policy*.

Compliance with CEQA

75. 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.

76. To the extent that the construction of any new basins, ponds and/or surface impoundments are authorized under this Order, such features involve minor alterations to land, which are exempt from CEQA procedural requirements pursuant to California Code of Regulations, title 14, section 15304 (CEQA Guidelines).

77. This Order is further exempt from CEQA procedural requirements insofar as it is adopted for protection of the environment and does not authorize construction activities or the relaxation of standards allowing for environmental degradation, in accordance with California Code of Regulations, title 14, section 15308 (CEQA Guidelines).

78. This Order is further exempt from CEQA procedural requirements because it can be seen with certainty that there is no possibility that the discharges and activities authorized herein will have a significant effect on the environment. (See Cal. Code Regs., tit. 14, § 15061, subd. (b)(3) [CEQA Guidelines].)

Other Regulatory Considerations

79. Pursuant to Water Code section 106.3, subdivision (a), it is “the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water, which are designed to protect human health and ensure that water is safe for domestic use.

80. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of 2-B, where:

    a. Threat Category “2” reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations, cause secondary drinking water standard violations, and cause nuisances; and

    b. Complexity Category “B” reflects any discharger not included in Category A, with either (1) physical, chemical or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

81. This Order, which prescribes WDRs for discharges of wastewater, is exempt from the prescriptive requirements of California Code of Regulations, title 27, section 20005 et seq. (See Cal. Code Regs., tit. 27, § 20090, subd. (b).)

82. Statistical data analysis methods outlined in the USEPA's 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (*Unified Guidance*) are appropriate for determining compliance with Groundwater Limitations of this Order. Other methods may be appropriate as well.

83. This Order does not cover storm water and other discharges that are subject to the Clean Water Act's National Pollution Discharge Elimination System (NPDES). With respect to stormwater, the Facility is currently covered under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities, State Water Board Order 2014-0057-DWQ, NPDES General Permit CAS000001 (Industrial General Permit).

84. The California Department of Water Resources 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 74-81* (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.

Scope of Order

85. This Order is strictly limited in scope to those waste discharges, activities and processes described and expressly authorized herein.

86. Pursuant to Water Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of <u>new</u> wastes (i.e., other than those described herein), or making <u>material changes</u> to the character, volume and timing of waste discharges authorized herein, without filing a new Report of Waste Discharge (ROWD) per Water Code section 13260.

87. Failure to file a new RWD before initiating material changes to the character, volume or timing of discharges authorized herein, shall constitute an independent violation of these WDRs.

88. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Discharger," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

89. All of the above information, as well as the information contained in the attached **Information Sheet** (incorporated herein), was considered by the Central Valley Water Board in prescribing the WDRs set forth below.

90. The Discharger, interested agencies and other 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.)

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

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

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267: that Waste Discharge Requirements Order 93-083 is rescinded (except for enforcement purposes); and that the Discharger shall comply with the following.

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses, including irrigation ditches outside of control of the Discharger, 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 CWC Section 13173, in a manner that causes violation of groundwater limitations, is prohibited.

4. Bypass around, or overflow from, the wastewater treatment ponds 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 ponds such that biological treatment mechanisms are disrupted is prohibited.

7. Discharge of anything other than domestic wastewater from the Facility office to the septic tank and leach field system is prohibited.

B. Flow Limitations

1. Effectively immediately, influent flows to the pond treatment system shall not exceed the following limits: 7.4 MG annually, as determined by the total flow for the calendar year (equivalent to average daily flow: 20,275 gpd). These limits are based on the Facility's 2018 effluent discharges as presented in the water balance (ROWD submittal dated 12 December 2019).

2. The Discharger reported full containment of wastewater in 2018, however the water balance using 2018 monthly effluent discharge data does not support this claim. The water balance assumes no infiltration to groundwater and shows a storage capacity shortfall spanning several months under 100-year return annual precipitation conditions This item is further addressed in Provision F.1.a.

C. Discharge Specifications

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

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

5. All conveyance, treatment, storage, and disposal systems 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 ensuring compliance with Discharge Specification C.6, the dissolved oxygen (DO) content in the upper one foot of Ponds 4, 5, 6, and 7 shall not be less than 1.0 mg/L for three consecutive weekly sampling events. Ponds 1, 2, and 3 provide anaerobic treatment; the Discharger has demonstrated that concentrations less than 1.0 mg/L have not

resulted in the generation of nuisance odors or vectors that cause concerns with neighboring landowners.

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 Ponds 1 through 6 is controlled by gravity discharge locations and shall be at least one foot. The operating freeboard in Pond 7 shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to determine compliance with this requirement, the Discharger shall install and maintain in Pond 7 a permanent staff gauge with calibration marks that clearly show the water level at 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 Discharge Specifications C.8 and C.9. The Discharger provides reasonable assurance that wastewater management includes added storage requirements in the winter season.

11. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. 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. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

14. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every two years upon adoption of this Order and shall periodically remove sludge as necessary to maintain adequate treatment and storage capacity.

15. Storage of residual solids in areas not equipped with means to prevent storm water infiltration is prohibited.

D. Groundwater Limitations

1. Release of waste constituents from any portion of the facility shall not cause groundwater to:
   a. Exceed a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.
   b. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations.
   c. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

E. Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage ponds. Solid waste refers to solid inorganic matter removed by screens or mechanical separators that will not be subject to onsite treatment and disposal.

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 soils in a mass or concentration that will violate the groundwater limitations of this Order.

3. If 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 a Regional Water Board) will satisfy this specification.

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

F. Other Provisions

1. The following reports shall be submitted pursuant to CWC section 13267 and shall be prepared as described in Provision F.3:

   a. Within four months following Central Valley Water Board adoption of WDRs Order **R5-2020-0023,** the Discharger shall submit an updated water balance that demonstrates that the wastewater ponds have sufficient storage and disposal capacity to contain the annual 7.4 MG or alternative effluent flow rate both under average annual rainfall conditions and 100-year return annual rainfall conditions; including consideration of at least the following:

      i. A minimum of two feet of freeboard in Pond 7 at all times (unless a registered civil engineer determines that a lower freeboard level will not cause overtopping or berm failure).

      ii. As-built design documents showing pond geometry and storage volumes for each pond and conveyance lines for wastewater, contact storm water and noncontact storm water.

      iii. Historical local evapotranspiration, pan evaporation, and lake evaporation data (monthly average values).

      iv. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns.

      v. Projected long-term percolation rates based on local soils percolation test data.

      vi. Proposed emergency operations measures, determination of the pond storage conditions at which the Discharger will initiate emergency operations measures, proposed agency notification procedures and reporting procedures, and determination of pond storage and weather conditions to resume normal ADF operations.

      vii. Documentation of the freeboard measuring device installation for Pond 7.

      If the updated water balance shows a storage and/or disposal capacity deficit, the Discharger shall propose specific structural and/or operations improvements that will ensure compliance with

Discharge Specification C.5 will be completed no later than one year following the Board's approval of proposed improvements.

b. Within eight months following Central Valley Water Board adoption of WDRs Order **R5-2020-0023,** the Discharger shall submit a Solids Management Plan detailing a routine pond maintenance plan and the removal and/or final disposal of solid materials from the Facility. The Plan shall account for all products, nonorganic waste material, concentrated grease/fats for biodiesel generation, periodic accumulated sludge removal from ponds and all other materials resulting from site activities and include a Solids Management Log to be used for long-term record-keeping. The Plan shall also describe measures to be used to control runoff or percolate from the sludge if it is to be dried onsite and specify the removal from the site prior to the onset of the rainy season (1 October).

c. By 1 October 2021, the Discharger shall submit a Groundwater Monitoring Well Installation Workplan that proposes drilling and installation of a shallow groundwater monitoring well network. The workplan shall be prepared in accordance with, and include the items listed in, the first section of Attachment D: "Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports", which is attached hereto and made part of this Order by reference. Groundwater well drilling and installation shall be conducted in the spring season, between March and May, weather permitting. The groundwater monitoring wells shall be designed to yield samples representative of the uppermost portion of the first aquifer underlying the ponds and Facility storage and processing areas.

d. Within six months following the Work Plan submittal, the Discharger shall submit a Groundwater Monitoring Well Installation Report for the proposed groundwater monitoring well network to satisfy the requirements of Provision 1.C. The report shall be prepared in accordance with, and including the items listed in, the second section of Attachment D: "Monitoring Well Workplan and Monitoring Well Installation Report Guidance", which is attached hereto and made part of this Order by reference. The report shall describe the installation and development of all new monitoring wells and explain any deviation from the approved workplan.

2. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows,

as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by 31 January.

3. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of 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 R5-2020-0023**, 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, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

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 cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.

10. As described in 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. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

12. The Discharger shall not allow pollutant-free wastewater to be discharged into the wastewater collection, treatment, and disposal systems in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

13. 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.

14. 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.

15. To assume operation as Discharger under this Order, the succeeding owner or operator 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 incorporation if a corporation, the name and address and telephone 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 CWC. 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.

16. 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.

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

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 its right to take any enforcement actions authorized by law.

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 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the internet (at the address below) and will be provided upon request.

Link to Water Board website - Filing petitions
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

Attachments:

Attachment A—Site Location Map
Attachment B—Facility Map
Attachment C—Process Flow Diagram
Attachment D—Monitoring Well Work Plan and Monitoring Well Installation Report
Information Sheet
Monitoring and Reporting Order R5-2020-0023

ATTACHMENT A—SITE LOCATION MAP

(see map on next page)

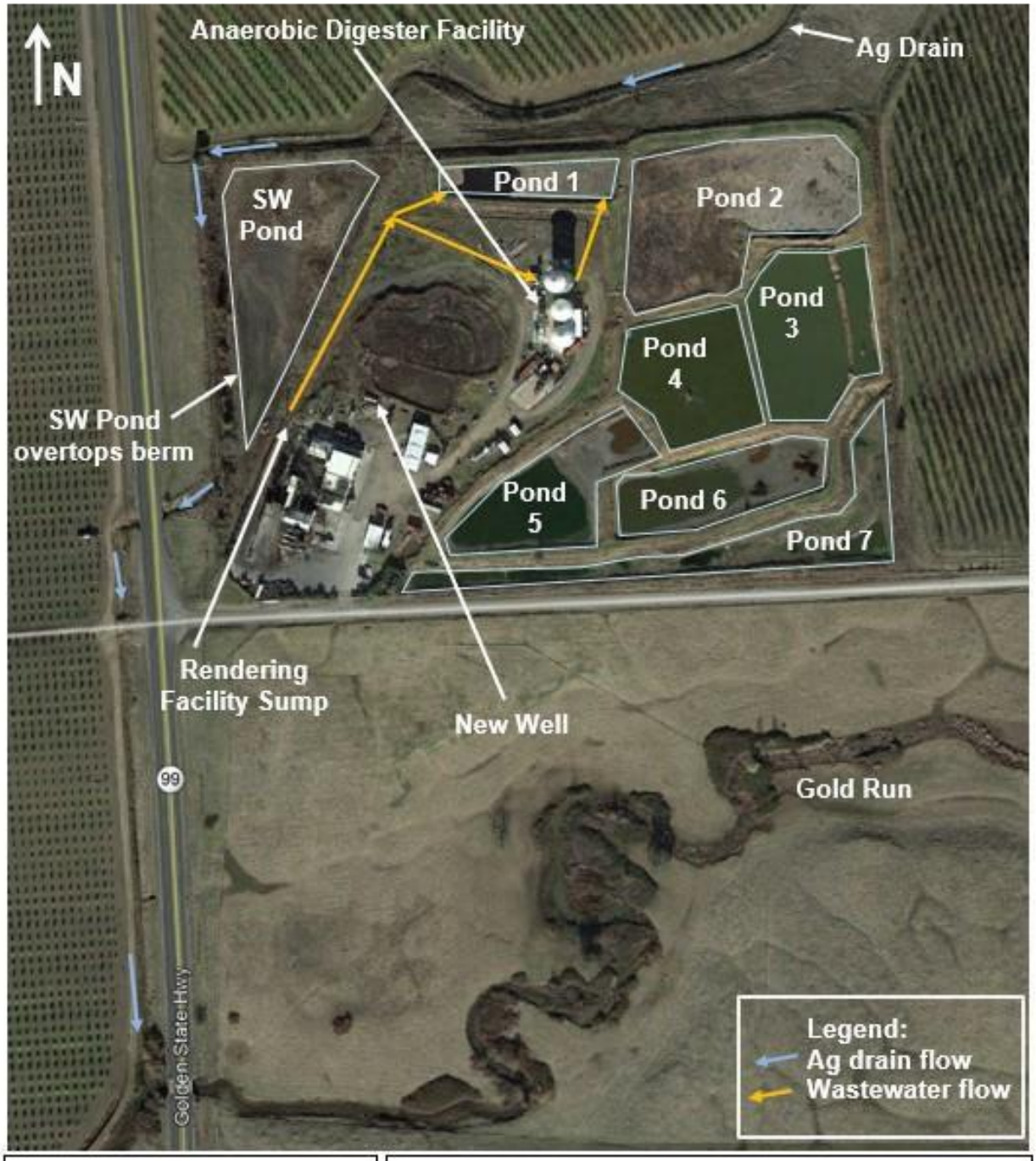
ORDER R5-2020-0023 **ATTACHMENT A – SITE LOCATION MAP**

DRAWING REFERENCE: GOOGLE EARTH MAP DATA: © 2019 GOOGLE NO SCALE	SITE LOCATION MAP NORTH STATE RENDERING COMPANY INC. BUTTE COUNTY

ATTACHMENT B—FACILITY MAP

(see map on next page)

ORDER R5-2020-0023 **ATTACHMENT B - FACILITY MAP**

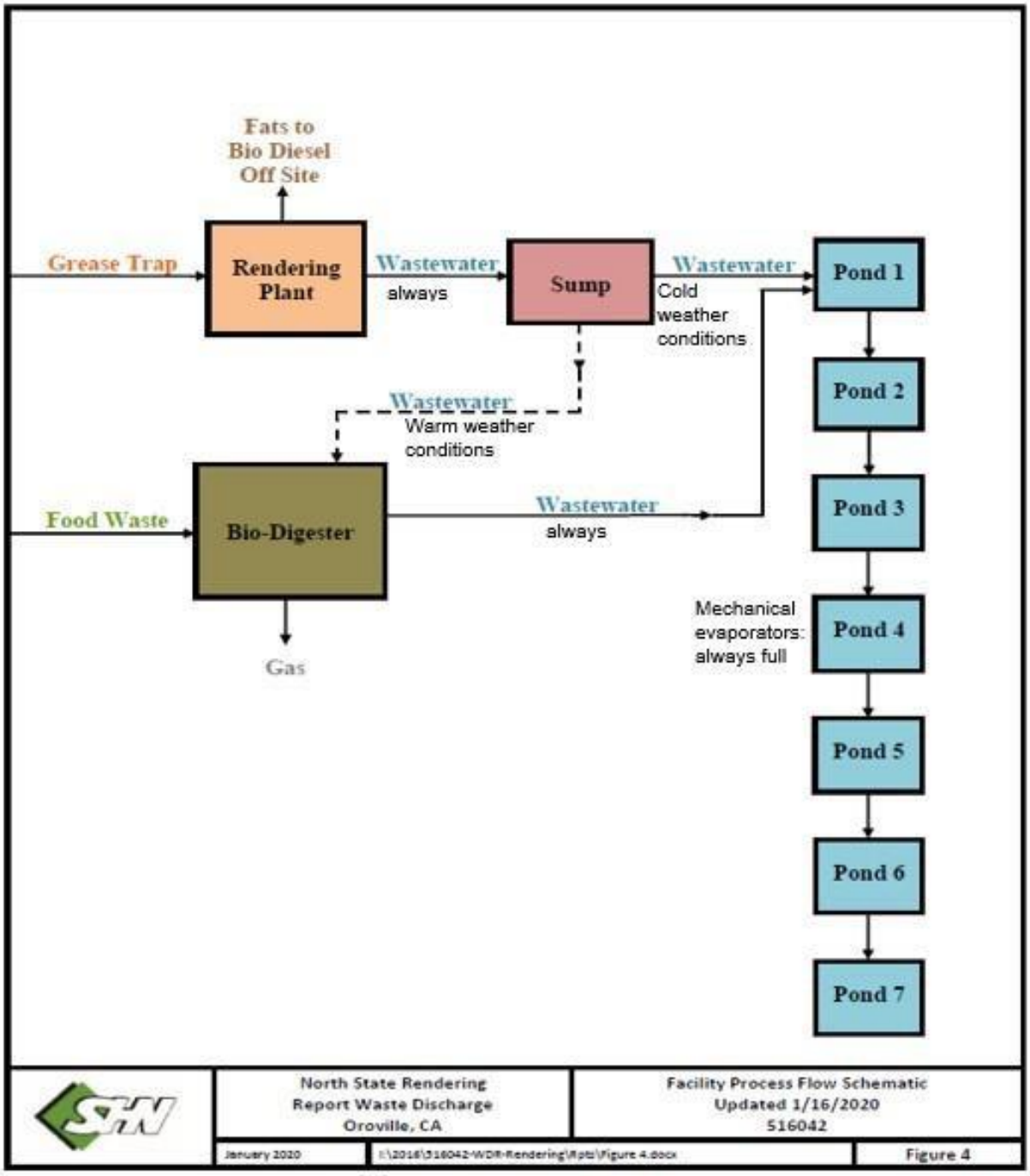


DRAWING REFERENCE: GOOGLE EARTH MAP DATA: © 2019 GOOGLE NO SCALE	FACILITY MAP NORTH STATE RENDERING COMPANY INC. BUTTE COUNTY

ATTACHMENT C—PROCESS FLOW DIAGRAM

(see map on next page)

ORDER R5-2020-0023 ATTACHMENT C – PROCESS FLOW DIAGRAM



DRAWING REFERENCE: GOOGLE EARTH MAP DATA: © 2019 GOOGLE NO SCALE	PROCESS FLOW DIAGRAM NORTH STATE RENDERING COMPANY INC. BUTTE COUNTY

ATTACHMENT D—REQUIREMENTS FOR MONITORING WELL INSTALLATION WORKPLANS AND MONITORING WELL INSTALLATION REPORTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2, below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

SECTION 1 - Monitoring Well Installation Workplan and Groundwater Sampling and Analysis Plan

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- On-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):

- Diagram of proposed well construction details
- Borehole diameter

- Casing and screen material, diameter, and centralizer spacing (if needed)
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)
- Anticipated depth of well, length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):

- Method of development to be used (i.e., surge, bail, pump, etc.)
- Parameters to be monitored during development and record keeping technique
- Method of determining when development is complete
- Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):

- Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
- Datum for survey measurements
- List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)
- Schedule for Completion of Work

Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP shall be included as an appendix to the workplan and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

A. Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling

- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
- General sampling techniques
- Record keeping during sampling (include copies of record keeping logs to be used)
- QA/QC samples
- Chain of Custody
- Sample handling and transport

SECTION 2 - Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells
- Number of monitoring wells installed and copies of County Well Construction Permits
- Topographic map showing facility location, roads, surface water bodies

- Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

- On-site supervision of drilling and well installation activities
- Drilling contractor and driller's name
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals and logging methods
- Well boring log
- Well boring number and date drilled
- Borehole diameter and total depth
- Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
- Depth to first encountered groundwater and stabilized groundwater depth
- Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form):

- Well construction diagram, including:
- Monitoring well number and date constructed
- Casing and screen material, diameter, and centralizer spacing (if needed)
- Length of well casing, and length and position of perforated interval
- Thickness, position and composition of surface seal, sanitary seal, and sand pack
- Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development:

- Date(s) and method of development
- How well development completion was determined
- Volume of water purged from well and method of development water disposal
- Field notes from well development should be included in report

F. Well Survey (survey the top rim of the well casing with the cap removed):

- Identify the coordinate system and datum for survey measurements
- Describe the measuring points (i.e. ground surface, top of casing, etc.)
- Present the well survey report data in a table
- Include the Registered Engineer or Licensed Surveyor’s report and field notes in appendix.

INFORMATION SHEET

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2020-0023

WASTE DISCHARGE REQUIREMENTS
FOR
CHRIS OTTONE
NORTH STATE RENDERING COMPANY, INC.
BUTTE COUNTY

INFORMATION SHEET

Background

The North State Rendering Company, Inc. (Discharger) owns and operates an anaerobic digester facility (ADF) that processes organic wastes and a former rendering plant which is currently used to process used cooking oil (UCO) for offsite biodiesel production. The combined facility (Facility) consists of a solids hopper, a concrete liquids collection pit, a mechanical separator, a grinder, lift pumps, electrical generator, three anaerobic biodigester reactor towers, the rendering plant equipped with a boiler, a fats recovery system, and a sump, seven unlined wastewater treatment and disposal ponds, and a storm water retention pond. The Board currently regulates the Facility's wastewater discharges under Waste Discharge Requirements (WDRs) Order 93-083.

From 1943 to 2016, the Facility operated as one of only four rendering plants in California that handle animal mortalities, the only lawful disposal option under most circumstances. The Facility served the entire northern California area north of Sacramento County. In 2012 the Discharger constructed the ADF and began accepting additional organic waste streams from businesses around northern California and southern Oregon. In 2016 the Discharger ceased rendering activities and transferred the business, truck fleet, and staff to the Sacramento Rendering Plant.

The Central Valley Water Board first adopted WDRs to regulate wastewater discharges from the Facility in 1975. WDRs Order 93-083 currently regulates discharges by limiting wastewater discharge to no more than 0.008 million gallons per day (mgd) and prohibiting degradation of groundwater quality. Local shallow groundwater quality is unknown. The Order covers wastewater discharges to a primary facultative pond, an aeration pond, and a third wastewater treatment and disposal pond with reporting requirements limited to dry-weather periods of land application.

Order 93-083 required monitoring and reporting for Biological Oxygen Demand and Total Suspended Solids and pond freeboard when wastewater was land applied. The Discharger ceased aeration and land application of wastewater in 2002.

INFORMATION SHEET

The Discharger expanded operations with the ADF in 2012. Between 2010 and 2016 the Discharger ceased using the primary facultative and aeration ponds and added five additional wastewater treatment and disposal ponds.

Following an inspection in June 2016, Central Valley Water Board staff issued a Notice of Violation and a 13267 Order for a Report of Waste Discharge (ROWD). After an extension and late notifications, the Discharger submitted a complete ROWD in July 2017. In August 2017 the Discharger notified the Central Valley Water Board and the Butte County Development Services Department that the Facility planned to accept septage waste as feedstock. The Central Valley Water Board approved a September 2017 Pilot Study Workplan requesting additional effluent characterization. In May 2018 the Discharger completed the pilot study and the Central Valley Water Board requested an Amended ROWD. The Discharger submitted supplemental information request by the Central Valley Water Board in between October 2018 and April 2019. The Amended ROWD was deemed complete in August 2019.

Facility and Discharge

The ADF is a two-stage mesophilic anaerobic digestion system. The ADF produces methane gas which is used for electrical generation and compressed onsite for use as vehicle fuel. Feedstock materials for the ADF include agricultural fruit waste, cheese whey, used cooking oil (UCO) waste, septage waste, commercial waste from pasta and salami manufacturing, cow manure, food waste, glycerin from offsite biodiesel production, olive processing waste, post-consumer organics/food waste, and wastewater from UCO processing that is constructed in the rendering facility.

UCO wastes are pumped from delivery trucks into a series of onsite storage tanks. A boiler is used to heat the storage tanks by passing steam through pipes in the tanks. The steam evaporates or condenses and drains to the sump. Heating the UCO separates wastewater and concentrates fats for offsite production of biodiesel fuel. Glycerin byproducts from the biodiesel fuel production are then delivered back to the Facility as a feedstock for the ADF.

Trucks are weighed upon entrance to the Facility and feedstock materials are unloaded to a solids hopper or a liquids storage pit, depending on the consistency of the waste material. The waste materials are homogenized and pulverized and then pumped into the first ADF reactor tower. In the first tower organic molecules are solubilized and converted into monomers, then volatile fatty acids, and finally into acetic acid, carbon dioxide and hydrogen by various microbial processes. Ferric iron is added to bind the sulfur and reduce its bioavailability to maintain the microbial population in the second tower. The partially reacted slurry is pumped to the second reactor where methanogens utilize the acetate and/or carbon dioxide and hydrogen to produce methane and carbon dioxide.

INFORMATION SHEET

Methane is used for electrical generation or is compressed onsite and used as vehicle fuel. The Discharger's vehicles have been reconfigured to run on compressed natural gas (CNG) produced at the Facility.

Wastewater from the ADF contains less than two percent solids digestate and is discharged by gravity to Pond 1, the primary receiving pond. Wastewater from the rendering plant sump is pumped to the ADF in periods of warm weather or discharges directly to Pond 1 in cold weather. In 2019 the Discharger found that discharging ADF wastewater to Pond 2 in summer months allowed microbes to break down the surface scum layer. The Discharger plans to continue this practice to maximize evaporative losses from the pond system.

From Pond 1, wastewater gravity flows to Ponds 2 through 7, in series. In 2018 Pond 4 was equipped with two evaporators to promote treatment and evaporation. The Discharger has experimented with moving water among ponds 5, 6 and 7 to optimize the mechanical evaporator operation. Ponds 5, 6, and 7 may be empty in summer months, depending on water storage needs and preparation for winter storage capacity.

Storm water falling in the paved area around the office and rendering facility flows to the rendering facility sump and is pumped to Pond 1. Storm water near the ADF discharges via a drain system to the storm water pond (SW Pond). When the SW Pond reaches capacity, it overtops the west berm to the agricultural drain to Gold Run. The Facility is enrolled under the General Permit for Storm Water Discharges Associated with Industrial Activities, Order NPDES No. CAS00001.

In May 2018 the Discharger concluded a five-month Pilot Study for introducing septage waste into the digester feedstock and found no detrimental effects to the ADF from processing up to 15% septage waste by volume. In 2018 the Discharger contracted an additional hauler and received up to 25% septage waste by volume. The Facility has continued receiving septage waste as a feedstock and submitted an Amended ROWD on 16 October 2018 with additional submittals on 13 December 2019 and 17 December 2019.

Wastewater

The Discharge produces wastewater that is high in salinity, ammonia and organic nitrogen, alkalinity, biological and chemical oxygen demand (BOD/COD) and coliform bacteria. The table below summarizes the limited analytical data available for wastewater at the Facility. The ADF effluent samples were collected between the ADF and Pond 1 and the partially treated effluent samples were collected where Pond 4 discharges to Pond 5.

INFORMATION SHEET

Table IS-1—Constituents of Concern in Pond System

Constituent	Units	Min-Max Concentrations for ADF Effluent	Min-Max Concentrations for Partially Treated Effluent
Biological oxygen demand	milligrams per liter	1,760-5,440	153-178
Chemical oxygen demand	milligrams per liter	12,500-20,600	1,390-1,480
pH	standard units	7.26-8.12	8.07-8.19
Specific conductivity	micro ohms per centimeter	11,500-12,200	6,650-7,270
Total dissolved solids	milligrams per liter	3,400-4,070	218-283
Fixed dissolved solids	milligrams per liter	2,430-2,780	2,540-2,900
Carbonate Alkalinity	milligrams per liter	48-4,460	1,960-2,130
Bicarbonate	milligrams per liter	59-5,440	2,390-2,600
Hardness	milligrams per liter	223-1,040	209-831
Chloride	milligrams per liter	665-909	794-865
Total Kjeldahl Nitrogen	milligrams per liter	1,240-1,610	393-413
Nitrate as Nitrogen	milligrams per liter	<0.20	<0.20
Sodium	milligrams per liter	274-404	509-513
Sulfate	milligrams per liter	<10.0-25.7	304-348
Total coliforms	Most probable number per 100 milliliters	>24,200	19,900-76,000

INFORMATION SHEET

Constituent	Units	Min-Max Concentrations for ADF Effluent	Min-Max Concentrations for Partially Treated Effluent
Iron, dissolved	micrograms per liter	316-513	311-439
Manganese, dissolved	micrograms per liter	15-36	41-60

Groundwater Conditions

The Facility is in the Colusa Basin Hydrologic Area (No. 520.40) of the Butte Hydrologic Unit, as depicted on hydrologic maps prepared by State Water Resources Control Board in August 1986.

The DWR Groundwater Information Center (GIC) Interactive Map Application shows regional groundwater underlying the area ranges seasonally from 30 to 60 feet below ground surface (bgs) and flows to the southwest. Limited published groundwater quality data from the United States Geological Survey (USGS) shows regional wells contain nitrate as nitrogen concentrations below the MCL of 10 mg/L (results range from 0.2-2.8 mg/L). The data also shows Electrical conductivity (EC) ranges from 123 to 186 µmhos/cm.

Well logs for onsite subsurface investigations indicate a shallow groundwater zone, possibly of limited lateral extent, at approximately 20 feet bgs. The approximate elevation of this shallow groundwater zone coincides with the elevation of Gold Run and may indicate the geologic contact with the Tuscan formation.

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

The Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.

Salt and Nitrate Control Regulatory Program Considerations

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. On 16

INFORMATION SHEET

October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 approving the Central Valley Water Board Basin Plan amendments and also directed the Central Valley Water Board to make targeted revisions to the Basin Plan amendments within one year from the approval of the Basin Plan amendments by the Office of Administrative Law. The Office of Administrative Law approved the Basin Plan amendments on 15 January 2020 (OAL Matter No. 2019-1203-03).

Pursuant to the Basin Plan amendments, dischargers will receive a Notice to Comply with instructions and obligations for the Salt Control Program within one year of the effective date of the amendments (17 January 2020). Upon receipt of the Notice to Comply, the North State Rendering Company, Inc. will have no more than six months to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. For the Nitrate Control Program, when the Notices to Comply will be sent out depends on the groundwater basin in which they are located. The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. More information regarding the CV-SALTS regulatory planning process can be found at the following link: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/).

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans and are intended to assure conformance with them. It may be appropriate to reopen the Order if new technical information is received or if applicable laws and regulations change.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING ORDER R5-2020-0023

MONITORING AND REPORTING PROGRAM
FOR
CHRIS OTTONE
NORTH STATE RENDERING COMPANY, INC.
BUTTE COUNTY

Separately issued pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for waste discharges regulated under Waste Discharge Requirements Order R5-2020-0023 (WDRs Order). Each of the Findings set forth in the WDRs Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP Order.

This MRP is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

This MRP Order may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

A. General Monitoring Requirements

1. Flow Monitoring

   Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year and records of calibration shall be maintained for review upon request.

2. Monitoring and Sampling Locations

   Samples shall be obtained at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change.

   The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

MONITORING AND REPORTING PROGRAM

Table MRP-1—Monitoring Locations

Monitoring Location Name	Monitoring Location Description
INF	Location where a representative sample of wastewater entering the pond treatment system can be obtained
EFF	Location where a representative sample of treated wastewater can be obtained
PND-1, PND-2, PND-3, PND-4, PND-5, PND-6, PND-7 and SW-PND	Seven treatment and storage ponds (PND-1 through PND-7) One storm water pond (SW-PND)
NEW WELL	Location where representative samples of regional groundwater can be obtained

3. Sampling and Sample Analysis

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

- The operator is trained in proper use and maintenance of the instruments;
- The instruments are field calibrated at the frequency recommended by the manufacturer;

MONITORING AND REPORTING PROGRAM

- The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and

- Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);

- *Test Methods for Evaluating Solid Waste* (EPA);

- *Methods for Chemical Analysis of Water and Wastes* (EPA);

- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);

- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and

- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency. This monitoring program shall remain in effect unless and until a revised MRP is issued.

B. Specific Monitoring Requirements

1. Feedstock Monitoring

MONITORING AND REPORTING PROGRAM

Daily logs of feedstock materials accepted for onsite processing shall be kept including supplier, material type, solid or liquid state, weight or volume and other relevant documentation.

2. General Pond Monitoring

Influent flow rates shall be monitored for all waste streams to the pond treatment system. In warm dry weather, wastewater collected at the sump passes through the ADF resulting in one waste stream to the ponds. In cold weather, ADF discharges to PND-1 constituting a primary waste stream and wastewater at the rendering plant sump also directly discharges to PND-1; there are two waste streams. The ADF discharges to PND-1 are metered. The seasonal rendering plant sump discharges to PND-1 may be measured by a weir, pump calibration and run time meter, or other means of estimation.

Weekly freeboard measurements for Pond 7 shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 foot.

Weekly visual observations for berm condition shall include evidence of saturation or seepage through the berm, need for vegetation removal, evidence of animal activity such as burrowing or erosion.

Weekly observations for the presence of odors or insect activity causing any type of nuisance condition.

All ponds used for treatment, storage, or disposal of wastewater shall be monitored as specified below.

Dissolved oxygen monitoring applies to any treatment pond containing more than two feet of standing water. Best results are obtained from field analysis.

Pond depth shall be recorded annually in late summer (August-September) when pond volumes are lowest to assess solids accumulation and available storage capacity for the upcoming winter season.

Table MRP-2—General Pond Monitoring

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Influent Flow, ADF	gallons per day	Meter reading	Continuous	Quarterly

MONITORING AND REPORTING PROGRAM

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Influent Flow, Sump	gallons per day	Meter, estimation	Continuous	Quarterly
Freeboard, Pond 7	0.1 feet	Measurement	Weekly	Monthly
Dissolved oxygen	milligrams per liter	Grab	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm condition	--	Observation	Weekly	Monthly
Pond depth, solids accumulation	0.1 feet	Measurement	Annually	Annually

3. Influent and Effluent Monitoring for the Pond Treatment System

Influent wastewater samples shall be collected from a location representative of all waste streams entering the pond treatment system. When two waste streams occur on a seasonal basis, influent wastewater samples shall be collected at the PND-1 discharge location to PND-2 to represent the combined waste streams in the primary pond, PND-1. Effluent samples will be collected at the final stage of wastewater treatment. Sample location descriptions and a map showing sample locations shall be included and the locations shall remain as consistent as possible under the Facility's operating conditions. Pond sample monitoring shall be performed for the following parameters:

MONITORING AND REPORTING PROGRAM

Table MRP-3—Influent and Effluent Quality Monitoring

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
pH	standard units	Grab	Monthly, Quarterly[1]	Quarterly
Oxidation-Reduction Potential	mV	Grab	Monthly, Quarterly[1]	Quarterly
Electrical Conductivity	microohms per centimeter	Grab	Monthly, Quarterly[1]	Quarterly
Total Dissolved Solids	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Fixed Dissolved Solids	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Biological Oxygen Demand[2]	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Chemical Oxygen Demand	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Total Nitrogen	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Total Kjeldahl Nitrogen	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Ammonia-Nitrogen	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Nitrate+Nitrite as Nitrogen	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Chloride	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly
Sodium	milligrams per liter	Grab	Monthly, Quarterly[1]	Quarterly

MONITORING AND REPORTING PROGRAM

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Total Metals[3]	micrograms per liter	Grab	Semiannually	Semiannually
General Minerals[3]	micrograms per liter	Grab	Semiannually	Semiannually
Priority Pollutants[4]	Micrograms per liter	Grab	Every 5 years	Every 5 years

Table Note 1: Monthly frequency for 12 months following WDR issuance; Quarterly frequency thereafter unless the Central Valley Water Board provides an argument for more frequent monitoring for select constituents of concern.

Table Note 2: 5-day, 20 degrees Celsius Biochemical Oxygen Demand.

Table Note 3: Total metals as presented in EPA's Publicly Owned Treatment Works Sludge Sampling and Analysis Guidance Document, (EPA/833B89100 August 1989) shall include the following: arsenic, cadmium, copper, lead, molybdenum, nickel, selenium, zinc, and mercury. General minerals shall include an ion balance for the following: sodium, calcium, magnesium, potassium, chloride, nitrate as nitrogen, sulfate, iron, manganese, total alkalinity-alkalinity series, and hardness.

Table Note 4: Priority pollutants as presented in Appendix A to U.S. EPA Code of Federal Regulations, title 40, Part 423, link to EPA Priority Pollutant list (https://www.epa.gov/sites/production/files/2015-09/documents/priority-pollutant-list-epa.pdf). Note that asbestos, dioxins and furans are not required.

4. Groundwater Monitoring

Groundwater monitoring from the New Well shall include at least the parameters listed in the table below. Although this water is not used in ADF operations, it is used to clean the premises and provides water quality data that is representative of regional groundwater flow beneath the Facility.

As an alternative, the Discharger may submit a copy of the most current Department of Public Health Consumer Confidence Report or analytical results submitted to the County Environmental Health Department or California Department of Public Health, as applicable.

MONITORING AND REPORTING PROGRAM

Table MRP-4—Groundwater Monitoring

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	gallons per day	Meter reading	Monthly	Annually
pH	Standard Units	Grab	Annually	Annually
Electrical Conductivity	Microohms per centimeter	Grab	Annually	Annually
Total Dissolved Solids	milligrams per liter	Grab	Annually	Annually
Chloride	milligrams per liter	Grab	Annually	Annually
Total Kjeldahl Nitrogen	milligrams per liter	Grab	Annually	Annually
Nitrate-Nitrogen	milligrams per liter	Grab	Annually	Annually

5. Pond Sludge Monitoring

The Discharger shall keep records regarding the quantity of pond sludge removed from all ponds; any sampling and analytical data; the quantity of sludge stored onsite and the quantity removed for offsite disposal.

If sludge is transported off-site for disposal, then the Discharger shall submit records identifying the hauling company, the amount of sludge transported, the date removed from the facility, the location of disposal and copies of all analytical data required by the entity accepting the waste. All records shall be submitted as part of the Annual Monitoring Report.

C. Reporting Requirements

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyredding@waterboards.ca.gov.

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
ECM Mailroom
364 Knollcrest Drive, Suite 205
Redding, California 96002

MONITORING AND REPORTING PROGRAM

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Attention: Compliance/Enforcement Section
North State Rendering Company, Inc.
Butte County
WDID: 5A042009001
Place ID: 262878

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

Reporting shall include a map view illustration of flow monitoring locations and sample collection locations.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports need to be included in the monitoring reports; all laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

MONITORING AND REPORTING PROGRAM

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

In the future, the State Water Board or Central Valley Regional Water Board may require electronic submittal of monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www. waterboards.ca.gov/ciwqs/index.html) or similar system. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System. Until then, electronic data files should be available upon request.

Quarterly Monitoring Reports

Quarterly monitoring reports shall be submitted to the Board by the 1st day of the second month after the quarter (i.e. the January-March quarterly report is due by May 1st). Each Quarterly Monitoring Report shall include the following:

1. Overview and discussion of monitoring results for the reporting period.

2. Tabulated results of feedstock monitoring, including daily logs and table summary with total monthly values for each waste type received.

3. Tabulated monthly results of influent flow monitoring to the pond system, including calculated monthly total flow volumes for each waste stream, average daily flow for each month, and total annual flow to date.

4. Tabulated results of pond monitoring, including:

    a. Visual observations including freeboard, berm integrity, and vector control;

    b. A narrative description of all preparatory, monitoring, sampling, and sample handling for pond monitoring.

    c. A field log for sample collection listing relevant weather and site conditions, parameters measured before, during, and after sample collection; sample preparation (e.g., filtering); and sample preservation.

MONITORING AND REPORTING PROGRAM

d. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter

e. Summary data tables of historical and current field measurements and analytical results.

f. A scaled map showing relevant structures and features of the facility, the locations of flow monitoring and sample collection, and surface waters.

g. Attach laboratory reports for analytical data and chain of custody documentation.

5. Tabulated results of sludge monitoring completed during the quarter, and (if applicable) verification of classification of biosolids as nonhazardous per 22 CCR, Article 11, Criteria for Identification of Hazardous and Extremely Hazardous Waste (California Assessment Manual procedures).

6. Tabulated results of groundwater monitoring

   a. Calculated values for monthly flow, arranged in tabular format and total annual flow to date.

   b. Tabulated results of annual laboratory data,

   c. A copy of laboratory report and chain of custody documentation.

Annual Monitoring Reports

Annual monitoring reports shall be submitted to the Board by the 1st day of February. Each Annual Monitoring Report shall include the following:

1. Effective 2020, and every five years thereafter, an evaluation of sludge depth and sludge removal plans pursuant to Discharge Specification D.15.

2. Summary data tables, time-series graphs, and a written evaluation of flow rate and analytical data and collected during the reporting period. Discussion should note anomalous data and operations events during the reporting period.

3. An evaluation of Facility operations including discussion of wastewater storage capacity issues, nuisance conditions, and a forecast of the flows anticipated in the next reporting period, as described in Standard Provision E.4.

MONITORING AND REPORTING PROGRAM

4. A discussion of compliance issues and the corrective actions taken, as well as any planned or proposed actions needed to bring wastewater discharges into full compliance with WDRs requirements.

5. Monitoring equipment maintenance and calibration records, as described in Standard Provision C.4., if applicable.

6. A statement of when the Operation and Maintenance Manual was last reviewed for adequacy and a description of any changes made during the reporting period.

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 its right to take any enforcement actions authorized by law.

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 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available on the internet (at the address below) and will be provided upon request.

Link to Water Board website - Filing petitions
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)