

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2017-0019

WASTE DISCHARGE REQUIREMENTS

FOR
CALIFIA FARMS, LLC
AND
NORTH KERN WATER STORAGE DISTRICT
PROCESS WATER REUSE PROJECT
KERN COUNTY

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

1. Califia Farms, LLC (hereafter "Califia Farms or Discharger") produces almond milk, juices, and coffee drinks at its Bakersfield facility (Facility), which is about six miles north of the City of Bakersfield as shown on Attachment A, which is attached hereto and made part of this Order by reference. Wastewater is generated during the processing and cleaning of the specialty drink processing equipment. Califia Farms began operations in 2011 and the discharge/disposal of its wastewater has been conducted under Waste Discharge Requirements 96-169 that were originally issued to Exeter Packers dba Sun Pacific Shippers in 1996. Waste Discharge Requirements Order 96-169 is being revised to reflect the change in the Sun Pacific Shippers discharge. The Califia Farms agreement with Sun Pacific to discharge to Sun Pacific's land application areas has been terminated, and Califia Farms is now seeking another disposal method for its wastewater.
2. On 19 November 2015, GEI Consultants, Inc. on behalf of Califia Farms submitted a Report of Waste Discharge (RWD) that described the construction of a pipeline to discharge Califia Farms wastewater into the nearby Lerdo Canal that is operated by the North Kern Water Storage District (hereafter District or Discharger). At the request of Central Valley Water Board staff, an amended RWD (additional information to complete the RWD) was submitted on 17 February 2016. Califia's wastewater will be blended in the Lerdo Canal with the District's surface and groundwater supplies, in addition to oil field produced water discharged by the California Resources Production Corporation (CRC). CRC's discharge is regulated by WDRs Order R5-2015-0127. During the non-irrigation season (typically December through February) and during an annual maintenance shutdown in January, the various waters including the Califia Farms discharge will be discharged to the Rosedale Spreading Basin for groundwater recharge.
3. The Califia Farms Facility is at 33502 Lerdo Highway, north of Bakersfield, in Section 11, T28E, R26E, MDB&M, as shown as shown on Attachment B, which is attached hereto and made part of this Order by reference. The District currently provides water for groundwater recharge and the irrigation of crops on approximately 55,000 acres in

Kern County. Attachment B shows the District Boundaries and the Rosedale Spreading Basin (Rosedale Basin), a 608-acre facility used for groundwater recharge (Sections 22 and 27, T28S, R26E, MDB&M; APNs 091-190-17 and 091-120-04).

4. Califia Farms owns and operates the facility that generates the wastewater, and the North Kern Water Storage District owns and operates the land application areas to which the blended waters will be discharged. Both Califia Farms and the District are responsible for compliance with these Waste Discharge Requirements (WDRs).

Existing Facility and Discharge

5. Currently, wastewater is generated from processing the Califia Farms specialty drink products and discharged at a rate of about 55,000 gallons per day (gpd). Wastewater was discharged to Sun Pacific’s land application areas, but currently Califia Farms process wastewater is being transported via tanker trucks to the North of the River wastewater treatment facility for disposal.
6. Source water is groundwater currently supplied from a shared well on the adjacent Sun Pacific property. The water is chlorinated to treat for sulfides, which are removed using a pleated bag filter. The treatment is likely contributing to the elevated electrical conductivity (EC) results of the discharge. The chlorinated water is treated through two separate processes depending upon its use as an ingredient or for cleaning/sterilization. Cleaning procedures use sodium hydroxide, which the RWD also indicates is likely contributing to the high EC and total dissolved solids (TDS) that are present in the discharge. This Order contains Provision E. 8 that requires Califia Farms to prepare a Salinity Management Plan to further ensure the salt in the discharge is continuing to be evaluated.
7. Water used in the manufacturing of the products is sent first through a multi-media filter, then through a granular activated carbon treatment unit, and finally through a reverse osmosis unit. The filter backwash or reject from these units is currently routed to the wastewater system for disposal.
8. Table 1 below summarizes analytical results from March 2014 through July 2016. The first number is the average and the number in parentheses below is the range of the detections.

Table 1 – Califia Farms Effluent Results

	pH s.u.¹	Electrical Conductivity umhos/cm²	Total Dissolved Solids mg/L³	Sodium mg/L³	Chloride mg/L³
Overall Average	7.5 (4.4 - 8.8)	2501 (1390 - 4400)	1973 (950 - 3400)	266 (61 - 980)	196 (45 - 630)
2014 Average	6.3 (4.4 - 7.8)	2126 (1720 - 2870)	1895 (950 - 3400)	150 (130 - 180)	152 (77 - 200)

	pH s.u.¹	Electrical Conductivity umhos/cm²	Total Dissolved Solids mg/L³	Sodium mg/L³	Chloride mg/L³
2015 Average	8.1 (5.3 - 8.8)	2843 (1800 - 3800)	2141 (1400 - 3300)	208 (130 - 460)	208 (130 - 460)
2016 Average	8.0 (7.4 - 8.3)	2242 (1390 - 4400)	1713 (1100 - 3000)	501 (61 - 980)	210 (76 - 630)

1. s.u. = standard pH units.
 2. umhos/cm = micromhos per centimeter.
 3. mg/L = milligrams per liter.

9. The results indicate that the discharge has elevated EC, TDS, and chloride levels that exceed water quality objectives (Title 22 secondary maximum contaminant levels (MCLs) for EC and TDS and the Tulare Lake Basin Plan for chloride). The Tulare Lake Basin Plan (Basin Plan) contains effluent limits for the discharge of wastewater that may recharge to good quality groundwater's that states the discharge shall not exceed an EC of 1,000 micromhos per centimeter (umhos/cm), a chloride content of 175 milligrams per liter (mg/L), or a boron content of 1.0 mg/L. The available boron data is limited to two samples from October 2015 and January 2016 that had results of 0.08 mg/L, and 0.13 mg/L, respectively. By itself and without the proposed blending with District waters and the California Resources Corporations, Inc.'s (CRC) oil field produced water, chloride in the Califia discharge will exceed the Basin Plan limit of 175 mg/L and the average EC of the discharge will exceed the Basin Plan limit of 1,000 umhos/cm. However, the discharge is to be blended with other waters in the Lerdo Canal and the Rosedale Spreading Basin as discussed in the following section.

Proposed Discharge

10. On behalf of Califia Farms, GEI Consultants, Inc. (GEI), submitted a RWD on 20 November 2015. Califia Farms is proposing to discharge its wastewater into the Lerdo Canal to supplement the North Kern Water Storage District (District) irrigation supplies. The Califia Farms RWD indicates that Califia Farms currently generates wastewater at a rate of about 55,000 gallons per day (gpd), but is projected to increase to 150,000 gpd in the future.
11. The Califia Farms RWD uses a model developed and used by Kennedy/Jenks Consultants for a March 2015 RWD prepared for the CRC and the District to show the influence the Califia Farms discharge will have to the waters in the Lerdo Canal. The Califia Farms RWD indicates the wastewater will be blended with District irrigation water at all times with the exception of a two week to one month period each year that the Lerdo Canal is closed for maintenance.

12. The RWD contained the estimated concentrations for the blended Califia Farms wastewater, CRC oil field produced water, and District irrigation water for both wet years and dry year scenarios. A dry year scenario assumes the minimum flow of other water sources (Kern River water and groundwater) since 1991 (24 years) are available for blending, while the wet year scenario assumes the maximum flow of the additional water sources are available for blending. Also listed are the applicable water quality objectives and the Districts own water quality goals as shown in the following tables.

Table 2 - Anticipated Blended Water Quality - Dry Year

<u>Source</u>	<u>Flow mgd¹</u>	<u>Electrical Conductivity umhos/cm²</u>	<u>Boron mg/L³</u>	<u>Chloride mg/L³</u>	<u>Sodium mg/L³</u>	<u>Arsenic ug/L⁴</u>	<u>Sulfate mg/L³</u>
District	27.15	384	0.1	35	37	1	9
CRC ⁵	1.85	772	1.0	85	172	76	3
Califia	0.15	2300	0.1	170	150	0	50
Blended	---	547	0	56	92	31	7
Water Quality Objectives	---	1000	1.0	175	---	10	250
District Goals	---	<650	0.5	100	140	10	---

1. mgd = million gallons per day
2. umhos/cm = micromhos per centimeter.
3. mg/L = milligrams per liter.
4. ug/L = micrograms per liter.
5. CRC = California Resources Production Company

Table 3 - Anticipated Blended Water Quality - Wet Year

<u>Source</u>	<u>Flow mgd¹</u>	<u>Electrical Conductivity umhos/cm²</u>	<u>Boron mg/L³</u>	<u>Chloride mg/L³</u>	<u>Sodium mg/L³</u>	<u>Arsenic ug/L⁴</u>	<u>Sulfate mg/L³</u>
District	765	384	0.1	35	37	1	9
CRC ⁵	29	772	1.0	85	172	76	3
Califia	0.23	2300	0.1	170	150	0	50
Blended	---	399	0	37	42	4	9
Water Quality Objective	---	1000	1.0	175	---	10	250
District Goals	---	<650	<0.5	<100	<140	<10	---

1. mgd = million gallons per day
2. umhos/cm = micromhos per centimeter.
3. mg/L = milligrams per liter.
4. ug/L = micrograms per liter.
5. CRC = California Resources Production Company

The anticipated blended water quality is less than the proposed water quality objectives and/or Title 22 MCLs, with the exception of arsenic in the dry year evaluation. However, as part of a nearby produced water reclamation project between the District and CRC, the District completed an arsenic soil-adsorption removal evaluation. The analysis

demonstrates that the unsaturated soils underlying the Rosedale Basin and the irrigated areas of the District have sufficient capacity to adsorb all arsenic from the proposed project discharge containing a concentration as high as 120 ug/L. The combined Califia and CRC discharges will not contain arsenic concentrations approaching 120 ug/L. The results demonstrate that there will be no change in the arsenic concentration in the underlying groundwater associated with project discharges to the District.

13. The RWD includes an estimate of the quality of the total discharge to the Rosedale Spreading Basin during the annual two week to 30 day maintenance shutdown of the canal using the current discharge rate of 55,000 gallons per day (gpd) (equals 0.17 acre feet per day), and the anticipated maximum flow rate of 150,000 gpd (0.46 acre feet per day). The Califia Farms discharge during this period will be blended directly with CRC's oil field produced water, and surface water when available. Table 4 provides estimates of the quality of the blended Califia Farms and CRC discharges, and also estimates the resulting quality using historical averages for surface water discharges to the Rosedale Spreading basins during the maintenance shutdown since 1991 (24 years).

Table 4 – Estimated Discharge to the Rosedale Spreading Basin

	Electrical Conductivity umhos/cm¹	Total Dissolved Solids mg/L²	Chloride mg/L²	Sodium mg/L²
Califia/CRC discharges only	823	632	94	178
Califia/CRC & historical surface water discharges	263	165	22	33
Water Quality Objective	1000	500	175	---
District Goals	650	---	100	140

^{1.} umhos/cm = micromhos per centimeter.

^{2.} mg/L = milligrams per liter.

Site-Specific Conditions

14. Source water has been provided to Califia Farms since 2011 from a well on the neighboring Sun Pacific property, but Califia Farms has just completed the installation of a new supply well on its property. The data for the Sun Pacific well is available, but is limited to select dates and constituents. GEI provided a 2014 Consumer Confidence Report for the Sun Pacific well and data for the Sun Pacific well from 1994 through 2015 was available on line. The averages presented for the Sun Pacific well in the following table are from four to five sampling events performed from 1999 through 2014. The Califia Farms well results are from one sample collected on 17 October 2016.

Table 5 – Source Water Results

<u>Constituent</u>	<u>Units</u> ¹	<u>Sun Pacific</u>	<u>Califia Farms</u>
Electrical Conductivity	umhos/cm	554	280
Sulfate	mg/L	70	4.6
Chloride	mg/L	97	49
Arsenic	ug/L	4.7	2.7

¹. umhos/cm = micromhos per centimeter, mg/L = milligrams per liter, ug/L = micrograms per liter.

15. The site elevation is about 440 feet above mean sea level and the natural land surface slopes gently to the southwest. The nearest surface water is the man-made Lerdo Canal, which is about 1,000 feet southwest of the Facility. The nearest natural water body is Poso Creek which is located about 4 miles north/northwest of the Facility.
16. The Facility itself sits right on the edge of the Federal Emergency Management Agency (FEMA) flood maps, and there is no coverage directly north of the Facility. According to FEMA map number 06029C1800E, the area directly south of the Facility and the Rosedale Spreading Basin are outside of the 100-year return frequency flood zones. According to FEMA Map Numbers 06029C0725E and 06029C1280E, portions of the proposed irrigated acreage in the northern portion of the District along Poso Creek and both spreading basins set along Poso Creek are within a 100-year return flood event. Considering the quality of the blended wastewaters and that the surface waters are already used so that the blended discharge will meet District irrigation standards, inundation by floodwaters of the two northern most spreading basins would not threaten the underlying groundwater quality.
17. According to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service, soils in the northern portion of the District consist primarily of Wasco sandy loam and the McFarland loam, with lesser amounts of Lewkalb sandy loam, Milham sandy loam, Driver coarse sandy loam, and the Kimberlina fine sandy loam. Soils in the Rosedale are in similar percentages, but the Lewkalb sandy loam is not present.
18. The Wasco sandy loam is a Class 2s soil that has moderate limitations that reduce the choice of plants or that require moderate conservation practices. The “s” subclass indicates the soil is limited mainly because it is shallow, droughty, or stony. The Wasco sandy loam is described as well drained with a high capacity to transmit water. The McFarland loam is a Class 1 soil that has few limitations that restrict usage. The McFarland loam is listed as prime farmland that if irrigated, is well drained with a moderately high capacity to transmit water.
19. The District area is characterized by hot dry summers and cooler, humid winters. The rainy season generally extends from November through March. Average annual precipitation is about 6.5 inches and annual evapotranspiration data is 54.6 inches with monthly averages ranging from 1.3 inches in January and December to 8.1 inches in

July (California Irrigation Management Information System (CIMIS) Shafter Station # 5). The 100-year, 24-hour maximum precipitation is about 2.9 inches, based on maps obtained from the Kern County Resource Management Agency, Engineering, Survey and Permit Services, Floodplain Management Section.

20. Land usage surrounding the Facility is primarily agricultural with industrial facilities present to the west. A Sun Pacific citrus packing facility is directly adjacent to the west of the Califia Farms Facility. Several industrial facilities including a Grimmway citrus processing facility are present about a mile west of the Califia Farms Facility near the intersection of Lerdo Highway and State Highway 99. The total land area within the District is approximately 60,000 acres. In 2012, nonagricultural lands in the service area were about 12 percent of the total area. Of the remaining 88 percent of irrigated area, approximately 80 percent were planted in permanent crops of nuts, vineyards, and fruit. The District provided crop acreage estimates and those are shown in the following table.

Table 6 – 2012 Crop and Acreage Estimates

<u>Crop</u>	<u>Acres</u>
Almonds	30,289
Grapes, Table	5,818
Alfalfa hay	3,678
Roses	2,961
Pistachios	2,601
Misc. Vegetables	1,723
Open Land	1,568
Apples	1,256
Cotton	754
Grain, Wheat	626
Pomegranates	334
Pecans	188
Grain, Corn	182
Others	156
Peppers	152
Olives	83
Cherries	27
Total Crops	52,396

Groundwater Conditions

21. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric and narrative objectives, including objectives for chemical constituents, toxicity

of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the MCLs in Title 22 of the California Code of Regulations. The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwater does not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

22. The California Legislature enacted A.B. 3030 during the 1992 session, subsequently codified in Water Code section 10750, *et seq.* Water Code section 10750 states, in part, that:

“Any local agency, whose service area includes a groundwater basin, or a portion of a groundwater basin, that is not subject to groundwater management pursuant to other provision of law or a court order, judgment, or decree, may, by ordinance, or by resolution if the local agency is not authorized to act by ordinance, adopt and implement a Groundwater Management Plan pursuant to this part within all or a portion of its service area.”

23. Water Code section 60224 empowers the District to take any action needed for protection and preservation of underlying groundwater supplies including:
- The prevention of contaminants from entering groundwater supplies;
 - The removal of contaminants from groundwater supplies;
 - The locating and characterizing of contaminants which may enter the groundwater supplies;
 - The identification of parties responsible for contamination of groundwater; and
 - The performance of engineering studies.
24. The District adopted an updated Groundwater Management Plan (Plan) in August 2012 with an overarching goal of “preserving the groundwater resource as a viable source of water supply to support overlying uses into the foreseeable future through local control and management.” Objectives of the plan are:
- Maintain groundwater levels at economically viable pumping depths for the overlying agricultural uses.
 - Protect groundwater quality in general and minimize increases in salinity.

- Avoid conditions conducive to inelastic land surface subsidence.
- Protect and preserve surface water rights and contracts.
- Protect and preserve surface water quality.

25. Monitoring elements of the Groundwater Management Plan include:

- Semi-annual monitoring of groundwater levels of wells within the District;
- Quarterly monitoring of groundwater quality of District wells during years when their use is required;
- Monthly sampling of water in the District's canals;
- Subsidence monitoring following significant pumping seasons; and
- Preparation of quarterly and annual monitoring reports.

26. The District adopted an Agricultural Water Management Plan (AWMP) in August 2014 in accordance with the requirements of the Water Conservation Bill of 2009 (SBX7-7, Water Code §10820). The AWMP presents the District's existing and planned activities and programs designed to improve water use efficiency.

27. To sustain existing irrigated agriculture, the District supplements the landowner's use of groundwater with imported surface water, and the treated process waters such as the discharge from Califia's Facility. Through its authority and Plan, the District proposes to manage the project within its boundaries to meet Basin Plan objectives. The Basin Plan allows blending of wastewater with surface and groundwater to promote reuse of wastewater in areas with water shortages provided it is otherwise consistent with water quality policies.

District Groundwater Considerations

28. The District is located in the recharge area of the Kern County Subbasin. The aquifer system in the District area consists of unconfined conditions in the upper few hundred feet, and confined conditions at greater depths depending on the local extent of the clay layers. Within this region, there are three general zones of clay lenses named the "300-foot clay", the "700-foot clay", and the "900-foot clay" as shown in the geologic cross sections in the 2012 North Kern Groundwater Management Plan. The 300-foot clay is not entirely continuous and so allows for downward groundwater movement. The 700-foot clay is generally thicker and more continuous than the 300-foot clay. In the eastern side of the basin, including the District, fresh water occurs to depths of approximately 1,500 feet. Hydrologic conditions of the District differ from those of adjacent areas to the west where shallow clay layers restrict surface water percolation.

29. Based on groundwater elevation contours for 2009 and 2011, the groundwater flow direction in the southern half of the District, including beneath the Rosedale Basin, has generally been from the southeast to the northwest, with a gradient of 12 to 15 feet per mile (ft/mi). In the northern half of the District, the groundwater flow direction has generally been from east to west, with a gradient of 7 to 10 ft/mi. The groundwater flow gradient in the vicinity of the Rosedale Basin was estimated to be 17 ft/mi based on 2012 groundwater elevation measurements. The transmissivity of the aquifer is estimated to be 160,000 to 460,000 gallons per day per foot and the hydraulic conductivity is approximately 53 to 152 feet per day. Based on these estimates of aquifer properties and using the 2012 hydraulic gradient estimate of 17 ft/mi, the flow of the groundwater underlying the Rosedale Basin is estimated to be between 3.8 and 11 mgd.
30. Subsurface conditions in the Rosedale Basin were evaluated using available well logs, and logs for a series of six shallow borings placed in the dominant soil types present in the spreading basin. Available well logs for three of the seven wells located within the Rosedale Basin were analyzed. Soil textures in the upper 100 feet below the ground surface (bgs) are generally silty or clayey sands, textures between 100 and 350 feet bgs are generally sands and gravels, and below 350 feet bgs, there are varying layers of sands, gravels, and clays. The 300-foot clay, 700-foot clay, and 900-foot clay layers appear to be present beneath the Rosedale Basin, with a possible additional clay layer present at around 500-feet bgs. The well logs and boring logs were also analyzed to determine the ratio of coarse-grained material (sands and gravels, including trace clays or silts) to fine-grained materials (clays and silts). Overall, the ratio was determined to be 52 percent coarse-grained material to 48 percent fine-grained material. The surface soils and alluvium present at the Rosedale Basin are primarily poorly graded sands underlain by silty and sandy alluvium to a depth of 30 feet bgs.
31. The District already monitors seven deep extraction wells and one 400-foot deep monitoring well (when water is present) that are within the Rosedale Spreading Basin. The following table shows groundwater results for wells within the District and those that are specifically within the Rosedale Basin. The first number shown is the average and the range is to the right in parentheses.

Table 7 - North Kern Water Storage District - Groundwater Quality

<u>Constituent</u>	<u>Units</u> ¹	<u>District Wells</u>	<u>Rosedale S.B. Wells</u>
Electrical Conductivity	umhos/cm	659 (160 – 2500)	429 (240 – 890)
Boron	mg/L	0.11 (0.1 – 0.48)	0.13 (0.1 – 0.22)
Chloride	mg/L	72 (9 – 470)	47 (9 – 100)
Sodium	mg/L	80 (20 – 390)	74 (13 – 160)

<u>Constituent</u>	<u>Units</u> ¹	<u>District Wells</u>	<u>Rosedale S.B. Wells</u>
Sulfate	mg/L	130 (12 – 750)	74 (22 – 230)
Arsenic	ug/L	Not analyzed	2.44 (2 – 3.5)

1. umhos/cm = micromhos per centimeter; mg/L = milligrams per liter; ug/L = micrograms per liter.

32. The Cawelo Water District is immediately upgradient of and adjacent to the District. The background groundwater quality used for the Cawelo Water District Project (WDR Order R5-2012-0058) is shown in the following table:

Table 8 - Background Groundwater Quality

<u>Constituent</u>	<u>Units</u> ¹	<u>CWD Background</u> ²
Electrical Conductivity	umhos/cm	618
Arsenic	ug/L	3.4
Boron	mg/L	0.14
Chloride	mg/L	87.7
Sodium	mg/L	55.7

1. umhos/cm = micromhos per centimeter; mg/L = milligrams per liter; ug/L = micrograms per liter.

2. Source: Cawelo Water District, 2011, *Famoso Basins Antidegradation Analysis*.

33. Califia Farms estimated the quality of the groundwater underlying the Rosedale Spreading Basin in the February 2016 amended RWD.

Table 9 – Estimated Groundwater Quality – Rosedale Spreading Basin

<u>Constituent</u>	<u>Units</u> ¹	<u>Estimated Value</u>
Electrical Conductivity	umhos/cm	440
Total Dissolved Solids	mg/L	255
Chloride	mg/L	46
Sodium	mg/L	73

1. umhos/cm = micromhos per centimeter; mg/L = milligrams per liter; ug/L = micrograms per liter.

Basin Plan, Beneficial Uses, and Regulatory Considerations

34. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2015 (the “Basin Plan”) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. The beneficial use of water in the Districts spreading basins and distribution systems is by design, agricultural supply. Surface water flows in the District are to the South Valley Floor hydrologic unit, Valley Floor Waters. The beneficial uses of Valley Floor Waters, as stated in the Basin Plan for Hydrologic Area No. 558, are agricultural supply; industrial service supply; industrial process supply; groundwater recharge;

water contact recreation; non-contact water recreation; warm freshwater habitat; wildlife habitat; and enhancement of rare, threatened, or endangered species.

35. The District is in the Kern County Basin hydrologic unit, Poso groundwater hydrographic unit with regards to groundwater. The Basin Plan designates the beneficial uses of groundwater in the Kern County Basin as municipal and domestic supply (MUN), agricultural supply, industrial process supply, and industrial service supply.
36. Water in the Tulare Lake Basin is in short supply, requiring importation of surface water from other parts of the State. The Basin Plan encourages use of recycled water on irrigated crops wherever feasible and indicates that evaporation of recyclable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace existing uses or proposed use of fresh water with recycled water.
37. The Basin Plan includes a water quality objective for chemical constituents that, at a minimum, require waters designated as MUN to meet the State drinking water maximum contaminant levels (MCLs) specified in 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.
38. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. 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.
39. 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.
40. 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 irrigating with water having an EC less than 700 umhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops. It is possible to achieve full yield potential for some crops with waters having EC up to 3,000 umhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.
41. 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.

42. 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.
43. The list of crops in Finding 20 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but it is representative of current and historical agricultural practices in the area.

Antidegradation Analysis

44. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
 - a. The degradation does not result in water quality less than that prescribed in State and regional policies, including violation of one or more water quality objectives.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
 - c. The discharger employs best practicable treatment or control (BPTC) to minimize degradation, and
 - d. The degradation is consistent with the maximum benefit to the people of the state.
45. For the purposes of determining whether the discharges regulated by this Order have the potential to degrade high-quality groundwater, the blended water that will be discharged pursuant to this Order has been compared to the groundwater beneath the Rosedale Basin (using the 2013-2014 average groundwater quality for seven wells completed beneath the Rosedale Basin) and the background water quality. The water quality constituents that may be expected to degrade groundwater are arsenic, boron, chloride, sodium, and EC.
46. The following table compares estimated discharge constituent levels from both the dry year (worst case scenario) and wet year evaluations and discharge to the Rosedale Spreading Basin during the annual maintenance shutdown, with measured groundwater quality beneath the Rosedale Spreading Basin, background groundwater quality from an adjacent water district, and applicable water quality objectives. The discharge water quality is based on the flow weighted average of 24 years of actual surface water

deliveries that incorporate the variations in annual precipitation and variations in annual Kern River water supply.

Table 10 – Estimated Discharge Results

	Electrical Conductivity <u>umhos/cm</u>¹	Boron <u>mg/L</u>²	Chloride <u>mg/L</u>²	Sodium <u>mg/L</u>²
Blended Discharge to canal (dry year)	547	0.1	56	92
Blended Discharge to canal (wet year)	399	0.1	37	42
Califia/CRC/Surface water to Rosedale SB	263	---	22	33
Groundwater Beneath Rosedale Basin	429	0.13	47	74
Background Groundwater Quality	618	0.14	88	56
Water Quality Objectives	1,000	1.0	175	---

1. umhos/cm = micromhos per centimeter.
 2. mg/L = milligrams per liter.

47. The results indicate that the EC, chloride, and sodium content of the discharge to the District farmlands during a dry year would be higher than the groundwater quality beneath the Rosedale Spreading Basin. But the estimated values are for discharge to the entire District and the values are less than the background groundwater quality with the exception of sodium. Sodium during a dry year would exceed the background water quality, but it is less than the water quality objective.
48. This Order establishes effluent and groundwater limitations for the discharges that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan.

Treatment and Control Practices

49. The Discharger implements the following treatment or control measures to minimize the potential for the waste discharges to degrade groundwater:
- a. Treatment and filtering of supply water to remove sulfides.
 - b. Removal of suspended solids and sediment from the waste stream prior to discharge to an oxidation ditch for further aeration and settlement of solids.
 - c. Appropriate solids disposal practices.
 - d. Comprehensive wastewater/effluent monitoring.
 - e. Wastewater stored in a 700,000 gallon lined oxidation ditch prior to discharge to the Lerdo Canal or Rosedale Spreading Basin.

- f. Preparation and implementation of a Salinity Management Plan.
 - g. Blending of process wastewater with existing water supplies so that the blended concentrations are protective of designated beneficial uses of the underlying aquifers.
 - h. Use of water management practices and monitoring at the irrigation and groundwater recharge points of discharge to ensure that groundwater, surface water, and crops are protected.
50. The Board finds that these treatment and control practices represent BPTC of the wastes that may threaten to degrade waters of the state.

Antidegradation Conclusions

51. This Order establishes terms and conditions to ensure that the authorized discharge from the Califia Farms Facility will not excessively degrade groundwater, contribute to existing pollution, or unreasonably affect present and anticipated future beneficial uses of groundwater.
52. The provisions of this Order require the Discharger to implement treatment or control measures listed in Finding 49. These Treatment and Control Practices are reflective of BPTC of the discharge.
53. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and therefore sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. The Discharger's operation provides numerous full time jobs and indirectly provides opportunities for local trucking firms, as well as the industries that produce materials and equipment used for farming the various crops grown on the Districts farm lands and equipment used in the specialty drink processing. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.
54. The discharges as regulated by this Order will provide the following benefits:
- a. Provide up to 168 Ac-ft/yr (~ 150,000 gallons per day) of process water for irrigation and groundwater recharge. This could result in the same amount of water conservation because existing water supplies would not need to be utilized for these purposes.
 - b. Provide a significant benefit for agriculture that would not be realized if the produced water was discharged to a wastewater treatment facility for disposal.

- c. Result in the protection and maintenance of regional groundwater resources. Groundwater recharge, in particular, can reduce the rate of groundwater decline in the project area and decrease pumping costs for any groundwater extraction needed.
 - d. Make available additional water supplies to support the agricultural economy of the District and the Central Valley region.
55. This Order is consistent with the Anti-Degradation Policy since: (a) the Discharger must implement BPTC to minimize degradation; (b) limited degradation is allowed by this Order, but groundwater quality is anticipated to improve and will be protective of future beneficial uses of groundwater; and (c) the limited degradation is of maximum benefit to people of the State.

Other Regulatory Considerations

56. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring groundwater underlying the discharge to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.
57. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2B as defined below:
- a. Category 2 threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
 - b. Category B complexity, defined as: "Any discharger not included [as Category A] that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."
58. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part

The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:

(b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

- (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
- (2) the discharge is in compliance with the applicable water quality control plan; and
- (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

59. The discharge authorized herein, and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27. The current lined wastewater oxidation ditch and District land application areas are exempt pursuant to Title 27, section 20090(b) because they are discharges of wastewater to land, and:
 - a. The Central Valley Water Board is issuing WDRs;
 - b. This Order prescribes requirements that will ensure compliance with the Basin Plan; and
 - c. The wastewater discharged to the Districts farm lands does not need to be managed as hazardous waste
60. In accordance with the requirements of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the District prepared an Initial Study and Negative Declaration (IS/ND) for the construction of a 1,200 foot, 6-inch pipeline from Califia Farm's Facility to the Lerdo Canal. The IS/ND was circulated for public review and comment from 15 April 2016 through 16 May 2016 (State Clearinghouse No. 2016041044). The Board, acting as a responsible agency, was consulted during the development of these documents. The District certified the IS/MND and issued a Notice of Determination on 11 July 2016.
61. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

Public Notice

62. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
63. The Dischargers and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

64. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that pursuant to sections 13263 and 13267 of the Water Code, Califia Farms, LLC, North Kern Water Storage District, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes other than the treated Califia Farms process wastewater at the location and in the manner described in the Findings and authorized herein is prohibited.
2. The bypass or overflow of wastes to surface waters is prohibited.
3. The discharge of water from canals used to transport industrial wastewater (Lerdo Canal) to canals used to transport municipal and domestic water sources (Friant-Kern Canal and/or others) is prohibited.
4. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in Water Code section 13050.
5. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.

B. Effluent Limitations

1. The blended discharge of Califia Farms process wastewater and water within the Lerdo Canal shall not exceed the following for the constituents listed:

<u>Constituent</u>	<u>Units¹</u>	<u>Daily Maximum</u>	<u>Annual Average</u>
Flow	gpd	150,000	---
Electrical Conductivity	umhos/cm	---	1,000
Boron	mg/L	---	1.0
Chloride	mg/L	---	200

¹. gpd = gallons per day; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter.

C. Discharge Specifications

1. Wastewater treatment and use of blended, reclaimed, process wastewater for groundwater recharge shall not cause pollution or a nuisance as defined by Water Code section 13050.

2. The Discharger shall operate all systems and equipment to optimize treatment of wastewater and the quality of the discharge.
3. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.
4. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
5. The discharge of the process wastewater shall not create objectionable odors perceivable beyond the limits of the Lerdo Canal and/or Rosedale Basin property at an intensity that creates or threatens to create nuisance conditions.
6. All spreading basins shall be managed to prevent breeding of mosquitos. In particular,
 - a. An erosion control plan should assure that coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting and herbicides.
 - c. Dead algae, vegetation and other debris shall not accumulate on the water surface.
 - d. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.
7. 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.
8. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at 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 E.9 and E.10.
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. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.
12. Storage of residual solids on areas not equipped with means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

D. Groundwater Limitations

1. The discharge of process wastewater, in combination with other sources, shall not cause groundwater underlying the District to contain waste constituents in concentrations that adversely affect beneficial uses. In no case shall the discharge, in combination with other sources, cause average EC in groundwater on a basin-wide basis to increase by more than six (6) $\mu\text{mhos/cm}$ per year. The average annual increase in EC will be determined from monitoring data by calculation of a cumulative average and annual increase over a 5-year period
2. The discharge of produced water shall not cause groundwater in the area potentially affected by discharges to the spreading basins to contain waste constituents in concentrations greater than the following:

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Electrical Conductivity	umhos/cm	1,000
Arsenic	ug/L	10
Boron	mg/L	0.75

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Chloride	mg/L	175
Sodium	mg/L	115

E. Provisions

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions), which are a part of this Order.
2. The Discharger shall comply with Monitoring and Reporting Program (MRP) R5-2017-0019, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. The Discharger shall keep at the District office and the Califia Farms Facility, copies of this Order including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
4. The District and Califia Farms must at all times properly operate and maintain their respective facilities and systems of treatment and control (and related appurtenances) that are installed or used 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 only when the operation is necessary to achieve compliance with the conditions of the Order.
5. All technical reports and work plans required herein 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 a person registered to practice in California pursuant to California Business and Professions Code Sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to California Water Code Section 13267.
6. 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.

7. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.
8. **By 24 August 2017**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan shall identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan.
9. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.
10. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
11. 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.
12. 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."
13. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving discharge of Califia Farms process wastewater to the Lerdo Canal, the District Farmlands, and/or the Rosedale Spreading Basin, 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 land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall 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 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 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 California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

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 action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order 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 may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on 24 February 2017.

Original signed by

PAMELA C. CREEDON, Executive Officer

Order Attachments:

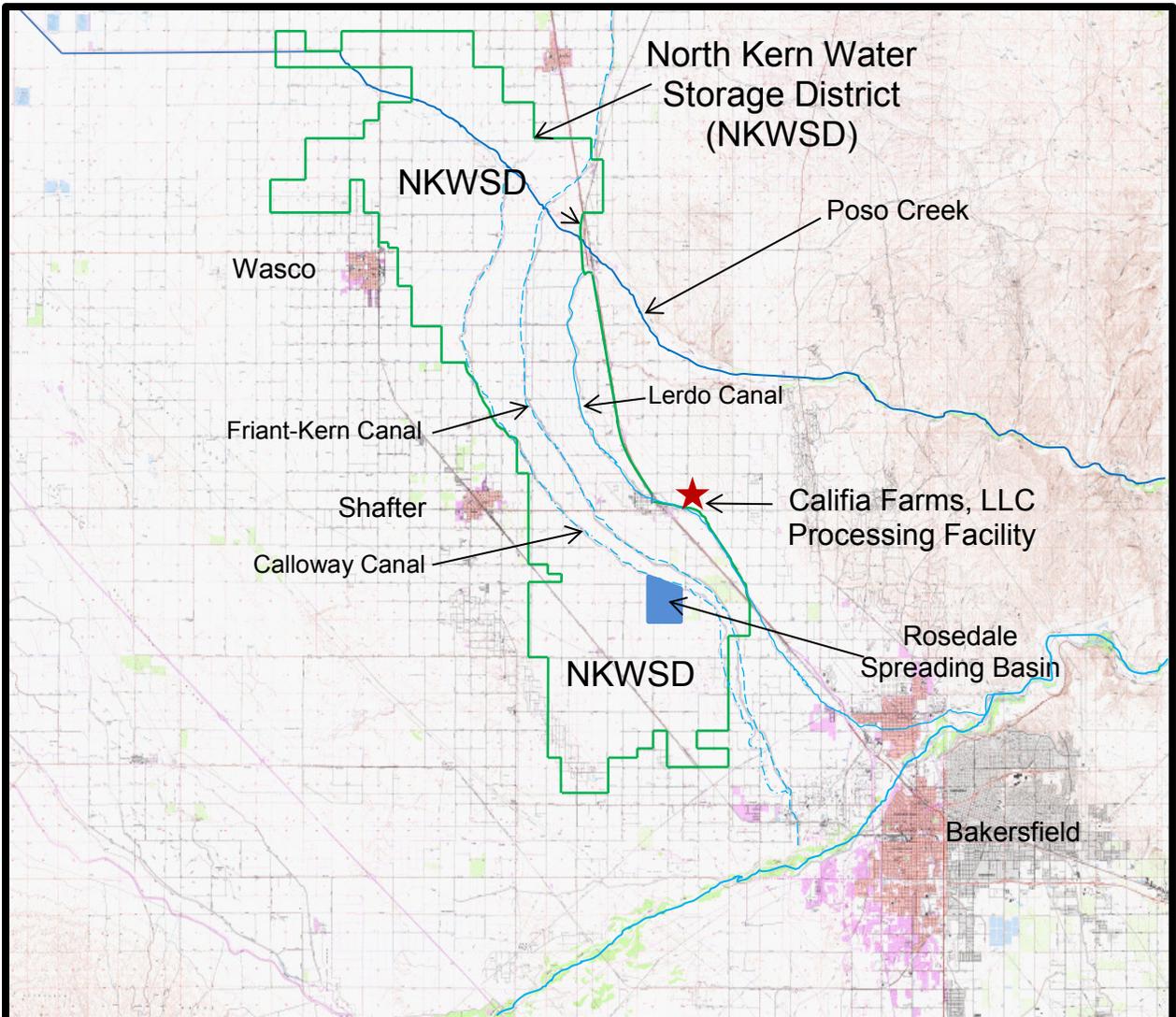
A Site Location Map

B Facility Map

Monitoring and Reporting Program No. R5-2017-0019

Information Sheet

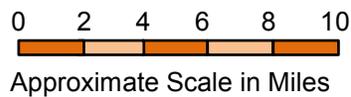
Standard Provisions (1 March 1991) (separate attachment to the Discharger only)



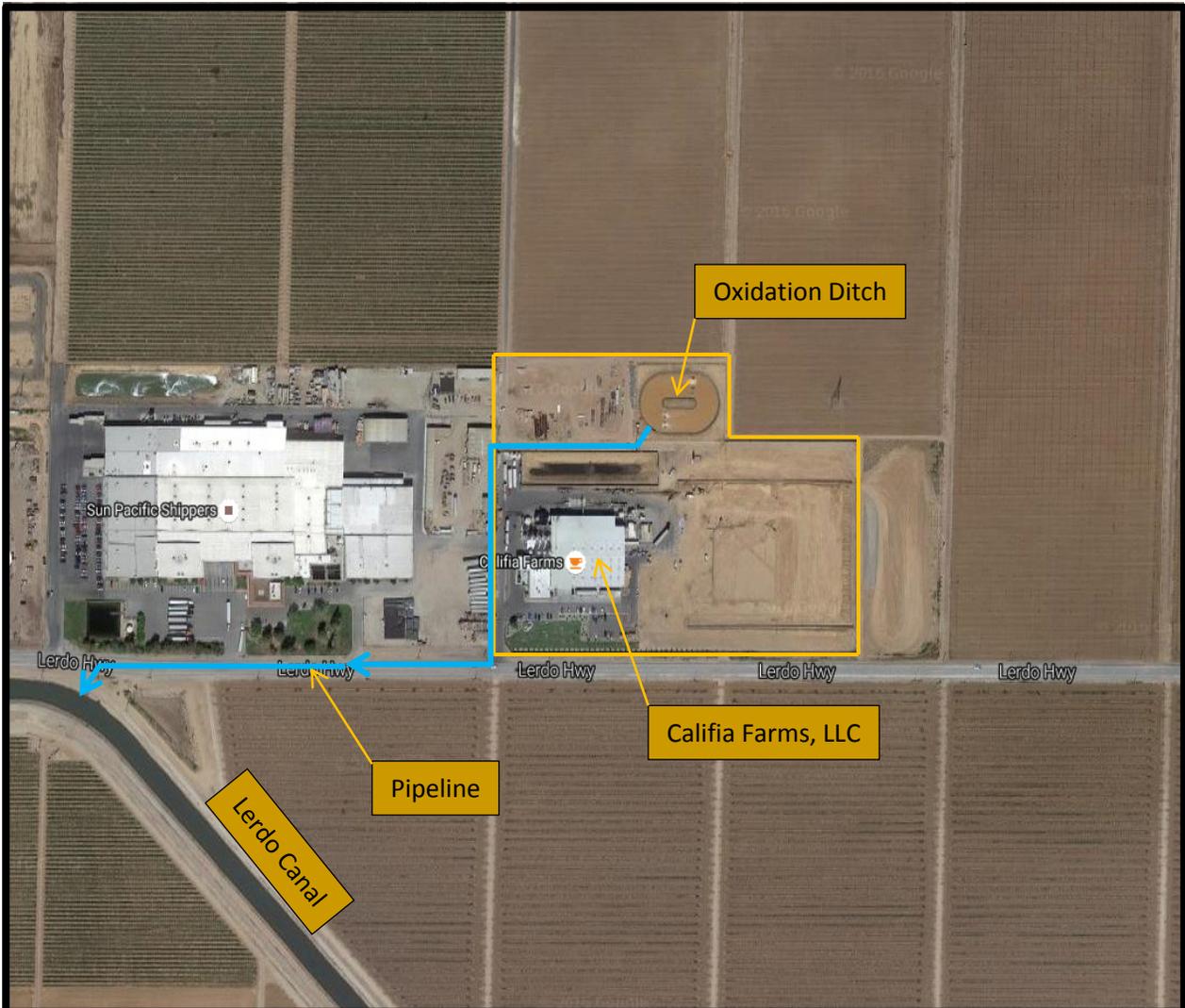
SITE LOCATION MAP

ORDER R5-2017-0019
WASTE DISCHARGE REQUIREMENTS

FOR
CALIFIA FARMS, LLC
AND
NORTH KERN WATER STORAGE DISTRICT
KERN COUNTY



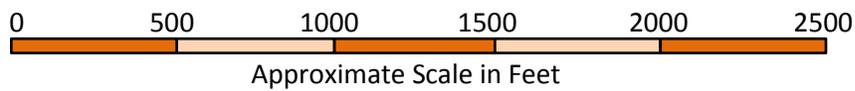
ATTACHMENT A



FACILITY MAP

ORDER R5-2017-0019
WASTE DISCHARGE REQUIREMENTS

FOR
CALIFIA FARMS, LLC
AND
NORTH KERN WATER STORAGE DISTRICT
KERN COUNTY



ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2017-0019
FOR
CALIFIA FARMS, LLC
AND
NORTH KERN WATER STORAGE DISTRICT
BAKERSFIELD PROCESSING FACILITY
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) 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. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *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. The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of 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.

A glossary of terms used within this MRP is included on page 7.

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

Monitoring Location Name	Monitoring Location Description
EFF-001	Location where a representative sample of the effluent can be obtained prior to discharge to the Lerdo Canal or the Rosedale Spreading Basin.
PND-001	Oxidation ditch and distribution system to the Lerdo Canal.
Source Water Wells	Supply wells used to provide water to the facility/land application areas and any other wells added to the groundwater supply well network.

EFFLUENT MONITORING (EFF-001)

The Discharger shall monitor its discharge of wastewater at a point (EFF-001) prior to discharge to the land application areas. The samples shall be representative of the volume and nature of the discharges. Time of collection of the samples shall be recorded. Wastewater monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	Electrical Conductivity	umhos/cm	Grab
Monthly	Biochemical Oxygen Demand	mg/L	24-hour composite
Monthly	Total Dissolved Solids	mg/L	24-hour composite
Monthly	Nitrite as Nitrogen	mg/L	24-hour composite
Monthly	Nitrate as Nitrogen	mg/L	24-hour composite
Monthly	Ammonia Nitrogen	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Quarterly	Boron	mg/L	24-hour composite
Quarterly	Arsenic	mg/L	24-hour composite
Quarterly	Manganese	mg/L	24-hour composite
Annually	General Minerals	mg/L ²	24-hour composite

^{1.} mgd = million gallons per day; umhos/cm = micromhos per centimeter; mg/L = milligrams per liter.

^{2.} mg/L or ug/L, as appropriate.

POND MONITORING (PND-01)

The oxidation ditch monitoring shall include at least the following PND-01:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	Freeboard	Feet ¹	Observation

^{1.} To nearest tenth of a foot

Permanent markers (e.g., staff gauges) shall be placed in the oxidation ditch. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard.

The Discharger shall inspect the condition of the oxidation ditch at least once per week and write visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether dead algae, vegetation, scum, or debris are accumulating on the oxidation ditch surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark green, dull green, yellow, gray, tan, brown, etc.).

SOURCE WATER MONITORING

Any well used as a source water supply shall be sampled. Prior to sampling the wells shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water.

The Discharger shall monitor all wells in its supply well network, and any additional wells added in the future, for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units¹</u>	<u>Sample Type</u>
Quarterly	pH	pH Units	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	Total Nitrogen	mg/L	Grab
Quarterly	Total Organic Carbon	mg/L	Grab
Quarterly	Boron	mg/L	Grab
Quarterly	Arsenic	mg/L	Grab
Quarterly	Manganese	mg/L	Grab
Quarterly	General Minerals	mg/L ²	Grab

^{1.} umhos/cm = micromhos per centimeter, mg/L = milligrams per liter

^{2.} mg/L or ug/L, as appropriate.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports**, which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

- First Quarter Monitoring Report: **1 May**
- Second Quarter Monitoring Report: **1 August**
- Third Quarter Monitoring Report: **1 November**
- Fourth Quarter Monitoring Report: **1 February.**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be mailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disc and mailed to the appropriate regional water board office, in this case 1685 E Street, Fresno, CA, 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5C15NC00207, Facility Name: Califia Farms, LLC Processing Facility, and North Kern Water Storage District, Order: R5-2017-0019

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements, and shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

In addition to the details specified in 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.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. 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 or Central Valley Water Board may notify the Dischargers to electronically submit and upload 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.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting:

1. The results of effluent monitoring specified on page 2.
2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flows from each the wastewater streams.

Pond Monitoring Reporting

1. The results of the monitoring specified on page 3.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Facility Information:

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.

3. A statement certifying when the flow meters and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A statement whether the current operation and maintenance manual, sampling plan, nutrient management plan, and contingency plan, reflect the Facility as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.
5. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____ *Original signed by* _____
PAMELA C. CREEDON, Executive Officer

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Unless otherwise specified or approved, samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:
	Alkalinity Chloride Sodium
	Bicarbonate Hardness Sulfate
	Calcium Magnesium TDS
	Carbonate Potassium

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

INFORMATION SHEET

INFORMATION SHEET - ORDER NO. R5-2017-0019
CALIFIA FARMS, LLC, AND
NORTH KERN WATER STORAGE DISTRICT
PROCESS WATER REUSE PROJECT
KERN COUNTY

Background

Califia Farms, LLC (Califia Farms or Discharger) owns and operates a specialty drink (almond milk, juices, and coffee drinks) processing plant at 33502 Lerdo Highway about six miles north of Bakersfield in Kern County. Califia Farms submitted a Report of Waste Discharge (RWD) in November 2015 proposing the construction of a pipeline to discharge Califia's wastewater into the nearby Lerdo Canal to be blended with irrigation waters (Kern River surface water or groundwater) and other process waters in the canal and discharged to land owned and operated by the District. Califia Farms submitted an amended RWD (additional information to complete the RWD) on 17 February 2016.

Wastewater Generation and Disposal

Wastewater is generated from the processing of specialty drink products including premium juices, almond milk, and blended coffee drinks, and the cleaning of the processing equipment. Wastewater is screened and aerated prior to discharge into the Lerdo Canal for blending and use as supplemental irrigation water or for groundwater recharge.

Groundwater Considerations

The District is located in the recharge area of the Kern County Subbasin. The aquifer system in the District area consists of unconfined conditions in the upper few hundred feet, and confined conditions at greater depths depending on the local extent of the clay layers. The groundwater flow direction in the southern half of the District, including beneath the Rosedale Basin, has generally been from the southeast to the northwest, with a gradient of 12 to 15 feet per mile (ft/mi). In the northern half of the District, the groundwater flow direction has generally been from east to west, with a gradient of 7 to 10 ft/mi. The groundwater flow gradient in the vicinity of the Rosedale Basin was estimated to be 17 ft/mi based on 2012 groundwater elevation measurements.

The District monitors seven deep extraction wells and one 400 feet monitoring well (when water is present) that are within the Rosedale Spreading Basin. The results indicate highly variable water quality results depending upon where one is within the District's farmlands, but the wells underlying the Rosedale Spreading Basin indicate good quality groundwater that does not exceed applicable water quality objectives.

Additional Regulatory Considerations

The Basin Plan states that the evaporation of reclaimable wastewater is not an acceptable permanent disposal method where the opportunity exists to replace an existing use of proposed use of fresh water with reclaimed water. To that end, Califia Farms blending its

wastewater with the Districts irrigation waters (surface and groundwater) provides supplemental irrigation water to the District for farming purposes.

Title 27 of the California Code of Regulations, section 20005 et seq (Title 27) contains regulations to address certain discharges to land. Discharge of Califia Farms process wastewater to the Lerdo Canal for blending and to the Rosedale Spreading Basin as authorized herein complies with Title 27 section 20090(b).

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.

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. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291** *[Note: Current phone numbers for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us.]* as soon as it or its agents

Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the internet at http://www.swrcb.ca.gov/rwqcb5/contact_us or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

Waste Discharge to Land

complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

Waste Discharge to Land

certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

Waste Discharge to Land

- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. 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 Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.
 - c. The monthly average concentration is the arithmetic mean of measurements made during the month.
 - d. The "daily maximum" **discharge** is the total discharge by volume during any day.

Waste Discharge to Land

- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

Waste Discharge to Land

additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

Waste Discharge to Land

- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers