CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0063
FOR
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

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

Background

1. Langer Farms LLC (Langer Farms or Discharger) owns and operates a fruit juicing processing facility (Facility) at 19300 Copus Road in Bakersfield (Section 36, Township 32 South, Range 25 East, MDB&M). The Facility has not previously been regulated by Waste Discharge Requirements (WDRs) from the Central Valley Water Board.

2. On 13 July 2009, Langer Farms submitted a Report of Waste Discharge (RWD) and various amendments thereto for the discharge of juice processing wastewater to evaporation/percolation ponds. The Facility is depicted on **Attachments A and B** (incorporated herein).

3. New WDRs are needed to ensure discharges will comply with Central Valley Water Board plans and policies.

Facility and Discharge

4. Langer Farms processes apples, oranges, peaches, and pomegranates to make juice. The Facility operates 24 hours, 365 days per year.

5. Waste streams generated at the Facility include: clean-in-place wash water, cooling tower blowdown, and reverse osmosis reject (collectively, “process wastewater”) and irrigation filter backwash from the agricultural sand filters used by Langer Farms to irrigate its orchards. The Discharger comingles process wastewater with irrigation filter backwash and discharges the comingled wastewater to evaporation/percolation ponds.

6. Solid waste is comprised of screens shipped offsite to local farms for cattle feed. This Order requires the Discharger to report the volume of solids produced, where solids will be used, whether solids will be used for cattle feed or disposal, and ultimate disposal site.

7. Approximately, 60,000 gpd of source water is treated through a reverse-osmosis (RO) system before being used at the Facility. The quality of source water prior to the RO treatment is shown in **Table 1**.

Table 1. Source Water Quality – Before RO Treatment

		2016				2017			
Constituent/ Parameter	Units	Min	Max	Avg.	Count	Min	Max	Avg.	Count
Electrical Conductivity	umhos/cm	1,638	1,810	1,723	11	1,741	1,811	1,767	5
Total Dissolved Solids	mg/L	1,300	1,800	1,409	11	1,300	1,400	1,360	5
Nitrate as Nitrogen	mg/L	4	14	5	11	4	4	4	5
Alkalinity	mg/L	82	120	90	11	82	86	83	5
Bicarbonate	mg/L	100	150	111	11	99	100	100	5
Calcium	mg/L	150	260	173	11	160	180	168	5
Carbonate	mg/L	<5.0	<5.0	---	11	<5.0	<5.0	---	5
Chloride	mg/L	22	44	27	11	23	28	25	5
Hardness	mg/L	620	980	694	11	640	710	668	5
Magnesium	mg/L	57	79	63	11	59	65	62	5
Potassium	mg/L	10	12	11	11	11	12	11	5
Sodium	mg/L	170	250	187	11	170	190	178	5
Sulfate	mg/L	770	1,200	854	11	770	860	818	5

8. Process wastewater generated at the Facility is collected in two wet wells prior to treatment. Process wastewater first passes through a rotary drum screen before going into the screened water tank and then through a decanter. From the decanter, it is stored in two wastewater tanks prior to passing through four sand filters followed by three bag filters. It then goes into three pH stabilization tanks for pH balance where 30 percent caustic soda is added. After the pH stabilization tanks, it goes into a pipe underground where it will comingle with irrigation filter backwater in the pipe prior to being discharged to the nine evaporation/percolation ponds. Langer Farms samples the comingled effluent sample from the pipe as it discharges into the evaporation/percolation ponds. A wastewater treatment flow schematic showing the Langer Farms wastewater treatment facility is shown in **Attachment C** (incorporated herein).

9. Monthly average wastewater flows at the Facility, based on data from February 2016 through November 2017, are shown in **Table 2**. Where bold, the monthly average flow exceeded the monthly average flow limit of 82,000 gpd included in this Order. On 23 January 2018, the Discharger submitted a water balance based on a 100-year wet year. The water balance indicates Facility evaporation/percolation ponds have a total storage capacity of 66 acre-feet that can accommodate the proposed flow of 82,000 gpd and still have a remainder of 38 acre-feet of storage capacity.

Table 2. Monthly Average Wastewater Flow

Month	2016				2017			
	Min (gpd)	Max (gpd)	Avg. (gpd)	Total (gallons)	Min (gpd)	Max (gpd)	Avg. (gpd)	Total (gallons)
January	---	---	---	---	---	---	---	---
February	77,025	95,225	**86,125**	172,250	---	---	---	---

Month	2016				2017			
	Min (gpd)	Max (gpd)	Avg. (gpd)	Total (gallons)	Min (gpd)	Max (gpd)	Avg. (gpd)	Total (gallons)
March	44,967	320,963	**92,450**	1,849,008	22,900	166,600	62,492	812,400
April	12,382	244,062	61,390	613,898	17,900	32,600	25,450	101,800
May	14,337	207,567	74,170	741,698	21,700	128,700	49,048	931,920
June	2,280	587,835	**135,315**	2,029,729	9,100	67,500	30,518	518,800
July	12,056	101,339	56,523	1,194,660	15,900	144,300	48,989	881,800
August	27,697	91,889	56,813	965,823	4,600	197,600	69,444	1,111,100
September	---	---	---	---	---	---	---	---
October	4,900	86,500	38,486	269,400	20,200	105,000	48,411	871,400
November	28,000	51,300	35,475	141,900	17,600	115,900	51,860	259,300
December	400	15,400	7,967	47,800	---	---	---	---
Total Flow (gal)				8,026,166	Total Flow (gal)			5,488,520
Total Flow (MG)				8.03	Total Flow (MG)			5.49

10. Quality of comingled process wastewater and irrigation filter backwash water is shown below.

Table 3. Comingled Wastewater

		2016				2017			
Constituent/Parameter	Units	Min	Max	Ave	Count	Min	Max	Ave	Count
pH	pH Units	3.71	11.57	---	42	4.3	6.5	---	18
Electrical Conductivity	umhos/cm	977	5,540	2,549	42	452	2,770	1,671	18
Biochemical Oxygen Demand	mg/L	510	12,000	4,934	42	180	13,000	3,964	18
Chemical Oxygen Demand	mg/L	820	23,000	9,826	20	410	29,000	9,994	10
Total Dissolved Solids	mg/L	710	6,200	3,561	20	470	13,000	3,946	10
Fixed Dissolved Solids	mg/L	340	2,600	1,128	20	230	1,600	793	10
Total Suspended Solids	mg/L	83	4,600	764	22	25	6,100	1,378	10
Total Organic Carbon	mg/L	260	8,300	3,406	20	120	8,500	2,992	10
Total Kjeldahl Nitrogen	mg/L	15	220	67	20	4.2	190	52	10
Nitrate as Nitrogen	mg/L	0.58	23.00	7.92	20	0.02	1.30	0.65	10
Ammonia as Nitrogen	mg/L	0.11	16.00	2.70	20	0.16	4.80	1.48	10
Total Nitrogen	mg/L	18	220	73	20	4.2	190	52	10
Chloride	mg/L	22	160	68	20	16	130	41	10
Sodium	mg/L	130	1,300	521	20	23	330	134	10
Potassium	mg/L	18	460	168	20	11	1,100	193	10
Iron	mg/L	1.8	20.0	6.7	20	0.9	40.0	12.1	10
Manganese	mg/L	0.04	0.48	0.17	20	0.03	0.69	0.26	10
Arsenic	mg/L	0.001	0.015	0.004	20	0.002	0.017	0.005	10
Alkalinity	mg/L	19	1,300	455	20	59	1,500	573	10
Bicarbonate	mg/L	23	1,600	450	20	72	1,800	689	10

Table 3. Comingled Wastewater

		2016				2017			
Constituent/Parameter	Units	Min	Max	Ave	Count	Min	Max	Ave	Count
Calcium	mg/L	11	77	51	20	16	240	69	10
Carbonate	mg/L	210	340	257	20	<2.5	<5	---	10
Hardness	mg/L	45	350	215	20	72	3,600	990	10
Magnesium	mg/L	4.1	38.0	21.1	20	7.5	820.0	198.9	10
Sulfate	mg/L	110	290	188	20	11	870	194	10

11. Based on analytical data from 2016 and 2017, as shown in **Table 3**, approximately 68 to 80 percent of the total dissolved solids is a result of organic compounds.

12. Domestic wastewater is discharged separately to an existing on-site septic tank regulated by Kern County.

Land Application Area Practices

13. Excessive application of food processing wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the soil profile and causing waste constituents (i.e., organic carbon, nitrates, other salts, and metals) to percolate below the root zone. Irrigation with high-strength wastewater can result in high BOD loading on the day of application, which can deplete oxygen in the soil and lead to anoxic conditions. When insufficient oxygen is present below the ground surface, anaerobic decay of organic matter can create reducing conditions that convert metals naturally present in the soil as relatively insoluble (oxidized) forms to more soluble (reduced) forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If reducing conditions do not reverse as the percolate travels through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Excessive organic loading can also increase groundwater bicarbonate concentrations, which cause increases in groundwater EC and total dissolved solids.

14. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or causing unreasonable degradation of groundwater can vary significantly depending on soil conditions and operation of the land application system.

15. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the U.S. Environmental Protection Agency (USEPA), cites BOD loading rates associated with crop irrigation in the range of 36 to 100 lbs/acre/day to prevent nuisance, but indicates that loading rates can be even higher under certain conditions. The studies that support this report did not evaluate actual or potential groundwater degradation associated with those loading rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have are not readily adapted to varying soil, groundwater, and climate conditions that are prevalent throughout the region.

16. The California League of Food Processors' *Manual of Good Practice for Land Application for Food Processing/Rinse Water* proposes risk categories associated with particular BOD loading rate ranges as follows:

    a. Risk Category 1: (less than 50 lbs/ac/day; depth to groundwater greater than 5 feet) indistinguishable from good farming operations with good distribution important.

    b. Risk Category 2: (less than 100 lbs/ac/day; depth to groundwater greater than 5 feet) minimal risk of unreasonable groundwater degradation with good distribution more important.

    c. Risk Category 3: (greater than 100 lbs/ac/day; depth to groundwater greater than 2 feet) requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.

    The *Manual of Good Practice* recommends allowing a 50 percent increase in the BOD loading rates in cases where sprinkler irrigation is used, but recommends that additional safety factors be used for sites with heavy and/or compacted soils. The *Manual of Good Practice* also states that the use of surface irrigation (boarder check method) makes uniform application difficult, especially for coarse textured soils.

17. Although it has not been subject to a scientific peer review process, the Manual of Good Practice provides science-based guidance for BOD loading rates that, if fully implemented, may be considered management practices to prevent groundwater degradation due to reduced metals.

18. This Order requires the Discharger to explore land application area (LAA) alternatives for the disposal of its wastewater (Provision G.10.a). This Order also requires the Discharger to submit a *Wastewater and Nutrient Management Plan* (Provision G.10.b) that details proposed methods to evenly apply wastewater to the LAA's if Langer Farms identifies and decides to incorporate LAA's as part of its disposal capacity. Langer Farms will need to describe the amount of nutrient uptake by the crops grown in the LAA's based on site specific information and demonstrate how much wastewater may be applied to the LAA's without violating the terms of this Order.

Site-Specific Conditions

19. Land uses in the vicinity are primarily agricultural. Crops grown in the area include cotton, oranges, and vineyards, according to the Kern County 2006 Land Use Maps published by the Department of Water Resources (DWR).

20. The Facility is in an arid climate characterized by dry summers and mild winters. The rainy season generally extends from November through May. Average annual pan evaporation is about 94.96 inches in Taft (approx. 17 miles west of Langer Farms) according to data in the *Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States,* published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA). The average annual precipitation is about 5.39 inches in Taft according to data obtained from the Western Regional Climate Center.

21. The predominant soil types below the Facility are Cerini Loam and Excelsior Sandy Loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service. Cerini Loam and Excelsior Sandy Loam have irrigated capability classifications of 2e and 2s, respectively. Soils with “Class 2” have moderate limitations that restrict the choice of plants or require moderate conservation practices. The subclass “e” shows that the main problem is the hazard of erosion unless close-growing plant cover is maintained. The susceptibility to erosion and past erosion damage are the major soil-related factors affecting the soils that are assigned this subclass. The subclass “s” shows that the soil has limitations within the root zone, such as shallowness of the root zone, a high content of stones, a low available water capacity, low fertility, and excessive salinity or sodicity. Overcoming these limitations is difficult.

22. According to Federal Emergency Management Agency (FEMA) Map Number 06029C3100E (Sept. 2008), the Facility is in Zone A, which has a one percent annual chance of flooding (100-year floodplain). No depth or base flood elevations are shown in the FEMA maps for this area.

Groundwater Considerations

23. The Discharger does not have a groundwater monitoring well network at the Facility.

24. Groundwater in the area is found at approximately 162 to 250 feet below ground surface (bgs), according to the DWR *Water Data Library*. Groundwater flows in the southeast direction, according to a Groundwater Elevation Map in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980.

25. The Corcoran Clay layer is found below the Facility 500 to 650 feet bgs, per the DWR’s 1981 *Depth to Top of Corcoran Clay* map.

26. The quality of groundwater in the area based on wells within a five-mile radius is shown in **Table 4** below.

Table 4. Groundwater Quality from Nearby Wells

Well Number[1]	Well Depth (ft bgs)	Date Sampled	EC (umhos/cm)	Nitrate as N (mg/L)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Magnesium (mg/L)	Iron (mg/L)	Manganese (mg/L)	Arsenic (mg/L)
32S26E25K001M	22.5	7/18/1989	16,600	18.5	3,600	270	1,000	420	0.06	0.04	0.001
32S26E22M001M	22.4	7/18/1989	8,130	3.05	1,700	480	290	180	0.04	0.01	0.001
32S26E19D001M	16.7	7/11/1989	4,260	1.5	370	520	140	240	0.02	0.01	0.001
32S25E23B001M	18.4	7/11/1989	4,780	<0.10	610	500	200	190	0.03	0.03	0.001

1 United States Geological Survey National Water Information System: Mapper

27. A water quality map in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980 shows total dissolved solids in the unconfined aquifer underlying the Facility ranges from 1,000 to 1,500 mg/L, based on data from 1973 through 1979.

Basin Plan, Beneficial Uses, and Water Quality Objectives

28. The operative *Water Quality Control Plan for the Tulare Lake Basin* (Basin Plan) designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference plans and policies of the State Water Resources Control Board (State Water Board). In accordance with Water Code section 13263 (a), these waste discharge requirements implement the Basin Plan.

29. The Facility is in Detailed Analysis Unit (DAU) No. 261, within the Kern County Basin hydrologic unit. The Basin Plan identifies the beneficial uses of groundwater in the DAU as municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND).

30. The Facility is in the Arvin-Wheeler Ridge Hydrologic Area No. 557.30 of the South Valley Floor Hydrologic Unit, as depicted on hydrologic maps prepared by the State Water Board in August 1986. The Basin Plan specifies that surface water within Hydrologic Unit 557 are Valley Floor Waters. As indicated in the Basin Plan; the beneficial uses of Valley Floor Waters are: agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-water contact recreation (REC-2), warm freshwater habitat (WARM), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), and groundwater recharge (GWR).

31. The Basin Plan includes narrative water quality objectives for chemical constituents that, at a minimum, require water designated as domestic or municipal supply to meet the Maximum Contaminant Levels (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.

32. The Basin Plan establishes narrative water quality objectives for chemical constituents, taste and odors, and toxicity in groundwater. The narrative 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.

33. 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 a numerical limitation in order to implement the narrative objective.

34. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:

    a. The maximum electrical conductivity (EC) in the effluent discharged to land shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source the EC shall be a weighted average of all sources.

    b. Discharges to areas that may recharge to good quality groundwater; shall not exceed an EC of 1,000 umhos/cm, a chloride of 175 mg/L, or a boron content of 1.0 mg/L. The Basin Plan generally applies these limits to industrial discharges to land.

35. The Basin Plan authorizes an exemption to the incremental EC increase limit in Finding 34.a for food processing industries that discharge to land and exhibit a disproportionate increase in EC of the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids from the raw food product, provided that beneficial uses are protected. Exceptions must be based on demonstration of best available technology and best management practices that control inorganic dissolved solids to the maximum extent feasible.

36. With a source water EC of 1,723 umhos/cm (in 2016), the average EC of the discharge (2,549 umhos/cm in 2016) slightly exceeds the Basin Plan limit of source water plus 500 umhos/cm of 2,223 umhos/cm. However, as described in Findings 11 and 35 above, the discharge is eligible for an exception to the Basin Plan's incremental EC limit for food processing industries with disproportionate increases in EC due to unavoidable concentrations of organic dissolved solids. The 1,000 umhos/cm EC limit and 175 mg/L chloride limit are not applicable because as described in Findings 23 through 27, underlying groundwater is of poor quality with respect to EC and chloride.

Antidegradation Analysis

37. The State Water Board's *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, Resolution No. 68-16 (Antidegradation Policy) limits the Board's discretion to authorize the degradation of "high-quality waters." This policy has been incorporated into the Board's Basin Plans. "High-quality waters" are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Board's Basin Plan. Whether a water is a high-quality water is established on a constituent-by-constituent basis, which means that an aquifer can be considered a high-

quality water with respect to one constituent, but not for others (SWRCB Order No. WQ 91-10.)

38. Antidegradation Policy applies when an activity discharges to high quality waters and will result in some degradation of such high-quality waters. When it applies, the Policy requires that WDRs reflect best practicable treatment or control (BPTC) of wastes and that any degradation of high quality waters (a) will be consistent with the maximum benefit to the people of the State, and (b) will not result in an exceedance of water quality objectives. If the activity will not result in the degradation of high quality waters, Antidegradation Policy does not apply, and the Discharger need only demonstrate that it will use "best efforts" to control the discharge ofwaste.

39. Constituents of concern that have the potential to degrade and pollute groundwater include organics, nutrients, and salts.

    a. For organics, the Order requires the submittal of a Wastewater and Nutrient Management Plan (Provision G.10.b) to ensure even application of wastewater at agronomic rates to the LAA's if the Discharger identifies an area to reclaim its effluent. Alternatively, this Order requires the Discharger to install a groundwater monitoring well network to assess groundwater degradation from the discharge.

    b. For nitrogen, this Order requires the Discharger to explore land application area alternatives for disposal of its wastewater and submit a Wastewater and Nutrient Management Plan to demonstrate how it will apply wastewater at hydraulic and agronomic rates.

    c. Based on groundwater data from 1989, the underlying groundwater EC ranges from 4,260 umhos/cm to 16,600 umhos/cm, and from 140 mg/L to 1,000 mg/L for chloride. The effluent is not expected to degrade groundwater with respect to EC and chloride.

40. The Discharger provide control of the discharge, or will provide control of the discharge, as required by this Order, that incorporates:

    a. Wastewater treatment for solids removal;

    b. Source water, effluent, pond monitoring; and

    c. Either application of its wastewater to land in accordance with a Wastewater and Nutrient Management Plan or installation and monitoring of a groundwater monitoring well network to monitor the impact of the Facility's discharge on groundwater (as required by Provision G.10).

    These control practices are reflective of BPTC of the discharge.

41. 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 aids in the economic prosperity of the region by the

direct employment of about 100 full time employees. The Discharger provides a tax base for local and county governments.

42. This Order establishes terms and conditions to ensure that the discharge does not unreasonably affect present and anticipated future beneficial uses of groundwater or result in groundwater quality worse than background or the water quality objectives set forth in the Basin Plan.

43. This Order is consistent with Antidegradation Policy because: (a) the Discharger has or will implement BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated future beneficial uses of groundwater, or result in water quality less than water quality objectives, and (c) the limited degradation is of maximum benefit to the people of the State.

Other Regulatory Considerations

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

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

46. The discharges of wastewater authorized under this Order are exempt from the prescriptive requirements set forth in California Code of Regulations, title 27, section 20000 et seq. (See Cal. Code Regs., tit. 27, § 20090, subd. (a)-(b).) :

47. Because stormwater generated by the Facility does not discharge to waters of the U.S., the Discharger need not obtain facility coverage under the *Statewide General Permit for Storm Water Discharges Associated with Industrial Activities*, State Water Board Order 2014-0057-DWQ, NPDES Permit No. CAS000001 (Industrial General Permit).

48. Water Code section 13267, subdivision (b)(1) provides as follows:

    > In conducting an investigation … the regional board may require that any person who has discharged, discharges, or … proposes to discharge … shall furnish,

> under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

49. Technical reports required under this Order (and per the separately-issued Monitoring and Reporting Program Order No. R5-2018-0063) are necessary to ensure compliance with the WDRs prescribed herein. Additionally, the burden of producing such reports, as estimated by Central Valley Water Board staff, is also reasonably related to the need for such reports.

50. Absent promulgation of stricter standards pursuant to Water Code section 13801, Department of Water Resources' standards for the construction and destruction of groundwater wells, per Bulletins 74-90 (June 1991) and 94-81 (Dec. 1981), shall apply to all wells installed or monitored in connection to this Order.

51. The ability to discharge waste to the waters of the State of California is not a right but a privilege. (see Wat. Code, § 13263, subd. (g).) Accordingly, the adoption of this Order shall not be construed as creating a vested right to continue in any discharges otherwise authorized herein.

CEQA

52. The prescription of WDRs, protective of the environment, for the Facility (an existing facility and/or operation) is exempt from the California Environmental Quality Act (CEQA), Public Resource Code section 21000 et seq., pursuant to section 15301 of the CEQA Guidelines (Cal. Code Regs., tit. 14, 15000 et seq.).

CV-SALTS Reopener

53. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate. For nitrate, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers could comply with the new nitrate program either individually or collectively with other dischargers. For salinity, dischargers that are unable to comply with stringent salinity requirements would instead need to meet performance-based requirements and participate in a basin-wide effort to develop a long-term salinity strategy for the Central Valley. This Order may be amended or modified to incorporate any newly-applicable requirements.

54. The stakeholder-led Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative has been coordinating efforts to implement new salt and nitrate management strategies. The Board expects dischargers that may be affected by new salt and nitrate management policies to coordinate with the CV-SALTS initiative.

Public Notice

55. 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 conditions of discharge of this Order.

56. The Discharger 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.

57. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13263 and 13267, Langer Farms LLC (Discharger), its agents, successors, and assigns, to meet the provisions contained in Division 7 of the Water Code and regulations promulgated thereunder, shall comply with the following:

A. Discharge Prohibitions

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

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

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

4. Treatment system bypass or overflow of untreated wastes is prohibited, except as allowed by Standard Provisions E.2 in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (SPRRs).

5. Discharge of wastewater in a manner or location other than that described herein or in the RWD is prohibited.

6. Discharge of toxic substances into the wastewater ponds such that biological treatment mechanisms are disrupted is prohibited.

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

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

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

B. Effluent Limitations

1. The discharge from the Facility shall not exceed the following: a monthly average flow of 0.082 million gallons per day (mgd) and a total annual flow 29.93 million gallons per year (mgy). **[Compliance shall be determined at EFF-001[1]]**

C. Discharge Specifications

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

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

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

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

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

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

7. As a means of discerning compliance with Discharge Specification C.6, the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

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

[1] Monitoring location EFF-001 is described in Monitoring and Reporting Program R5-2018-0063

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 Effluent Limitation B.1 and Discharge Specifications C.8 and C.9.

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

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

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

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

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

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

D. Groundwater Limitations

Release of waste constituents from any component of any treatment, storage, delivery system, or land application area associated with the discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:

1. Nitrate as Nitrogen of 10 mg/L.

2. For constituents identified in Title 22, the MCLs quantified therein.

E. Land Application Area Specifications

1. The BOD loading to the LAA's calculated as a cycle average as determined by the method described in the attached Monitoring and Reporting Program, shall not exceed 100 pounds per day per acre.

2. Land application of wastewater shall be managed to minimize erosion.

3. LAA's shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop irrigation with process wastewater immediately and implement corrective actions to ensure compliance with this Order.

4. Any runoff of wastewater (tailwater) shall be confined to the LAA's and shall not enter any surface water drainage course or storm water drainage system.

5. The Discharger may not discharge process wastewater to the LAA during rainfall or when soils are saturated.

6. Crops shall be grown in the LAA. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize crop uptake of water and nutrients.

7. Application of waste constituents to the LAA's shall be at reasonable agronomic rates to preclude creation of a nuisance and degradation of groundwater, considering the crop, soil, climate, and irrigation management system. The annual nutritive loading of the LAA's, including the nutritive value of organic and chemical fertilizers and of the wastewater shall not exceed the annual crop demand.

8. Hydraulic loading of wastewater and supplemental irrigation water shall be at reasonable agronomic rates.

9. The Dischargers shall ensure that water, BOD, and nitrogen are applied and distributed uniformly across each LAA field. The Discharger shall implement changes to the irrigation system and/or operation practices as needed to ensure compliance with this specification.

10. The LAA's shall be managed to prevent breeding of mosquitos. In particular:

    a. All applied irrigation water must infiltrate within 48 hours;

    b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and

    c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.

F. Solids Specifications

Solids generated at the Facility consist of silt, sand, and other debris removed during the pre-cleaning process and fruit scraps.

1. Any drying, handling and storage of solids at the Facility shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes the development of odor nuisance conditions and infiltration of waste constituent into soils in a mass or concentration that will violate groundwater limitations of this Order.

2. Collected screenings and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.

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

G. Provisions

1. Except as otherwise provided herein, the Discharger shall comply with all provisions in the SPRRS (incorporated herein).

2. The Discharger shall comply with MRP R5-2018-0063, 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. A copy of this Order, including its MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the Langer Farms Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

4. 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 documents 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.

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

6. Per the SPRRs, 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.

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

8. In the event of any change in control or ownership of the Facility, 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.

9. To assume operation as a Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the 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 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.

10. The Discharger shall comply with the following schedule:

	Task	Due Date
a.	Submit a *Land Application Exploration Report* that describes feasible land application area alternatives for the disposal of the Discharger's wastewater. The *Land Application Exploration Report* shall be subject to Executive Officer approval.	**By 4 February 2019**
b.	If Langer Farms identifies land application areas in Task 10.a, a Wastewater and Nutrient Management Plan shall be submitted for Executive Officer approval. The Wastewater and Nutrient Management Plan must include the information required in Provision G.11. Upon Executive Officer approval of the Wastewater and Nutrient Management Plan, Langer Farms shall begin discharging the Facility's wastewater to the land application areas identified in Task 10.a. Or If Langer Farms does not identify land application areas in Task 10.a or if the Executive Officer does not concur with the findings of the *Land Application Exploration Report,* Langer Farms shall submit a Work Plan for the installation of a groundwater monitoring well network, as required by Task 10.c.	**By 3 August 2020**

c.	Submit a Work Plan for the installation of a groundwater monitoring well network subject to Executive Officer approval. The Work Plan shall satisfy the information needs specified in the monitoring well installation section of Attachment D, *Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports.* All wells shall comply with appropriate standards as described in *California Well Standard Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981), and any more stringent standards adopted by the State or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.	**3 month after the completion of Task 10.a if required (see Task 10.b)**
d.	Complete well installation as necessary and commence groundwater monitoring in accordance with Monitoring and Reporting Program R5-2018-0063.	**3 months from the completion of Task 10.c.**
e.	Submit a groundwater monitoring well installation report that meets the requirements of Attachment D, *Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports.*	**1 month from the completion of Task 10.d**

11. At a minimum, the Wastewater and Nutrient Management Plan must include management practices that will be implemented to ensure wastewater and the nutrients contained therein are applied evenly at agronomic rates and will not cause nuisance conditions or unreasonable degradation of underlying groundwater. The objective of the Wastewater and Nutrient Management Plan is to identify and utilize site specific data to demonstrate wastewater loading will occur at reasonable agronomic rates that will preclude degradation of groundwater that will exceed Water Quality Objectives or adversely affect Beneficial Uses.

12. **By 29 January 2019**, the Discharger shall submit a Salinity Management Plan with salinity source control reduction goals and an implementation time schedule for Executive Officer approval. The Salinity Management Plan shall identify any additional methods that could be used to further reduce the salinity of the discharge to the maximum extent feasible. The Discharger shall implement the plan in accordance with the approved time schedule.

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

14. In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans

for investigations and studies, that describe the conduct of investigations and studies or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

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

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this 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, section 2050 et seq. 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 filling petitions may be found on the Internet (at the address provided below) or will be provided upon request.

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

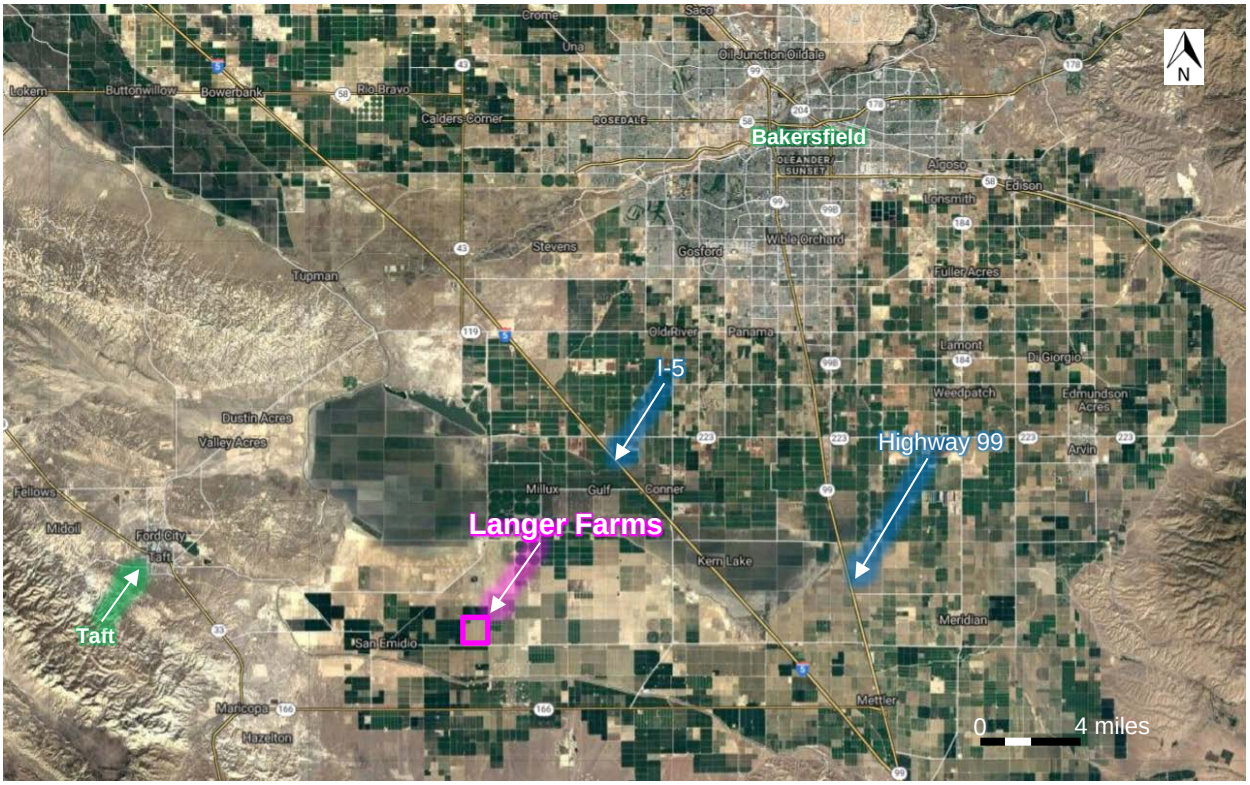
I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 2 August 2018.

ORIGINAL SIGNED BY

PATRICK PULUPA, Executive Officer

Order Attachments:

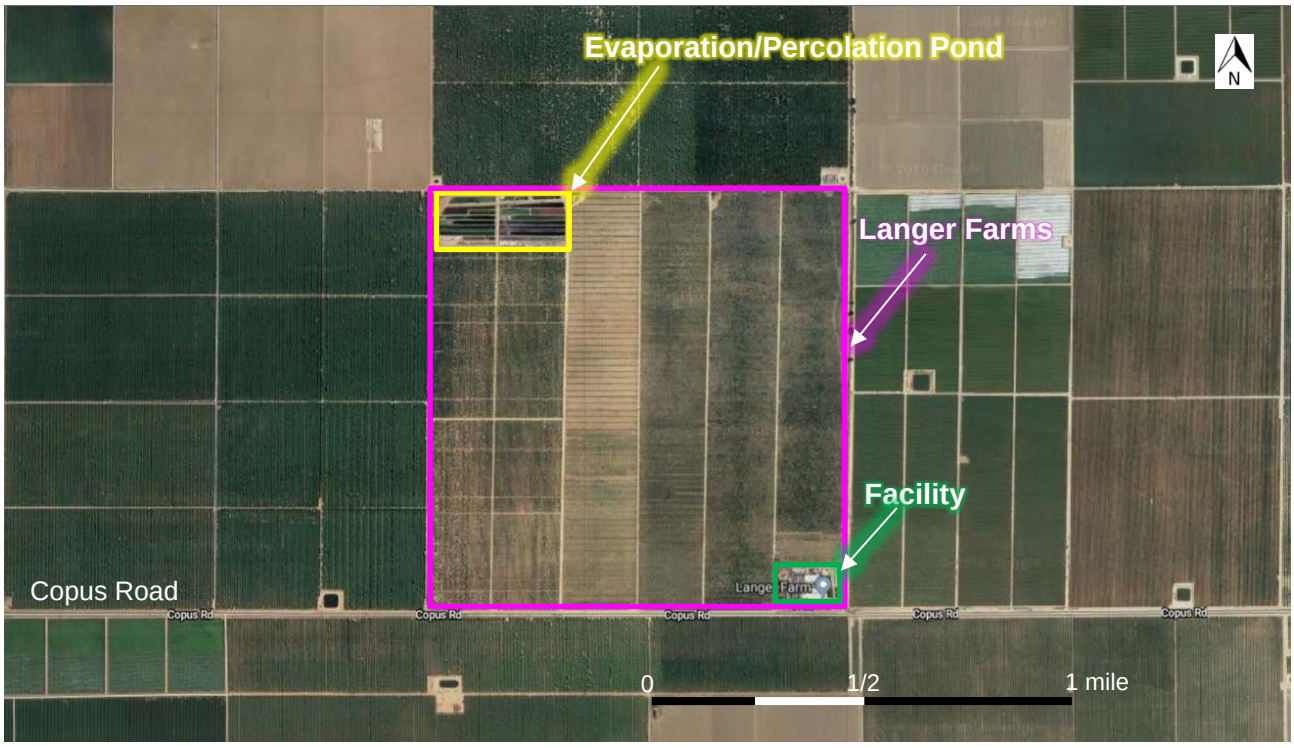
- Attachment A—Site Location Map
- Attachment B—Facility Map
- Attachment C—Wastewater Treatment Flow Schematic
- Attachment D—Standards Requirements for Monitoring Well Installation, Work Plans and Monitoring Wells Installation Reports
- Monitoring and Reporting Program R5-2018-0063
- Information Sheet
- Standard Provisions and Reporting Requirements dated 1 March 1991



SITE LOCATION MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0063
FOR
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

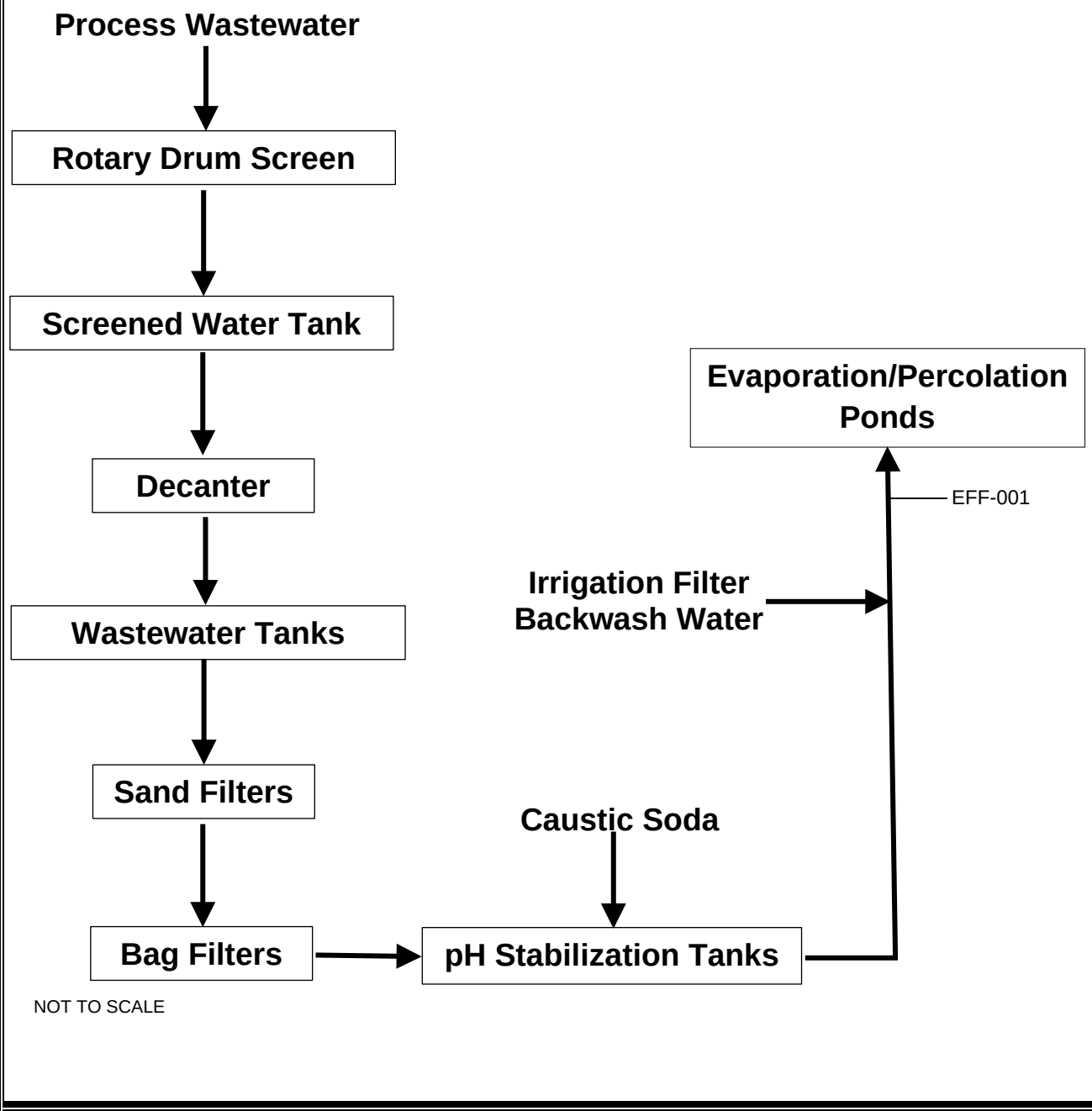
ATTACHMENT A



FACILITY MAP

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0063
FOR
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

ATTACHMENT B



WASTEWATER TREATMENT FLOW SCHEMATIC

WASTE DISCHARGE REQUIREMENTS ORDER R5-2018-0063
FOR
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

ATTACHMENT C

ORDER NO. R5-2018-0063
ATTACHMENT D
STANDARD REQUIREMENTS FOR
MONITORING WELL INSTALLATION WORK PLANS AND
MONITORING WELL INSTALLATION REPORTS

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

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

The monitoring well installation work plan shall contain, at a minimum, the following information:

A. General Information:
   Purpose of the well installation project

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

B. Drilling Details:
   On-site supervision of drilling and well installation activities
   Description of drilling equipment and techniques
   Equipment decontamination procedures
   Cuttings disposal methods
   Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods

C. Monitoring Well Design (in graphic form with rationale provided in narrative form):
   Diagram of proposed well construction details
   - Borehole diameter
   - Casing and screen material, diameter, and centralizer spacing (if needed)
   - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
   - Anticipated depth of well, length of well casing, and length and position of perforated interval
   - Thickness, position and composition of surface seal, sanitary seal, and sand pack

- Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):
Method of development to be used (i.e., surge, bail, pump, etc.)
Parameters to be monitored during development and record keeping technique
Method of determining when development is complete
Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):
Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
Datum for survey measurements
List well features to be surveyed (i.e., top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)
The Groundwater SAP, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedures for:

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

SECTION 2 - Monitoring Well Installation Report

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

A. General Information:
   Purpose of the well installation project
   Number of monitoring wells installed and identifying label(s) for each
   Brief description of geologic and hydrogeologic conditions encountered during well installation
   Topographic map showing facility location, roads, surface water bodies
   Large-scaled site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):
   On-site supervision of drilling and well installation activities
   Drilling contractor and driller's name
   Description of drilling equipment and techniques
   Equipment decontamination procedures
   Well boring log (provide for each well)
   - Well boring number and date drilled
   - Borehole diameter and total depth
   - Total depth of open hole (i.e., total depth drilled if no caving or back-grouting occurs)
   - Depth to first encountered groundwater and stabilized groundwater depth
   - Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (provide for each well):
   Well construction diagram including:
   - Monitoring well number and date constructed
   - Casing and screen material, diameter, and centralizer spacing (if needed)
   - Length of well casing
   - Length and position of slotted casing and size of perforations
   - Thickness, position and composition of surface seal, sanitary seal, and sand pack
   - Type of well caps (bottom cap either screw on or secured with stainless steel screws)

E. Well Development (provide for each well):
- Date(s) and method of development
- How well development completion was determined
- Volume of water purged from well and method of development water disposal

F. Well Survey (provide for each well):
- Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot)
- Ground surface elevation (feet above mean sea level to within 0.01 foot)
- Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale)
- Present the well survey report data in a table

G. Water Sampling:
- Date(s) of sampling
- How well was purged
- How many well volumes purged
- Levels of temperature, EC, and pH at stabilization
- Sample collection, handling, and preservation methods
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets
- Water level elevation(s)
- Groundwater contour map

H. Soil Sampling (if applicable):
- Date(s) of sampling
- Sample collection, handling, and preservation methods
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets
- Present soil sampling data in a table

I. Well Completion Report(s) (as defined in California Water Code §13751). Blank forms are available from California Department of Water Resources' website **www.water.ca.gov**. Submit this section under separate cover.

J. Appendix - include, at a minimum, copies of the following:
- County-issued well construction permits
- Registered engineer or licensed surveyor's report and field notes
- Field notes from well development

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2018-0063
FOR
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

Langer Farms LLC (Langer Farms or 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, electrical conductivity, and dissolved oxygen) 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 and 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 State Water Resources Control Board (State Water Board), Division of Drinking Water 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 the requested reduction in monitoring frequency.

A glossary of terms used within this MRP is included on page 11.

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

Monitoring Location Name	Monitoring Location Description
EFF-001	The location after the irrigation filter backwash is comingled with treated process wastewater and before the comingled wastewater is discharged into the evaporation/percolation ponds.
PND-001 through PND-009	Evaporation/Percolation Ponds No. 1 through 9
SPL-001	Source water from the onsite supply well
LAA-001 through LAA-00X	Land Application Areas established pursuant to Provision G.10.
GWM-001 through GWM-00X	Groundwater monitoring wells established pursuant to Provision G.10.

EFFLUENT MONITORING

Effluent samples shall be collected at EFF-001. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	Electrical Conductivity	umhos/cm	Grab
Weekly	Biochemical Oxygen Demand[1]	mg/L	Grab
2/Month	Total Dissolved Solids	mg/L	Grab
2/Month	Fixed Dissolved Solids	mg/L	Grab
2/Month	Total Suspended Solids	mg/L	Grab
2/Month	Total Organic Carbon	mg/L	Grab
2/Month	Total Kjeldahl Nitrogen	mg/L	Grab
2/Month	Nitrate as Nitrogen	mg/L	Grab
2/Month	Nitrite as Nitrogen	mg/L	Grab
2/Month	Ammonia as Nitrogen	mg/L	Grab
2/Month	Total Nitrogen	mg/L	Calculated
2/Month	General Minerals[2]	mg/L	Grab

1 Five-day, 20ºC biochemical oxygen demand (BOD)

2 General mineral analysis shall include, alkalinity (as $CaCO_3$), bicarbonate (as $CaCO_3$), boron, calcium, carbonate ($CaCO_3$), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

POND MONITORING

A permanent marker (e.g., staff gages) shall be placed in the evaporation/percolation ponds. The marker shall have calibrations indicating water level at the design capacity and available operational freeboard. Effluent evaporation/percolation ponds monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	DO[1]	mg/L	Grab[2]
Weekly	Freeboard	Feet[3]	Observation

1 DO in the upper one foot of any wastewater pond containing wastewater shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the discharger shall report the findings to the Central Valley Water Board in writing within 10 day and shall include a specific plan to resolve the low DO issues within 30 days.
2 DO shall be measured between 8:00 am and 10:00 am and shall be taken opposite the pond inlet at a depth of approximately one-foot.
3 To the nearest tenth of a foot.

The Discharger shall inspect the condition of the evaporation/percolation ponds weekly and record 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 grease, dead algae, vegetation, scum, or debris are accumulating on the storage pond 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.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

SOURCE WATER MONITORING

The Discharger shall monitor the source water at SPL-001. For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements.

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	Electrical Conductivity	umhos/cm	Grab
Annually	General Minerals[1,2]	mg/L	Grab

1 With the exception of wastewater samples, samples must be filtered. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.
2 General mineral analysis shall include, alkalinity (as $CaCO_3$), bicarbonate (as $CaCO_3$), boron, calcium, carbonate ($CaCO_3$), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

LAND APPLICATION AREA MONITORING

The Discharger shall inspect the condition of the LAA's once per week when wastewater is being discharged and write visual observations in a bound logbook. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in the logs and included as part of the annual report.

In addition, the Discharger shall perform the following routine monitoring and loading calculations for each discrete irrigation area within the land application area. The data shall be collected and presented in tabular format and shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Daily	Application Location	n/a	n/a
Daily	Application Area	acres	n/a
Daily	Wastewater Flow	gallons	Metered
Daily	Wastewater Loading	inches/day[1]	Calculated
Daily	Supplemental Irrigation	inches/day[1]	Calculated
Daily	Precipitation[2]	inches/day[1]	Rain gage[2]
BOD Loading Rates:			
Daily	On Day of Application[3]	lbs/acre-day	Calculated
Daily	Cycle Average[4]	lbs/acre-day	Calculated
Nitrogen Loading Rates:			
Monthly	From Wastewater[3]	lbs/acre-month	Calculated
Monthly	From Fertilizer and Irrigation Water[5]	lbs/acre-month	Calculated
Salt Loading Rates:			
Monthly	From Wastewater[3]	lbs/acre-month	Calculated
Annually	Cumulative Salt Loading	lbs/acre-year	Calculated

1 Report to the nearest 0.01 inch.
2 National Weather Service data from the nearest weather station is acceptable.
3 Loading rates to be calculated using the applied volume of wastewater, applied acreage, and average effluent concentrations for BOD, total nitrogen, and fixed dissolved solids as specified in the Reporting Section (pages 7 and 10).
4 The cycle average BOD loading rates shall be calculated using applied volume of wastewater, applied acreage, and average of effluent concentrations for BOD and divided by the number of days between applications for each individual irrigation section to determine the cycle average loading rate (see page 7).
5 Additional nitrogen loading to the land application area from other sources (i.e. organic matter and manure).

GROUNDWATER MONITORING

After measuring water levels and prior to collecting samples, each monitoring well 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. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically 3 to 5 well casing volumes, until pH, EC, and turbidity have stabilized.

Upon installation of its monitoring well network, the Discharger shall monitor the wells in its monitoring well network GWM-001 through GWM-00X and any subsequent additional monitoring wells as follows:

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly[3]	Depth to Groundwater	Feet[1]	Measured
Quarterly[3]	Groundwater Elevation	Feet[1,2]	Calculated
Quarterly[3]	pH	pH units	Grab
Quarterly[3]	Electrical Conductivity	umhos/cm	Grab
Quarterly[3]	General Minerals[4]	various	Grab
Quarterly[3]	Total Organic Carbon	mg/L	Grab

1 To the nearest hundredth foot.
2 Groundwater elevation shall be calculated based on depth-to-water measurements from a surveyed measuring point.
3 Samples to be collected quarterly in January, April, July, and October.
4 General mineral analysis shall include, alkalinity (as $CaCO_3$), bicarbonate (as $CaCO_3$), boron, calcium, carbonate ($CaCO_3$), chloride, hardness, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, sulfate, and TDS. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

The Discharger shall maintain its groundwater monitoring well network. If a groundwater monitoring well(s) is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well(s). The well(s) shall be replaced following Executive Officer approval of the work plan and time schedule.

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: 5C15NC00102, Facility Name: Langer Farms LLC, Order: R5-2018-0063

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 Dischargers have 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.

A. All Quarterly Monitoring Reports shall include the following:

Wastewater Reporting

1. The results of Effluent and Pond Monitoring specified on pages 2 and 3.

2. For each month of the processing season, calculation of the maximum daily flow, monthly average flow, and cumulative annual flow.

3. For each month of the processing season, calculation of the monthly average effluent EC and BOD concentrations.

4. A summary of the notations made in the pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Source Water Reporting

1. The results of Source Water Monitoring specified on page 3.

Land Application Area Reporting

1. The results of monitoring and loading calculations specified on pages 3 and 4.

2. Calculation of the hydraulic load for wastewater and fresh irrigation water to the land application area in gallons and/or acre-inches.

3. A summary of the notations made in the log book during each quarter. The entire contents of the log do not need to be submitted.

4. Calculate daily and cycle average BOD_5 loading rates for the Land Application Area;

   a. The mass of BOD_5 applied to the land application area on a daily basis shall be calculated using the following formula:

$$M = \frac{8.345\ (CV)}{A}$$

Where:	M	=	Mass of BOD applied to a LAA in lbs/ac/day
	C	=	Concentration of BOD_5 in mg/L based on the most recent monitoring result
	V	=	Volume of wastewater applied to LAA in millions of gallons per day
	A	=	Area of LAA irrigated in acres
	8.345	=	Unit conversion factor

   b. The mass of BOD_5 applied to the land application area on a cycle average basis shall be calculated using the following formula:

$$M = \frac{8.345\ (CV)}{AT}$$

Where:	M	=	Mass of BOD applied to a LAA in lbs/ac/day
	C	=	Concentration of BOD_5 in mg/L based on the most recent monitoring result
	V	=	Volume of wastewater applied to LAA in millions of gallons per day
	A	=	Area of LAA irrigated in acres
	T	=	Irrigation cycle length in days (From first day water was applied to the last day of drying time)
	8.345	=	Unit conversion factor

Groundwater Reporting

1. The result of groundwater monitoring specified on pages 4 and 5. If there is insufficient water in the well(s) for sampling, the monitoring well(s) shall be reported as dry for that quarter.

2. For each monitoring well, a table showing groundwater depth, elevation, and constituent concentrations for the five previous years, up through the present quarter.

3. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow. The map shall also include locations of all monitoring wells and wastewater storage and application areas

B. Annual Reports, shall be submitted in the Fourth Quarter Monitoring report on **1 February of each year**, and shall include the following:

Facility Information

1. The names and general responsibilities of all persons in charge of wastewater management.

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 meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).

4. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

5. A discussion and summary of the compliance record for the reporting period. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with this Order.

Solids Reporting

1. Annual production total solids (excluding trash and recyclables) in dry tons or cubic yards.

2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.

    a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.

    b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.

    c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).

    d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.

    e. For beneficial reuse at locations and by entities not operating under a WDRs, and as approved by the Executive Officer, include: the name and location of the site where the beneficial reuse occurs and/or solids are sent for beneficial reuse.

Land Application Area Reporting

1. The type of crop(s) grown in the LAA's, planting and harvest dates, and the quantified nitrogen and fixed dissolved solids uptakes (as estimated by technical references or, preferably, determined by representative plant tissue analysis).

2. The monthly and annual discharge volume of wastewater and irrigation water applied to the LAA's during the reporting year expressed in million gallons and acre-inches.

3. A monthly balance for the reporting year that includes:

   a. Monthly average ET_o (observed evapotranspiration) – Information sources include California Irrigation Management Information System (CIMIS) http://www.cimis.water.ca.gov/

   b. Monthly crop uptake

      i. Crop water utilization rates are available from a variety of publications available from the local University of California Davis extension office.

      ii. Irrigation efficiency – Frequently, engineers include a factor for irrigation efficiency such that the application rate is slightly greater than the crop utilization rate. A conservative design does not include this value.

   c. Monthly average precipitation – this data is available at http://www.cimis.water.ca.gov/ or at http://www.ncdc.noaa.gov

   d. Monthly average and annual average discharge flow rates.

   e. Monthly estimates of the amount of wastewater percolating below the root zone (i.e., amount of wastewater applied in excess of crop requirements).

4. The total pounds of nitrogen applied to the LAA's on an annual basis in lbs/acre-year, shall be calculated using the following formula:

$$M = \sum_{i=1}^{12} \frac{(8.345(C_i V_i) + M_x)}{A}$$

Where:	M	=	Mass of nitrogen applied to a LAA in lbs/ac/day
	C_i	=	Average concentration of total nitrogen for the month in mg/L
	V_i	=	Volume of wastewater applied to LAA for the month in millions of gallons
	A	=	Area of LAA irrigated in acres
	i	=	Number of the month (e.g., January = 1, February = 2, etc)
	C_i	=	Average concentration
	Mx	=	Nitrogen mass from other sources (e.g., fertilizer, irrigation water, etc)
	8.345	=	Unit conversion factor

5. The total pounds of fixed dissolved solids that have been applied to the LAA's in lbs/acre-year, as calculated from the sum of the monthly loadings.

$$C_a = \frac{\sum_{1}^{12}[(C_{Pi} \times V_{Pi}) + (C_{Si} \times V_{Si})]}{\sum_{1}^{12}(V_{Pi} + V_{Si})}$$

Where:
- C_a = Flow-weighted average annual FDS concentration in mg/L
- i = The number of the month (e.g., January = 1, February = 2, etc.)
- C_{Pi} = Monthly average process wastewater FDS concentration for calendar month *i* in mg/L)
- C_{Si} = Monthly average supplemental irrigation water FDS concentration for calendar month *i* in mg/L (considering each supplemental source separately)
- V_{Pi} = Volume of process wastewater applied to LAA during calendar month *i* in million gallons
- V_{Si} = Volume of supplemental irrigation water applied to LAA during calendar month *i* in million gallons (considering each supplemental source separately)

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Monitoring and Reporting Program issued by the California Regional Water Quality Control Board, Central Valley Region on 2 August 2018.

ORIGINAL SIGNED BY

PATRICK PULUPA, Executive Officer

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	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected at least 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.
2/Month	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
ug/L	Micrograms per liter
umhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2018-0063
LANGER FARMS LLC
FRUIT JUICING FACILITY
KERN COUNTY

INFORMATION SHEET

Background

Langer Farms LLC (Langer Farms) owns and operates a fruit juicing processing facility (Facility) at 19300 Copus Road in Bakersfield (Section 36, Township 32 South, Range 25 East, MDB&M). The Facility has not previously been regulated by Waste Discharge Requirements (WDRs) from the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board).

On 2 April 2009, Central Valley Water Board staff inspected the Facility. At the time of the inspection, processed wastewater was being discharged to an adjacent 10-acre disposal area. The 10-acre disposal area contained two unlined evaporation/percolation ponds.

On 8 April 2009, the Central Valley Water Board issued Langer Farms a letter for the unauthorized discharge at the Facility in violation of Water Code section 13264 and requested that Langer Farms submit a Report of Waste Discharge (RWD) for the ongoing discharge by 24 April 2009.

On 13 July 2009, the Central Valley Water Board issued Langer Farms a 13267 letter directing Langer Farms to submit a RWD.

On 13 July 2009, the Central Valley Water Board received a RWD, submitted by Reed International LTD (signed and stamped by Larry L. Russell, RCE No. 27274) on behalf of Langer Farms. The RWD did not include analytical data characterizing the Facility's process wastewater and source water.

On 12 August 2009, the Central Valley Water Board notified Langer Farms that the July 2009 RWD was incomplete and outlined technical information needed to complete the RWD.

A google aerial image from October 2009 shows the wastewater discharge location consisted of two unlined evaporation/percolation ponds adjacent to the Facility. A google aerial image from August 2012 along with a January 2018 Central Valley Water Board staff inspection of the Facility confirm a new discharge location on the northwest quadrant of section 36, Township 32 South, Range 25 East, MDB&M. The new discharge location consists of nine evaporation/percolation ponds. Sometime between 2013 and 2014 Langer Farms reduced the acreage of the evaporation/percolation ponds from approximately 38 acres to 23 acres.

On 21 July 2014, the Central Valley Water Board issued Langer Farms a 13260/13264 letter requiring Langer Farms to submit an amended RWD with the technical information originally requested in the 12 August 2009 Central Valley Water Board letter.

On 27 October 2015, AQUA operations submitted a RWD (signed by Matt VoVilla, RCE No. 43130) on behalf of Langer Farms. The RWD included one analytical result for the process wastewater generated at the Facility and one analytical result for source water at the Facility.

On 6 January 2016, the Central Valley Water Board issued Langer Farms a Notice of Violation/13267 directive requiring a statistically representative analytical data set to evaluate the discharge and its potential impacts to groundwater. The Notice of Violation (NOV) required effluent

monitoring for various constituents. The NOV also required source water monitoring for flow-weighted electrical conductivity, total dissolved solids, nitrate as nitrogen, and general minerals.

From March 2016 to November 2016, AQUA operations submitted various submittals that contained analytical data.

On 14 July 2017, AQUA operations submitted a RWD (signed by Matt VoVilla, RCE No. 43130) on behalf of Langer Farms. The 2017 RWD included data characterizing source water and process wastewater at the Facility.

Discharge
Langer Farms processes apples, oranges, peaches, and pomegranates to make juice. The Facility operates 24 hours a day, 365 days a year.

Quality of the comingled wastewater (process wastewater and irrigation filter backwash) is shown in Table 1.

Table 1. Quality of Comingled Wastewater

		2016				2017			
Constituent/Parameter	Units	Min	Max	Ave	Count	Min	Max	Ave	Count
pH	pH Units	3.71	11.57	---	42	4.3	6.5	---	18
Electrical Conductivity	umhos/cm	977	5,540	2,549	42	452	2,770	1,671	18
Biochemical Oxygen Demand	mg/L	510	12,000	4,934	42	180	13,000	3,964	18
Chemical Oxygen Demand	mg/L	820	23,000	9,826	20	410	29,000	9,994	10
Total Dissolved Solids	mg/L	710	6,200	3,561	20	470	13,000	3,946	10
Fixed Dissolved Solids	mg/L	340	2,600	1,128	20	230	1,600	793	10
Total Suspended Solids	mg/L	83	4,600	764	22	25	6,100	1,378	10
Total Organic Carbon	mg/L	260	8,300	3,406	20	120	8,500	2,992	10
Total Kjeldahl Nitrogen	mg/L	15	220	67	20	4.2	190	52	10
Nitrate as Nitrogen	mg/L	0.58	23.00	7.92	20	0.02	1.30	0.65	10
Ammonia as Nitrogen	mg/L	0.11	16.00	2.70	20	0.16	4.80	1.48	10
Total Nitrogen	mg/L	18	220	73	20	4.2	190	52	10
Chloride	mg/L	22	160	68	20	16	130	41	10
Sodium	mg/L	130	1,300	521	20	23	330	134	10
Potassium	mg/L	18	460	168	20	11	1,100	193	10
Iron	mg/L	1.8	20.0	6.7	20	0.9	40.0	12.1	10
Manganese	mg/L	0.04	0.48	0.17	20	0.03	0.69	0.26	10
Arsenic	mg/L	0.001	0.015	0.004	20	0.002	0.017	0.005	10
Alkalinity	mg/L	19	1,300	455	20	59	1,500	573	10
Bicarbonate	mg/L	23	1,600	450	20	72	1,800	689	10
Calcium	mg/L	11	77	51	20	16	240	69	10
Carbonate	mg/L	210	340	257	20	<2.5	<5	---	10
Hardness	mg/L	45	350	215	20	72	3,600	990	10
Magnesium	mg/L	4.1	38.0	21.1	20	7.5	820.0	198.9	10

		2016				2017			
Constituent/Parameter	Units	Min	Max	Ave	Count	Min	Max	Ave	Count
Sulfate	mg/L	110	290	188	20	11	870	194	10

Soil and Groundwater Conditions
Soils below the Facility are predominately Cerini Loam and Excelsior Sandy Loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service.

The Discharger does not have a groundwater monitoring well network in the vicinity of the Facility. Groundwater in the area is approximately 162 to 250 feet below ground surface (bgs) according to the *Water Data Library* published by the Department of Water Resources. Groundwater in the area flows in the southeast direction according to a Groundwater Elevation Map in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980. The Corcoran Clay layer is found below the Facility at 500 to 650 feet bgs according to *Depth to Top of Corcoran Clay* map published by the Department of Water Resources in 1981.

A water quality map in the *Groundwater Pollution Study* published by the Kern County Health Department in 1980 shows total dissolved solids in the unconfined aquifer underlying the Facility ranges from 1,000 to 1,500 mg/L, based on data from 1973-1979. Consistency

Monitoring Requirements
Section 13267 of the Water Code authorizes the Central Valley Water Board to require the Discharger to submit monitoring and technical reports as necessary to investigate the impact of a waste discharge on water of the State.

The proposed Order includes effluent monitoring, pond monitoring, and source water monitoring. This monitoring is necessary to characterize the discharge and evaluate compliance with effluent limitations and specifications prescribed by this Order.

CV-SALTS Regulatory Considerations
The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate. The Salinity Control Program currently being developed would subject dischargers that do not meet stringent salinity numeric values (700 umhos/cm EC as a monthly average to protect the AGR beneficial use and 900 umhos/cm as an annual average to protect the MUN beneficial use) to performance-based salinity requirements , and would require these dischargers to participate in a Basin-wide Prioritization and Optimization Study to develop a long-term strategy for addressing salinity accumulation in the Central Valley.

The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. The Central Valley Water Board anticipates that the CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs region-wide, including the WDRs that regulate discharges from the Facility. More information regarding this regulatory planning process can be found at the following link:

https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/

Reopener

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